Curriculum Vitae

Gerhard A. Holzapfel
Dr. Dr.h.c., Professor of Biomechanics

Office Graz

Graz University of Technology
Institute of Biomechanics
Stremayrgasse 16-II
A-8010 Graz, Austria

Phone ++43 (0)316 873 35500
E-mail holzapfel@tugraz.at
URL www.biomech.tugraz.at

Office Trondheim

Norwegian University of Science and Technology (NTNU)
Faculty of Engineering Science and Technology, 7491 Trondheim, Norway

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Personal Data

Date of Birth:	May 22, 1961
Place of Birth:	Graz, Austria
Citizenship:	Austria

Education

1996	Habilitation in *„Mechanics“,* Vienna University of Technology, Austria
1993 – 1995	Post-Doctoral Fellow at the Division of Applied Mechanics, Department of Mechanical Engineering, Stanford University, CA, USA, with the late Professor *Juan C. Simo*
1990	Ph.D. Mechanical Engineering, Graz University of Technology, Austria (with distinction)
6/86 – 1/87	National Service at Red Cross
1985	M.Sc. Civil Engineering, Graz University of Technology, Austria (with distinction)
1980	Graduation certificate from High School (with distinction)

Professional Appointments

Since 4/16	Adjunct Full Professor in Biomechanics, Norwegian University of Science and Technology (NTNU), Faculty of Engineering Science and Technology, Trondheim, Norway
Since 2/07	Full Professor of Biomechanics – Head of the Institute, Graz University of Technology, Austria
2/07 – 10/13	Adjunct Full Professor of Biomechanics, Royal Institute of Technology (KTH), School of Engineering Sciences, Department of Solid Mechanics, Stockholm, Sweden
12/04 – 1/07	Full Professor of Biomechanics, Royal Institute of Technology (KTH), School of Engineering Sciences, Department of Solid Mechanics, Stockholm, Sweden
1/98 – 11/04	Associate Professor at the Institute of Structural Analysis, Graz University of Technology, Austria
5/87 – 12/97	Assistant at the Institute of Strength of Materials, Graz University of Technology, Austria (1991 on leave to P.R. China, 1993-1995 on leave to the USA)
1991	Visiting Scholar at University of Shenyang, P.R. China
6/88 – 9/88	Visiting Scholar at Ruhr-University Bochum, Germany
1/86 – 5/86	Research Assistant at Darmstadt University of Technology, Germany

Awards and Honors

7/25	The Huiskes Medal for Biomechanics from the European Society of Biomechanics For his significant contributions to the fundamentals of continuum mechanics, which are now widely used in the field of biomechanics
5/25	Honorary Degree in Mechanical Engineering from the University of Parma,

Italy (approved by the Italian Ministry of University and Research)

2/25 International Member of the United States National Academy of Engineering (NAE)
For contributions to the mechanics of soft materials and for the quantification, modeling, and analysis of biological tissue microstructures

1/25 EUROMECH Solid Mechanics Prize 2025 (awarded every three years)
For pioneering transformative and seminal advances in the mathematical and computational biomechanical modelling of the nonlinear solid mechanics of several soft biological tissues, especially artery and heart tissues

9/24 Fellow of the European Academy of Sciences: Engineering Division

6/24 Honoris Causa Doctorate from the Institut Mines-Télécom, École des Mines de Saint-Étienne, France

6/22 Eugenio Beltrami Senior Scientist Prize
For his outstanding research and achievements in biomechanics, which were an exciting and challenging stimulus for a whole generation of scientists
http://memocscenter.univaq.it/memocs/en/attivita/the-eugenio-beltrami-senior-scientist-prize/

2021 Warner T. Koiter Medal from the American Society of Mechanical Engineers (USA)
For outstanding contributions to the application of solid mechanics in the development of continuum theory, computational methods, simulations and experiments in the biomechanics of soft biological materials; and for international leadership in the filed through editorships, conference organization, mentoring and Ph.D.-level education.
www.asme.org/about-asme/honors-awards/achievement-awards/warner-t-koiter-medal

2021 William Prager Medal from the Society of Engineering Science (USA)
https://socengsci.org/prager-medal/

3/19 Ordinary Member of the European Academy of Sciences and Arts
Class VI: Technical and Environmental Sciences

3/18 2018 Best CMBBE Paper Award
D.M. Pierce, T. Ricken and G.A. Holzapfel: A hyperelastic biphasic fiber-reinforced model of articular cartilage considering distributed collagen fiber orientations: continuum basis, computational aspects and applications. *Computer Methods in Biomechanics and Biomedical Engineering,* **16** (2013) 1344–1361

1/18 Leverhulme Trust Visiting Professorship for UK, University of Portsmouth
The Leverhulme Trust was established in 1925 under the will of Viscount Leverhulme (William Lever)

9/15 Fellow of EUROMECH – European Mechanics Society

10/14 Highly Cited Researcher 2014 in Engineering
Selected by Thomson Reuters and listed as "The World´s Most Influential Scientific Minds: 2014" – highlycited.com
Worldwide there were 187 selected in Engineering, including one from Austria with this designation in this field. Highly Cited Researchers 2014 represents some of world's leading scientific minds. They were determined by analyzing papers indexed within the Web of Science between 2002 and 2012, and they rank among the top 1% most cited in their specific field.

8/14 Elected member of Academia Europaea – www.ae-info.org/ae/User/Holzapfel_Gerhard_A
Section: Physics and Engineering Sciences

11/13 Congress Award Graz 2013
Category: not repeated conferences in Graz

5/12 Corresponding Member of the Austrian Academy of Sciences
Section: Mathematics and the Natural Sciences

3/12 Founding Fellow of EAMBES – European Alliance for Medical and Biological Engineering & Science
An EAMBES fellowship is indented "for individuals who have distinguished themselves by identifiable contributions or accomplishments in Medical and Biological Engineering and Science"

11/11 Erwin Schrödinger Prize 2011
Annual award presented by the Austrian Academy of Sciences for lifetime achievements

by Austrians in the fields of mathematics and natural sciences. The prize was established in 1956, and was first awarded to Erwin Schrödinger.

11/08 Research Award 2008 of the Federal State of Styria, Austria, for Simulation and Modeling – Basic Research and University Research

12/07 Member of the Young Curia of the Austrian Academy of Sciences
The Young Curia ("Junge Kurie") is a panel of outstanding young scientists who should actively participate within the academy. It is an autonomous instrument that exists besides the Section for Mathematics and the Natural Sciences, and the Section for the Humanities and the Social Sciences.

3/03 Awarded with the "Josef-Krainer Würdigungspreis 2003 for exceptional achievements in the field of Biomechanics"
The prize-winners are selected among scholars from all disciplines by an interdisciplinary Jury after peer review.

2001 Founding Co-Editor of the Journal "Biomechanics and Modeling in Mechanobiology", Springer-Verlag

7/97 START-Award 1997
START-Awards are for “outstanding young researchers of any discipline” and are selected by an International Jury. It supports research for 6 years.

1993 – 1994 Erwin Schrödinger Scholarship for foreign countries
An Erwin Schrödinger Scholarship for foreign countries is for young graduates of all disciplines who have distinctive qualifications.

1983 Winner of the Amann-Foundation

Offers – Professorships

Full Professorships

Since 4/16 International Chair of Biomechanics, Norwegian University of Science and Technology (NTNU), Faculty of Engineering Science and Technology, Trondheim, Norway

Since 2/07 Chair of Biomechanics, Graz University of Technology, Austria

5/13 Chair of Biomedical Engineering, College of Science & Engineering, School of Engineering, University of Glasgow, UK (not accepted)

12/04 – 1/07 Chair of Biomechanics, Royal Institute of Technology (KTH), School of Engineering Sciences, Department of Solid Mechanics, Stockholm, Sweden

7/03 Chair of Applied Mechanics (Continuum Mechanics), C4, University of Kassel, Germany (not accepted)

Visiting Professorships

1/18 – 7/18 Leverhulme Trust Visiting Professorship, University of Portsmouth, UK

Since 4/09 University of Glasgow, School of Mathematics and Statistics, UK
Invited by Professor Ray W. Ogden

5/07 University of Zaragoza, Department of Mechanical Engineering, Spain
Invited by Professor Manuel Doblaré

4/03 – 5/03 Universidad Politécnica de Cataluña, Escuela Técnica Superior de Ingenieros de Caminos, Barcelona, Spain
Invited by Professors Eugenio Oñate and Carlos Agelet de Saracibar

11/02 University of Trento, Dipartimento di Ingegneria Meccanica e Strutturale, Italy (not accepted)
Invited by Professor D. Bigoni

5/01 Polish Academy of Sciences, Institute of Fundamental Technological

Research, Warsaw (not accepted)
Invited by the late Professor Jozef Joachim Telega

Editorial Appointments

- Co-Editor-in-Chief, Journal "Biomechanics and Modeling in Mechanobiology", Springer-Verlag, Heidelberg, New-York. Since 2002: appears six times a year (with David Nordsletten, University of Michigan, Ann Arbor, MI, USA and King's College London, UK, continuing on Peter Hunter, University of Auckland, New Zealand, Larry Taber, Washington University in St. Louis, USA and Jay D. Humphrey, Yale University, USA) **(2023 IF: 3.0).**
  abstracted/indexed in Science Citation Index Expanded (SciSearch), Journal Citation Reports/Science Edition, PubMed/Medline, SCOPUS, INSPEC, EMBASE, Google Scholar, EBSCO, CSA, Academic OneFile, Academic Search, AGRICOLA, Biological Abstracts, BIOSIS, CSA Environmental Sciences, EI-Compendex, EMBiology, Gale, OCLC, SCImago, SPOLIT, Summon by ProQuest *www.springeronline.com/journal/10237*
- Co-Editor, Monographic Series TU Graz, Computation in Engineering and Science, Verlag der Technischen Universität Graz. Since 2008 (with G. Brenn, W. von der Linden, M. Schanz, O. Steinbach).
  www.tugraz.at/institute/am-bm/forschung/schriftenreihe-ces/
- Guest Co-Editor, Research Topic on "Advances in Brain Mechanics", *Frontiers in Mechanical Engineering,* **7** (2021) 803151, with S. Budday and P.V. Bayly.
- Guest Co-Editor, Special Issue on "Mathematical and Computational Modeling in Biomechanics", *ZAMM Zeitschrift für angewandte Mathematik und Mechanik,* **98,** Issue 12 (2018) 2038–2327, with C. Cyron.
- Guest Co-Editor, Special Invited Collection on "Multiscale Soft Tissue Mechanics and Mechanobiology: State-of-the-Art Modeling", *Journal of Elasticity,* **129,** Issue 1-2 (2017) 1–305, with R.W. Ogden.
- Guest Co-Editor, Special Issue on "Coupled Models for Soft Biological Tissue Disorders", *Annals of Biomedical Engineering,* **43** (2015) 1475–1711, with E. Peña.
- Guest Co-Editor, Special Issue on "82nd Annual Meeting of the International Association of Applied Mathematics and Mechanics (GAMM), Graz 2011", *Proceedings in Applied Mathematica and Mechanics (PAMM),* **11** (2011) 1–954, with G. Brenn, M. Schanz and O. Steinbach.
- Guest Editor, Special Issue on "Computational Biomechanics of Soft Tissue", *Computer Methods in Biomechanics and Biomedical Engineering,* **4** (2001) 189–305.

Publications

Books

1. G.A. Holzapfel, M. Rolf-Pissarczyk and X.Y. Xu (eds.): "Model Validation and Uncertainity Quantification in Biomechanics of Soft Tissue", Elsevier, in preparation.

2. G.A. Holzapfel and R.W. Ogden (eds.): "Multiscale Soft Tissue Mechanics and Mechanobiology: State-of-the-Art Modeling", Springer Nature, 2018
   https://www.springer.com/gp/book/9789402412185

3. G.A. Holzapfel and R.W. Ogden (eds.): "Biomechanics: Trends in Modeling and Simulation". Studies in Mechanobiology, Tissue Engineering and Biomaterials, Springer Nature, 2017
   www.springer.com/de/book/9783319414737

4. G.A. Holzapfel and E. Kuhl (eds.): "Computer Models in Biomechanics: From Nano to Macro". Springer, 2013, p. 413
   www.springer.com/materials/mechanics/book/978-94-007-5463-8

5. G.A. Holzapfel and R.W. Ogden (eds.): "Biomechanical Modelling at the Molecular, Cellular and Tissue Levels". CISM Courses and Lectures No. 508, Springer, Wien, New York, 2009, p. 344
   www.springerlink.com/content/r1qg55/#section=247089&page=1&locus=0

6. G.A. Holzapfel and R.W. Ogden (eds.): "Mechanics of Biological Tissue". Springer-Verlag, Heidelberg, 2006, p. 524
   www.springer.com/sgw/cda/frontpage/0,11855,1-175-22-52091382-detailsPage%253Dppmmedia%257CaboutThisBook%257CaboutThisBook,00.html

7. G.A. Holzapfel, W. Moser and G. Reichard (eds.): "Advanced Numerical Analyses of Solids and Structures, and Beyond", Verlag der Technischen Universität Graz, 2004, p.192
   ISBN 3-902465-01-8

8. G.A. Holzapfel and R.W. Ogden (eds.): "Biomechanics of Soft Tissue in Cardiovascular Systems", CISM Courses and Lectures No. 441. Springer, Wien, New York, 2003, p. 394
   www.springer.com/dal/home/generic/search/results?SGWID=1-40109-22-2314299-0

9. G.A. Holzapfel: "Nonlinear Solid Mechanics. A Continuum Approach for Engineering". John Wiley & Sons, Chichester, 2000, p. 455 (5^{th} print in 1/07)
   www.wiley.com/WileyCDA/WileyTitle/productCd-0471823198.html

CD-ROMs and Book of Abstracts

1. G.A. Holzapfel, V. Prot and Z. Zhang (eds.): "Book of Extended Abstracts for Solid (Bio)Mechanics: Challenges of the Next Decade", a Symposium in Honor of Professor Bjørn H. Skallerud's 60^{th} Birthday, Trondheim, Norway, September 20, 2019
   ISBN 978-3-85125-704-5

2. G.A. Holzapfel and R.W. Ogden (eds.): "Book of Abstracts for the 8^{th} European Solid Mechanics Conference – ESMC-2012", Graz, Austria, July 9-13, 2012
   ISBN 978-3-85125-223-1

3. G.A. Holzapfel, J. Vander Sloten, M.M. Sette, D.M. Pierce and D. Stoyanov (eds.): "Proceedings of the Joint Workshop on Computer/Robot Assisted Surgery", Graz, Austria, July 11-13, 2011
   ISBN 978-94-6018-364-5

Invited Book Chapters

1. S. Verstraeten, J. Brüning, L. Goubergrits, S. Schievano, C. Capelli, A. Rizzo, M. Rolf-Pissarczyk, G.A. Holzapfel, M. Spanjaards, W. Huberts: Generation and validation of virtual patient cohorts for *in silico* clinical trials: achievements from the SIMCor project.

In: G.A. Holzapfel, M. Rolf-Pissarczyk and X.Y. Xu (eds.) “Model Validation and Uncertainity Quantification in Biomechanics of Soft Tissue”, Elsevier, submitted.

2. G.A. Holzapfel and R.W. Ogden: Constitutive modeling of soft biological tissues. In: J. Merodio and R.W. Ogden (eds.), “Constitutive Modelling of Solid Continua”, Springer Series Solid Mechanics and its Applications (2nd ed.), Springer Nature Switzerland AG 2025, in press.

3. C. Sherif, G. Sommer, P. Schiretz and G.A. Holzapfel. Computational fluid dynamic simulations of cerebral aneurysms. In: A. Di Ieva, E. Suero Molina, S. Liu and C. Russo (eds), “Computational Neurosurgery. Advances in Experimental Medicine and Biology”, Springer, Cham, vol 1462, (2024), 397-415.

4. B. Lane, S. Sherifova, V.A. Santamaría, J. Molimard, G.A. Holzapfel and S. Avril: Novel experimental methods to characterize the mechanical properties of the aorta. In: T.C. Gasser, S. Avril and J.A. Elefteriades (eds.), “Biomechanics of the Aorta: Modeling for Patient Care”, Elsevier, (2024), 91-108.

5. S.S. Sajjadinia, B. Carpentieri and G.A. Holzapfel: Hybrid data-driven and numerical modeling of articular cartilage, In: B. Carpentieri and P. Lecca (eds.), “Big Data Analysis and Artificial Intelligence for Medical Sciences", John Wiley & Sons, (2024), 181-203.

6. S.S. Sajjadinia, B. Carpentieri and G.A. Holzapfel: Large-scale finite element modeling of pre-stress in articular cartilage. In: W. Skalli, S. Laporte and A. Benoit (eds), “Computer Methods in Biomechanics and Biomedical Engineering II. CMBBE 2023”. Lecture Notes in Computational Vision and Biomechanics. Springer, Cham, vol 39, (2024), 105-112.

7. O. Gültekin and G.A. Holzapfel: Anisotropic failure criteria in relation to crack phase-field modeling at finite strains. In: F. Aldakheel, B. Hudobivnik, M. Soleimani, H. Wessels, Ch. Weißenfels and M. Marino (eds.), “Current Trends and Open Problems in Computational Mechanics”, Springer Nature, (2022), 151-159.

8. J.-L. Martiel, G. Finet, G.A. Holzapfel, M. Stuber, T. Matsumoto, R.I. Pettigrew and J. Ohayon: Importance of residual stress and basal tone in healthy and pathological human coronary arteries. In: J. Ohayon, G. Finet and R.I. Pettigrew (eds.), “Biomechanics of Coronary Atherosclerotic Plaque. From Model to Patient: Volume 4 in Biomechanics of Living Organs”, Chapter 19, Academic Press, (2020), 443-473.

9. O. Gültekin and G.A. Holzapfel: A brief review on computational modeling of rupture in soft biological tissues. In: E. Oñate, D. Peric, E. de Souza Neto and M. Chiumenti (eds.), “Advances in Computational Plasticity. A Book in Honour of D. Roger J. Owen”, Computational Methods in Applied Sciences, Volume 46, Springer Nature, (2018), 113-144.

10. G.A. Holzapfel: Computational biomechanics of soft biological tissues: arterial walls, heart walls and ligaments. In: E. Stein, R. de Borst and T.J.R. Hughes (eds.), “Encyclopedia of Computational Mechanics Second edition”, Part 2 Solids and Structures, John Wiley & Sons, Ltd: Chichester, pp. 1-47 (2017); DOI 10.1002/9781119176817.ecm2041

11. G.A. Holzapfel: Microstructure and mechanics of human aortas in health and disease. In: G.A. Holzapfel and R.W. Ogden (eds.), "Biomechanics: Trends in Modeling and Simulation", Studies in Mechanobiology, Tissue Engineering and Biomaterials, Springer Nature, (2017), 157-192.

12. G.A. Holzapfel and B. Fereidoonnezhad: Modeling of damage in soft biological tissues. In: Y. Payan and J. Ohayon (eds.), "Biomechanics of Living Organs. Hyperelastic Constitutive Laws for Finite Element Modeling", Chapter 5, Academic Press, (2017), 101-123.

13. G.A. Holzapfel, J. Tong and T.U. Cohnert: Biomechanical behavior of diseased arteries: tissue dissection, gender difference and mass fraction in abdominal aortic aneurysms. In: N. Chakfé, B. Durand and W. Meichelboeck (eds.), "ESVB 2013 – New Endovascular Technologies – From Bench Test to Clinical Practice", Chapter 31, Geprovas, Strasbourg, France, (2013), 299-316.

14. N. Famaey, E. Kuhl, G.A. Holzapfel and J. Vander Sloten: Cardiovascular tissue damage: an experimental and computational framework. In: G.A. Holzapfel and E. Kuhl (eds.), "Computer Models in Biomechanics", Chapter 10, Springer, (2013) 129-148.

15. S. Murtada and G.A. Holzapfel: A mathematical approach for studying Ca^{2+}-regulated smooth muscle contraction. In: G.A. Holzapfel and E. Kuhl (eds.), "Computer Models in Biomechanics", Chapter 4, Springer, (2013) 45-62.

16. J. Stålhand, A. Klarbring and G.A. Holzapfel: Modeling of smooth muscle activation. In: G.A. Holzapfel and E. Kuhl (eds.), "Computer Models in Biomechanics", Chapter 6, Springer, (2013) 77-89.

17. G.A. Holzapfel, J. Tong, P. Regitnig and T.U. Cohnert: Recent advances in the biomechanics of abdominal aortic aneurysms. In: N. Chakfé, B. Durand and W. Meichelboeck (eds.), "ESVB 2011 – New Endovascular Technologies – From Bench Test to Clinical Practice", Chapter 3, Europrot, Strasbourg, France, (2011), 23-40.

18. P.N. Watton, Y. Ventikos and G.A. Holzapfel: Modelling cerebral aneurysm evolution. In: T. McGloughlin (ed.), "Biomechanics and Mechanobiology of Aneurysms", Springer, Heidelberg, (2011) 373-399.

19. G.A. Holzapfel and D.E. Kiousis: Interaction of balloon catheter-stent systems with atherosclerotic lesions: a computational study. In: N. Chakfé and B. Durand (eds.), "ESVB 2009 – New Technologies in Vascular Biomaterials. Connecting Biomaterials to Arterial Structures", Chapter 7, Europrot, Strasbourg, France, (2009), 89-111.

20. G.A. Holzapfel: Arterial tissue in health and disease: experimental data, collagen-based modeling and simulation, including aortic dissection. In: G.A. Holzapfel and R.W. Ogden (eds.), "Biomechanical Modelling at the Molecular, Cellular and Tissue Levels", CISM Courses and Lectures No. 508, Springer: Wien, New York, (2009), 259-343.

21. G.A. Holzapfel: Collagen in Arterial Walls: Biomechanical Aspects. In: P. Fratzl (ed.), "Collagen. Structure and Mechanics", Chapter 11, Springer-Verlag, Heidelberg, (2008), 285-324.

22. G.A. Holzapfel and D.E. Kiousis: Biomechanical characterization of the stented artery. Computational solid mechanical aspects. In: N. Chakfé, B. Durand and J.-G. Kretz (eds.), "ESVB 2007 – New Technologies in Vascular Biomaterials. Fundamentals About Stents II", Chapter 2, Europrot, Strasbourg, France, (2007), 11-23.

23. P.J. Elbischger, H. Bischof, G.A. Holzapfel and P. Regitnig. Computer vision analysis of collagen fiber bundles in the adventitia of human blood vessels. In: J.S. Suri, C. Yuan, D.L. Wilson and S. Laxminarayan (eds.), "Plaque Imaging: Pixel to Molecular Level. Studies in Health Technology and Informatics", Chapter 4, IOS Press (2005), 113:97-129.

24. C.T. Gasser and G.A. Holzapfel: 3D crack propagation in unreinforced concrete. Physical modeling and numerical analyses. In: G.A. Holzapfel, W. Moser and G. Reichard (eds.), "Advanced Numerical Analyses of Solids and Structures, and Beyond", Verlag der Technischen Universität Graz, 2004, ISBN 3-902465-01-8, 61-79.

25. G.A. Holzapfel: Computational Biomechanics of Soft Biological Tissue. In: E. Stein, R. de Borst and T.J.R. Hughes (eds.), "Encyclopedia of Computational Mechanics", Volume 2: Solids and Structures, Chapter 18, John Wiley & Sons, Ltd: Chichester (2004), 605-635.

26. C.A.J. Schulze-Bauer, M. Stadler, R. Stollberger, P. Regitnig and G.A. Holzapfel: Assessment of plaque stability based on high-resolution magnetic resonance imaging of human atherosclerotic lesions and computational mechanical analysis. In: M. Cerrolaza, M. Doblaré, G. Martínez, and B. Calvo (eds.), "Computational Bioengineering: Current Trends and Applications", Imperial College Press: Singapore (2004), 101-115.

27. G.A. Holzapfel: Structural and numerical models for the (visco)elastic response of arterial walls with residual stresses. In: G.A. Holzapfel and R.W. Ogden (eds.), "Biomechanics of Soft Tissue in Cardiovascular Systems", CISM Courses and Lectures No. 441, Springer: Wien, New York (2003), 109-184.

28. G.A. Holzapfel: Biomechanics of soft tissues with application to arterial walls. In: J.A.C. Martins and E.A.C. Borges Pires (eds.), "Mathematical and Computational Modeling of Biological Systems", Chapter 1, Centro Internacional de Matemática CIM: Coimbra, Portugal (2002), 1-37.

29. G.A. Holzapfel: Biomechanics of soft tissue. In: J. Lemaitre (ed.), "The Handbook of Materials Behavior Models", Volume III, Multiphysics Behaviors, Chapter 10, Composite Media, Biomaterials, Academic Press: Boston (2001), 1057-1071.

30. G.A. Holzapfel, T.C. Gasser and R.W. Ogden: A new constitutive framework for arterial wall mechanics and a comparative study of material models. In: S.C. Cowin and J.D. Humphrey (eds.), "Cardiovascular Soft Tissue Mechanics", Kluwer Academic Publishers: Dordrecht (2001), 1-48.

31. G.A. Holzapfel, C.A.J. Schulze-Bauer and M. Stadler: Mechanics of angioplasty: Wall, balloon and stent. In: J. Casey and G. Bao (eds.), "Mechanics in Biology", AMD-Vol. 242, BED-Vol. 46, New York (2000), 141-156.

Peer-Reviewed Journal Articles[1]

All works are listed in the reversed order of their times of appearance.

In Press

1. E. Agrafiotis, D. Zimpfer, H. Mächler and G.A. Holzapfel: Review of systemic mock circulation loops for evaluation of implantable cardiovascular devices and biological tissues. *Journal of Endovascular Therapy*, in press **(IF: 2.6).**

Appeared

2. R. Alberini, M. Terzano, G.A. Holzapfel and A. Spagnoli: A discrete fiber dispersion model with octahedral symmetry quadrature for mechanical analyses of skin corrective surgeries. *Computer Methods in Applied Mechanics and Engineering*, **438** (2025) 117809 **(IF: 6.9).**

3. K. Bäumler, M. Rolf-Pissarczyk, R. Schussnig, T.-P. Fries, G. Mistelbauer, M.R. Pfaller, A.L. Marsden, D. Fleischmann and G.A. Holzapfel: Assessment of aortic dissection remodeling with patient-specific fluid-structure interaction models. *IEEE Transactions on Biomedical Engineering,* **72** (2025) 953–964 **(IF: 4.756).**

4. F. Bogoni, M.S. Brunner, G. Almer, G. Hörl, Y.G. Tehlivets, G. Sommer, O. Tehlivets and G.A. Holzapfel: Homocysteine leads to aortic stiffening in a rabbit model of atherosclerosis. *Acta Biomaterialia,* **201** (2025) 412–428 **(IF: 9.4).**

5. D. Bošnjak, R. Schussnig, S. Ranftl, G.A. Holzapfel and T.-P. Fries: Geometric uncertainty of patient-specific blood vessels and its impact on aortic hemodynamics: A computational study. *Computers in Biology and Medicine,* **190** (2025) 110017**(IF: 7.0).**

6. T.L. Cabaniss, R. Bodlak, Y. Liu, G.P. Colby, H. Lee, B.N. Bohnstedt, R. Garziera, G.A. Holzapfel and C.-H. Lee: CFD investigations of a shape-memory polymer foam-based endovascular embolization device for the treatment of intracranial aneurysms. *Biomechanics and Modeling in Mechanobiology,* **24** (2025) 281–296 **(IF: 3.0).**

7. N. Firouzi, R. Garziera, G.A. Holzapfel and T. Rabczuk: Mechanics of finite nonlinear viscoelastic growth for soft biological tissues. *Thin-Walled Structures,* **210** (2025) 112996 **(IF: 5.7).**

8. G.A. Holzapfel, J.D. Humphrey and R.W. Ogden: Biomechanics of soft biological tissues and organs, mechanobiology, homeostasis, and modeling. *Journal of the Royal Society Interface,* **22** (2025) 20240361 **(IF: 3.7).**

9. G.A. Holzapfel and R.W. Ogden: Modeling the biomechanical properties of soft biological tissues: constitutive theories. *European Journal of Mechanics A/Solids,* **112** (2025) 105634 **(IF: 4.4).**

10. G.A. Holzapfel, J.D. Humphrey and R. W. Ogden: Biomechanics of soft biological tissues and organs, mechanobiology, homeostasis, and modeling. *Journal of the Royal Society Interface,* in press **(IF: 3.7).**

[1] Impact Factor (IF) according to Journal Citation Reports® 2023, published by Thomson Reuters

11. C.S. Holzer, A. Pukaluk, C. Viertler, P. Regitnig, E.M. Charry, H. Wolinski, M. Eschbach, A.W. Caulk and G.A. Holzapfel: Implications of compressive loading of the stomach wall: Interplay between mechanical deformation and microstructure. *Acta Biomaterialia,* **192** (2025) 101–118 **(IF: 9.4).**

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    - On **June 30, 2023,** the paper received the 2022 Acta Student Award. https://www.sciencedirect.com/journal/acta-biomaterialia/about/news#recipients-of-the-2022-acta-student-awards
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67. G.A. Holzapfel and G. Reiter: A thermomechanical analysis of polymers. In: "Canadian Society for Civil Engineering, Proceedings of the Engineering Mechanics Symposium", Vol. IV, Winnipeg, Manitoba, Canada (1994), 406-411.

68. G.A. Holzapfel: Tangent moduli for rubber-like materials. In: R.E. Ekstrom and S.I. Chou (eds.), "Proceedings of the 23rd Midwestern Mechanics Conference", Lincoln, Nebraska, USA (1993), 145-147.

69. G.A. Holzapfel: Application of the two-dimensional hermitian finite-difference method to Reissner-Mindlin-theory of thin shell structures undergoing finite rotations. "International Conference on Comput. Engineering Science ICES'91", Melbourne, Australia (1991), 372-375.

70. G.A. Holzapfel and C.C. Celigoj: Zur Berechnung von endlichen Rotationen schubelastischer Flächentragwerke mit dem Mehrstellenverfahren. Zeitschrift für angewandte Mathematik und Mechanik, **T614** (1991), 71-76.

71. G.A. Holzapfel: Die Gleichgewichtsbedingungen einer geometrisch nichtlinearen Flächentragwerkstheorie als Approximation eines dreidimensionalen Kontinuums. Festschrift Wolfhart Uhlmann, Technische Hochschule Darmstadt, Schriftenreihe Wissenschaft und Technik, **40** (1990), 139-160.

Habilitation, Ph.D.-Thesis, Master-Thesis

1. Habilitation: Physical modeling and finite element analysis of elastomeric systems, with a special emphasis on coupled thermomechanical problems. Institute for Mechanics, Vienna Institute of Technology, Austria, 1996.

2. Ph.D.-Thesis: Die Anwendung des Mehrstellenverfahrens auf die Reissner-Mindlin-Theorie dünner Flächentragwerke mit endlichen Rotationen. Institute for Strength of Materials, Department of Mechanical Engineering, Graz University of Technology, Austria, 1990.

3. Master-Thesis: Elastische und Plastische Untersuchungen von unter Spannung verstärkten Stahlbauteilen (Zugstab mit allgemeinem Querschnitt und I-förmiger Querschnitt unter Biegung und Torsion). Department of Civil Engineering, Graz University of Technology, Austria, 1985.

Oral and Poster Presentations – (Extended) Abstracts

Oral Presentations given in the 33 different countries:

Australia, Austria, Belgium, Brazil, Canada, Chile, China, Croatia, Czech Republic, Estonia, Finland, France, Germany, Greece, Holland, Hungary, Ireland, Italy, Japan, Luxembourg, Norway, Poland, Portugal, Romania, Singapore, Slovenia, South Africa, Spain, Sweden, Switzerland, Turkey, United Kingdom, USA

Oral Presentations – (Extended) Abstracts:

1. M.P. Kainz, M. Terzano, G. Sommer, A. Greiner, S. Budday, P. Steinmann and G.A. Holzapfel: Pores and Prejudices: An experimental evaluation of Darcy's permeability in brain tissue with biomimetic hydrogels. EBM Symposium 2025 (Exploring Brain Mechanics). Erlangen, Germany, September 30 – Ocrober 1, 2025.

2. F. Bogoni, M.P. Wollner, O. Tehlivets and G.A. Holzapfel: On the rate dependence of equilibrium relations in aortic tissue. 11th GACM Colloquium on Computational

Mechanics for Young Scientists from Academia and Industry. Braunschweig, Germany, September 21-24, 2025.

3. M. Terzano, L. Stosch, F. Bogoni and G.A. Holzapfel: Calibration of a finite linear viscoelastic model for anisotropic vascular tissue. 11th GACM Colloquium on Computational Mechanics for Young Scientists from Academia and Industry. Braunschweig, Germany, September 21-24, 2025.

4. A. Alina, F. Lanzl, C. Braun, S. Peldschus, G.A. Holzapfel and G. Sommer: Experimental investigation of ring-shaped samples of human MMA under tensile load (in German). 104th Annual Meeting of the German Society of Forensic Medicine (DGRM). Graz, Austria, September 16-19, 2025.

5. G. Almer, M. Brunner, C. Diwoky, M. Lechleitner, G. Sommer, F. Bogoni, D. Kolb, Y. Tehlivets, G. Leitinger, M. Kavertseva, A. Schwarz, V. Bubalo, G. Rechberger, M. Herrmann, H. Mangge, S. Frank, G.A. Holzapfel, D. Kratky, G. Hörl and O. Tehlivets: Impact of antioxidant treatment on aorta remodelling in balloon-injured rabbits fed a B vitamin and choline deficient diet – a preclinical model of atherosclerosis and hyperhomocysteinaemia. 47th ESPEN Congress on Clinical Nutrition & Metabolism. Prague, Czech Republic, September 13-16, 2025.

6. A. Greiner, N. Reiter, J. Hinrichsen, M. Kainz, G. Sommer, G.A. Holzapfel, P. Steinmann, E. Comellas and S. Budday: Model-driven exploration of poro-viscoelasticity in human brain tissue: be careful with the parameters! XI International Conference on Computational Bioengineering – ICCB 2025. Rome, Italy, September 8-10, 2025.

7. A. Greiner, N. Reiter J. Hinrichsen, M.P. Kainz, G. Sommer, G.A. Holzapfel, P. Steinmann, E. Comellas and S. Budday: Model-driven analysis of parameter influence in poro-viscoelastic brain tissue mechanics. 20th International Symposium on Computer Methods in Biomechanics and Biomedical Engineering (CMBBE 2025). Barcelona, Spain, September 3-5, 2025.

8. O. Ghorbani, V.S. Ellensen, R.M. Persson, V. Prot, G.A. Holzapfel and B. Skallerud: Regional biomechanical variations in patients with ascending thoracic aortic aneurysms with bicuspid and tricuspid aortic valves: A microstructure-informed finite element approach. 20th International Symposium on Computer Methods in Biomechanics and Biomedical Engineering (CMBBE 2025). Barcelona, Spain, September 3-5, 2025.

9. M. Pétré, M. Terzano, H. Wolfs, G. Kerkchofs, G.A. Holzapfel and N. Famaey: From microstructure to mechanics: A multiscale computational model of arterial tissue. 20th International Symposium on Computer Methods in Biomechanics and Biomedical Engineering (CMBBE 2025). Barcelona, Spain, September 3-5, 2025.

10. M. Terzano, S. Schrammel, A. Spagnoli and G.A. Holzapfel: Cutting in biomechanics: applications and open challenges. EUROMECH Colloquium 655. Graz, Austria, August 25-27, 2025.

11. G.A. Holzapfel, M. Rolf and O. Gültekin: Crack phase-field modeling to predict the progression of aortic dissections. EUROMECH Colloquium 655. Graz, Austria, August 25-27, 2025 (keynote speaker).

12. F. Bogoni, M.P. Wollner, O. Tehlivets and G.A. Holzapfel: On the separation of equilibrium and inelastic effects in arteries. 12th European Solid Mechanics Conference (ESMC2025). Lyon, France, July 7-11, 2025.

13. O. Ghorbani, R. Matongo Persson, V. Skalstad Ellensen, V. Prot, G.A. Holzapfel and B. Skallerud: Regional micro- and macro-structural properties of the aortic wall in ascending thoracic aortic aneurysms. 12th European Solid Mechanics Conference (ESMC2025). Lyon, France, July 7-11, 2025.

14. C.S. Holzer, A. Pukaluk, C. Viertler, P. Regitnig, M. Eschbach, A.W. Caulk and G.A. Holzapfel. Mechanical response of the human stomach wall to radial compression and associated microstructural changes. 12th European Solid Mechanics Conference (ESMC2025). Lyon, France, July 7-11, 2025.

15. M.P. Kainz, M. Terzano and G.A. Holzapfel: Biomechanical and biological characterization of brain tissue-inspired hydrogels: Focus on porous material properties for tissue engineering applications. 12th European Solid Mechanics Conference (ESMC2025). Lyon, France, July 7-11, 2025.

16. M. Khalaj, M. Kainz, M. Terzano and G.A. Holzapfel: Exploring the mechanical complexity of the interface between gray and white matter in the brain. 12th European Solid Mechanics Conference (ESMC2025). Lyon, France, July 7-11, 2025.

17. S.M.B. Kwakman, M. Rolf-Pissarczyk, M. Terzano and G.A. Holzapfel: A fully parameterized 3D computational model of atherosclerotic arteries to simulate balloon angioplasty. 12th European Solid Mechanics Conference (ESMC2025). Lyon, France, July 7-11, 2025.

18. S. Lo Franco, F. Parrinello, M. Terzano, G. Borino and G.A. Holzapfel: A variationally-consistent hybrid equilibrium element for finite poroelasticity. 12th European Solid Mechanics Conference (ESMC2025). Lyon, France, July 7-11, 2025.

19. V. Prot, O. Ghorbani, R. Matongo Persson, V. Skalstad Ellensen, G.A. Holzapfel and B. Skallerud: Characterization of the anisotropic viscoelastic behavior in aneurysm tissue of the ascending thoracic aorta using biaxial tensile tests and constitutive modeling. 12th European Solid Mechanics Conference (ESMC2025). Lyon, France, July 7-11, 2025.

20. M. Rolf-Pissarczyk, K. Bäumler, R. Schussnig, A.L. Marsden, D. Fleischmann and G.A. Holzapfel: Insights into aortic remodeling in type B aortic dissection using patient-specific fluid-structure interaction simulations. 12th European Solid Mechanics Conference (ESMC2025). Lyon, France, July 7-11, 2025.

21. S. Schrammel, M.P. Wollner, M. Terzano, C. Holzer, A. Caulk and G.A. Holzapfel: Statistical analysis of precompression time in laparoscopic sleeve gastrectomy using finite element modeling. 12th European Solid Mechanics Conference (ESMC2025). Lyon, France, July 7-11, 2025.

22. S. Sherifova, S. Avril and G.A. Holzapfel: Global and local mechanics of the aortic media under radial extension. 12th European Solid Mechanics Conference (ESMC2025). Lyon, France, July 7-11, 2025.

23. G. Sommer, M. Pranger, L. Wallinger, D. Kolb, G. Leitinger, C. Viertler and G.A. Holzapfel: Determination of induced vascular damage by in vitro stenting. 12th European Solid Mechanics Conference (ESMC2025). Lyon, France, July 7-11, 2025.

24. M. Terzano, S. Gardellin, M.P. Kainz, M. Rolf, M. Isasi and G.A. Holzapfel: A fracture mechanics-based approach to the structural integrity of fibrous scaffolds. 12th European Solid Mechanics Conference (ESMC2025). Lyon, France, July 7-11, 2025.

25. M.P. Wollner and G.A. Holzapfel: On the mutual coupling of viscoelasticity and the Mullins effect. 12th European Solid Mechanics Conference (ESMC2025). Lyon, France, July 7-11, 2025.

26. M. Yusefi, E. Agrafiotis, H. Mächler, G. Sommer and G.A. Holzapfel: Biaxial biomechanical comparison of ex vivo perfused human thoracic aortas with and without stents. 12th European Solid Mechanics Conference (ESMC2025). Lyon, France, July 7-11, 2025.

27. G.A. Holzapfel: Biomechanics: From history to patient-specific modeling. 30th Congress of the European Society of Biomechanics (ESB25), Zürich, Switzerland, July 6-9, 2025 **(Lecture for the Huiskes Medal 2025).**

28. D. Martonová, M. Peirlinck, G.A. Holzapfel, S. Leyendecker and E. Kuhl: Robust material model discovery for human myocardium. 30th Congress of the European Society of Biomechanics (ESB25), Zürich, Switzerland, July 6-9, 2025.

29. M. Rolf-Pissarczyk, M. Wollner, M. Terzano, N. Götzen and G.A. Holzapfel: Credibility assessment of polymeric scaffold material modeling for in situ tissue-engineered vascular implants. 30th Congress of the European Society of Biomechanics (ESB25), Zürich, Switzerland, July 6-9, 2025.

30. M. Rolf-Pissarczyk, K. Bäumler, A.L. Marsden, D. Fleischmann and G.A. Holzapfel: Material and computational modeling of aortic dissection: local hemodynamic phenomena correlate with aortic remodeling across multiple scales. On Multi-scale Computational Methods for Solids and Fluids (ECCOMAS MSF 2025), Croatia, Split, June 25-27, 2025.

31. M. Yusefi, E. Agrafiotis, H. Mächler, M. Andreas, G. Sommer and G.A. Holzapfel: Region-specific biaxial biomechanical evaluation of ex vivo perfused human thoracic aortas with and without stents. Annual meeting of the Austrian Society for Cardiothoracic Surgery, Salzburg, Austria, June 4, 2025.

32. I. Breslavsky, G. Franchini, F. Giovanniello, A. Kassab, G.A. Holzapfel and M. Amabili: Mechanical characterisation and material modelling of human aortas with vascular smooth muscle activation. 31st International Conference on Computational & Experimental Engineering and Sciences (ICCES2025), Changsha, China, May 25–29, 2025.

33. G.A. Holzapfel: The power of interdisciplinary research: biomechanics as an example. On the occasion of the award “Laurea Magistrale in Ingegneria Meccanica a Gerhard Alfred Holzapfel”, Parma, Italy, May 19, 2025.

34. A. Alesi, F. Lanzl, G. Sommer, G.A. Holzapfel and S. Peldschus: Qualification of a method for the experimental investigation of ring-shaped MMA samples (in German). 32th Spring Conference of the German Society of Forensic Medicine (DGRM) – North-South Region. Mainz, Germany, May 16-17, 2025.

35. M.P. Wollner and G.A. Holzapfel: Modeling rate-dependent damage effects in soft biological tissue. 95th Annual Meeting of the International Association of Applied Mathematics and Mechanics (GAMM 2025), Poznań, Poland, April 7-11, 2025.

36. G. Wang, H. Zheng, L. Ning, M. Amabili, G.A. Holzapfel and C.W. Lim: Polarization-dependent elastic wave control by a novel honeycomb topological metamaterial. 9th International Conference on Mechanical, Aeronautical and Automotive Engineering (ICMAA 2025), Yokohama, Japan, April 2-4, 2025.

37. C. Wang, G. Wang, J. Yan, M. Amabili, G.A. Holzapfel and C.W. Lim: Attenuation of train-induced vibrations using metastructures. 5th International Civil Engineering and Architecture Conference (CEAC 2025), Tokyo, Japan, March 28-31, 2025.

38. M. Rolf-Pissarczyk, K. Bäumler, R. Schussnig, A.L. Marsden, D. Fleischmann and G.A. Holzapfel: Assessment of aortic dissection remodeling: results from an in silico study. Annual Meeting of the Austrian Society for Biomedical Engineering (ÖGBMT), Graz, Austria, October 24-25, 2024.

39. A. Pukaluk, H. Wolinski, G. Leitinger, D. Kolb, Ch. Viertler, P. Regitnig, K. Bredies, T. Pock, G.A. Holzapfel and Gerhard Sommer: Experimental multiscale studies on the passive mechanical behavior of human aortas. Annual Meeting of the Austrian Society for Biomedical Engineering (ÖGBMT), Graz, Austria, October 24-25, 2024.

40. G.A. Holzapfel: Modeling fiber-reinforced biosolids with application to artery walls in health and disease. MECSOL 2024 – 9th International Symposium on Solid Mechanics, Florianópolis, Brazil, October 21-23, 2024 **(plenary speaker).**

41. J.L.M. Thiesen, B. Klahr, T.A. Carniel, G.A. Holzapfel, P.J. Blanco and E.A. Fancello: Enriched computational homogenization scheme for large deformation poromechnics. MECSOL 2024 – 9th International Symposium on Solid Mechanics, Florianópolis, Brazil, October 21-23, 2024.
Oral presentation was awarded the “Best Student Paper“.

42. S. Sherifova, S. Avril and G.A. Holzapfel: Mechanical behavior of the dissected aortic media during radial extension. 19th Biennial Meeting of the ISACB Vienna 2024, Vienna, Austria, October 5-8, 2024.

43. G.A. Holzapfel, M. Rolf-Pissarczyk and A. Pukaluk: Can we prevent aortic dissection? A look to the microstructure of the aorta. London Aorta 2024, London, UK, October 3-4, 2024 **(special invitation speaker).**

44. R. Alberini, A. Spagnoli, M. Javad Sadeghinia, B. Skallerud, M. Terzano and G.A. Holzapfel: Calibration of fiber dispersion models for human skin based on second harmonic generation microscopy and biaxial mechanical tests. XXVI Congresso AIMETA (Associazione Italiana di Meccanica Teorica e Applicata), Naples, Italy, September 2-6, 2024.

45. O. Tehlivets, G. Almer, F. Bogoni, M.S. Brunner, C. Diwoky, S. Frank, H. Habisch, J. Hafner, M. Herrmann, G. Hoefler, G.A. Holzapfel, G. Hörl, D. Kolb, D. Kratky, J. Kukilo, R.P. Kühnlein, M. Lechleitner, G. Leitinger, M. Mack, T. Madl, H. Mangge, D. Pernitsch, B. Pertschy, G.N. Rechberger, S. Schauer, G. Sommer, E. Talker, Y.G. Tehlivets, H. Wolinski and T. Züllig: Homocysteine-associated consequences: focus on methylation inhibition. FASEB Science Research Conferences, B Vitamins and One-Carbon Metabolism, Niagara Falls, New York, August 11-16, 2024.

46. D. Martonová, M. Peirlinck, G.A. Holzapfel, S. Leyendecker and E. Kuhl: Constitutive neural networks for model discovery of myocardial tissue. 19th International Symposium on Computer Methods in Biomechanics and Biomedical Engineering (CMBBE), Vancouver, Canada, July 30 – August 1, 2024.

47. F. Bogoni, M.P. Wollner and G.A. Holzapfel: Experimental methodology for evaluation of the equilibrium and rate-dependent mechanical properties of porcine aortas. 29th Congress of the European Society of Biomechanics (ESB24), Edinburgh, Scotland, June 30 – July 3, 2024.

48. C.S. Holzer, A. Pukaluk, C. Viertler, P. Regitnig, H. Wolinski, E. Machado Charry, A.W. Caulk, M. Eschbach and G.A. Holzapfel: Effects of compressive loading: interplay between deformation and microstructure of the stomach wall. 29th Congress of the European Society of Biomechanics (ESB24), Edinburgh, Scotland, June 30 – July 3, 2024.

49. M.P. Kainz, M. Terzano and G.A. Holzapfel: Hydrogel permeability analysis using microfluidic perfusion. 29th Congress of the European Society of Biomechanics (ESB24), Edinburgh, Scotland, June 30 – July 3, 2024.

50. S.M.B. Kwakman, M. Terzano, M. Rolf-Pissarczyk and G.A. Holzapfel: A parametric 2D model of iliac arteries for balloon angioplasty. 29th Congress of the European Society of Biomechanics (ESB24), Edinburgh, Scotland, June 30 – July 3, 2024.

51. M. Pétré, L. Maes, G. Hanon, M. Dalbosco, G.A. Holzapfel, L. Delannay, G. Kerckhofs and N. Famaey: MicroCT-inspired multiscale modeling of arterial tissue. 29th Congress of the European Society of Biomechanics (ESB24), Edinburgh, Scotland, June 30 – July 3, 2024.

52. A. Pukaluk, D. Haspinger, H. Wolinski, S. Eidenhammer, C. Viertler and G.A. Holzapfel: Evaluation of molecular damage in collagen fibers caused by macroscopic extension of the aortic wall. 29th Congress of the European Society of Biomechanics (ESB24), Edinburgh, Scotland, June 30 – July 3, 2024.

53. S. Sherifova, S. Avril and G.A. Holzapfel: Mechanical behavior of dissected aortic media under radial tensile loading. 29th Congress of the European Society of Biomechanics (ESB24), Edinburgh, Scotland, June 30 – July 3, 2024.

54. G. Sommer, M. Pranger, D. Kolb, G. Leitinger and G.A. Holzapfel: Investigation of ultrastructural vascular damage after in vitro stenting. 29th Congress of the European Society of Biomechanics (ESB24), Edinburgh, Scotland, June 30 – July 3, 2024.

55. M. Terzano, M.P. Kainz and G.A. Holzapfel: Nonlinear biphasic modeling of brain-mimicking hydrogels. 29th Congress of the European Society of Biomechanics (ESB24), Edinburgh, Scotland, June 30 – July 3, 2024.

56. M. Yusefi, E. Agrafiotis, G. Sommer, H. Mächler and G.A. Holzapfel: TEVAR versus open aortic arch intervention in ex vivo perfused human thoracic aortas. 29th Congress of the European Society of Biomechanics (ESB24), Edinburgh, Scotland, June 30 – July 3, 2024.

57. G.A. Holzapfel: The steep rise of biomechanics: current status and future directions. Mechanics and Biomechanics: From the Equation to the Application, Saint-Étienne, France, June 19, 2024.

58. G.A. Holzapfel, K. Bäumler and M. Rolf-Pissarczyk: A patient-specific computational model of aortic dissection considering fluid-structure interaction. 3rd International Conference of Nonlinear Solid Mechanics (ICoNSoM 2024), Cagliari, Italy, June, 11-14, 2024.

59. R. Alberini, A. Spagnoli, M. Sadeghinia, B. Skallerud, M. Terzano and G.A. Holzapfel: Fourier transform-based algorithm for the quantification of the spatial orientation distribution of 3D fiber networks. 9th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS Congress 2024), Lisbon, Portugal, June 3-7, 2024.

60. G.A. Holzapfel, M. Rolf-Pissarczyk, A. Pukaluk and G. Sommer: Microstructural reconstruction of fibrous tissue with corresponding modeling and application to patients. 9th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS Congress 2024), Lisbon, Portugal, June 3-7, 2024 (plenary speaker).

61. G.M. Melito, M. Rolf-Pissarczyk, M. Terzano, M.P. Wollner, G.A. Holzapfel and K. Ellermann: Model validation with global sensitivity analysis for polymeric scaffolds in restorative valves. 9th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS Congress 2024), Lisbon, Portugal, June 3-7, 2024.

62. M. Pétré, L. Maes, G. Hanon, M. Dalbosco, G.A. Holzapfel, L. Delannay, G. Kerckhofs and N.Famaey: MicroCT-inspired multiscale modeling of arterial tissue. 9th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS Congress 2024), Lisbon, Portugal, June 3-7, 2024.

63. M. Rolf-Pissarczyk, K. Bäumler, R. Schussnig, A.L. Marsden, D. Fleischmann and G.A. Holzapfel: A longitudinal study of aortic remodeling in chronic type B dissection with patient-specific fluid–structure interaction models. 9th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS Congress 2024), Lisbon, Portugal, June 3-7, 2024.

64. R. Schussnig, M. Rolf-Pissarczyk, K. Bäumler, T.-P. Fries, G.A. Holzapfel and M. Kronbichler: On the role of tissue mechanics in fluid-structure interaction simulations of patient-specific aortic dissection. 9th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS Congress 2024), Lisbon, Portugal, June 3-7, 2024.

65. M. Terzano and G.A. Holzapfel: Region- and rate-dependent microscale properties of human brain white matter. 9th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS Congress 2024), Lisbon, Portugal, June 3-7, 2024.

66. M.P. Wollner, C.S. Holzer, A.W. Caulk and G.A. Holzapfel: Uncertainty propagation and calibration of the expected behavior of constitutive models. 9th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS Congress 2024), Lisbon, Portugal, June 3-7, 2024.

67. Ch. Hanisch, R. Kirchberger, R. Kargl, F. Lackner, M. Uecker, T.-P. Fries, G.A. Holzapfel, H. Deutschmann, Ch. Mayer, M. Arnreiter, G. Laufer and H. Mächler: Blood flow analysis with computational fluid dynamics of segmented CT compared to 4D flow MRI: Evaluation using a 3D printed model of a type B dissection. Annual meeting of the Austrian Society for Cardiothoracic Surgery, Salzburg, Austria, May 29, 2024.

68. H. Dehghani, G.A. Holzapfel, M. Mittelbronn, S. Belouettar and A. Zilian: Multiscale modelling of the brain tissue as a soft poroelastic composite. The 6th InterPore BeNeLux Chapter Meeting, Luxemburg, April 11-12, 2024.

69. G.A. Holzapfel and M. Rolf-Pissarczyk: Patient-specific computational modeling of aortic dissection. Aortic Biomechanics Symposium, Shanghai (Zhongshan Hospital), China, April 10, 2024.

70. G.A. Holzapfel: Mechanics, modeling and simulation of aortic dissection. Fudan Symposium on Cardiovascular Biomechanics and Medical Imaging, Shanghai, China, April 9, 2024 (keynote speaker).

71. G.A. Holzapfel and R.W. Ogden: The development of a building block for a structural artery model. EUROMECH/ICMS Colloquium 630 on Nonlinear Elasticity: Modelling of Multi-Physics and Applications, Edinburgh, Scotland, March 25-28, 2024 (keynote speaker).

72. M.P. Wollner, C.S. Holzer, A.W. Caulk and G.A. Holzapfel: Probabilistic parameter identification of a rate-dependent constitutive model for porcine stomach tissue. 94th Annual Meeting of the International Association of Applied Mathematics and Mechanics (GAMM 2024), Magdeburg, Germany, March 18-22, 2024.

73. M.P. Kainz, M. Polz, D. Ziesel, T. Rienmüller, T. Rath, K. Binter, M. Terzano and G.A. Holzapfel: Biomimetic hydrogels: Synthesis, characterization, and potential applications in neural tissue engineering. Zagreb Bioelectronics Workshop 23, Zagreb, Croatia, October 22-24, 2023.

74. G.A. Holzapfel: Modeling the microstructure of artery walls with a focus on collagen cross-links. XVII International Conference on Computational Plasticity, COMPLAS 2023, Barcelona, Spain, September 5-7, 2023.

75. M. Terzano, M. Dalbosco and G.A. Holzapfel: Macro and microsclae mechanics of abdominal aortic aneurysms. XVII International Conference on Computational Plasticity, COMPLAS 2023, Barcelona, Spain, September 5-7, 2023.

76. M.P. Wollner, A. Pukaluk, C.S. Holzer and G.A. Holzapfel: Reconstruction of an orientation distribution from planar projections according to the principle of maximum entropy. XVII International Conference on Computational Plasticity, COMPLAS 2023, Barcelona, Spain, September 5-7, 2023.

77. A. Pukaluk, H. Wolinski, G. Leitinger, D. Kolb, C. Viertler, P. Regitnig, G.A. Holzapfel and G. Sommer: Experimental multiscale investigations on the passive mechanical behavior of human aortas: load-induced micro- and nanostructural changes of collagen, elastin, and proteoglycans. Biomechanics in Vascular Biology and Disease: Integrating Vascular Mechanics, Biology and Medicine. South Hadley, USA, August 6-11, 2023.

78. G.A. Holzapfel, A. Pukaluk and G. Sommer: Mechanical behavior of human aortic walls and ultrastructural changes under loading. 14th International Conference on the Mechanical Behaviour of Materials, Santiago, Chile, July 12-14, 2023 (plenary speaker).

79. C. Holzer, A. Pukaluk, C. Viertler, P. Regitnig, A.W. Caulk, M. Eschbach, E.M. Contini, and G.A. Holzapfel: From animal model to human study: A mechanical and structural analysis of the stomach. 28th Congress of the European Society of Biomechanics (ESB23), Maastricht, The Netherlands, July 9-12, 2023.

80. M.P. Kainz, A. Greiner, J. Hinrichsen, D. Kolb, E. Comellas, P. Steinmann, S. Budday, M. Terzano and G.A. A. Holzapfel: Characterizing poro-viscoelastic material properties of brain tissue-mimicking hydrogels. 28th Congress of the European Society of Biomechanics (ESB23), Maastricht, The Netherlands, July 9-12, 2023.

81. A. Pukaluk, H. Wolinski, C. Viertler, P. Regitnig, G.A. Holzapfel and G. Sommer: Load-induced microstructural changes of collagen and elastin fibers in the human aortic wall are layer-specific. 28th Congress of the European Society of Biomechanics (ESB23), Maastricht, The Netherlands, July 9-12, 2023.

82. G. Sommer, M. Pranger, D. Kolb, G. Leitinger, G.A. Holzapfel and G. Sommer: Ultrastructural study of induced vascular damage caused by in vitro stenting. 28th Congress of the European Society of Biomechanics (ESB23), Maastricht, The Netherlands, July 9-12, 2023.

83. M. Amabili, I. Breslavsky, F. Giovanniello, G. Franchini, A. Kassab and G.A. Holzapfel: Effect of smooth-muscle activation in the static and dynamic mechanical characterization of human aortas. 9th International Congress of the Serbian Society of Mechanics, Vrnjačka Banja, Serbia, July 5-7, 2023.

84. G.M. Melito, A. Jafarinia, T.S. Müller, M. Rolf-Pissarczyk, G.A. Holzapfel, G. Brenn, T. Hochrainer and K. Ellermann: Development of a reduced-order model for understanding FL thrombosis in type B aortic dissection using a global sensitivity analysis and polynomial chaos expansion. ECCOMAS Young Investigators Conference (YIC2023), Porto, Portugal, June 19-21, 2023.

85. M. Rolf-Pissarczyk, K. Bäumler, R. Schussnig, T.-P. Fries, D. Fleischmann, A.L. Marsden and G.A. Holzapfel: Studying follow-up type B aortic dissection with patient-specific fluid-structure interaction models. ECCOMAS Young Investigators Conference (YIC2023), Porto, Portugal, June 19-21, 2023.

86. R. Schussnig, M. Rolf-Pissarczyk, K. Bäumler, G.A. Holzapfel, T.-P. Friea and M. Kronbichler: Accelerated Dirichlet-Robin fluid-structure interaction in patient-specific hemodynamics. ECCOMAS Young Investigators Conference (YIC2023), Porto, Portugal, June 19-21, 2023.

87. M. Terzano, S. Saeidi, M. Dalbosco and G.A. Holzapfel: A microstructure-informed model of the white matter of human brain. ECCOMAS Young Investigators Conference (YIC2023), Porto, Portugal, June 19-21, 2023.

88. M.P. Wollner, M. Terzano, M. Rolf-Pissarczyk and G.A. Holzapfel: A general Bayesian framework for calibrating constitutive models. ECCOMAS Young Investigators Conference (YIC2023), Porto, Portugal, June 19-21, 2023.

89. G.A. Holzapfel, A. Pukaluk, G. Sommer and R.W. Ogden: Analysis of the microstructure of biological fiber networks: experimental and modeling aspects. EUROMECH Colloquium 634 on multi-physics of fibrous networks and fibre-composite materials, Eindhoven, The Netherlands, June 19-21, 2023 **(keynote speaker).**

90. G.A. Holzapfel, A. Pukaluk, G. Sommer and R.W. Ogden: Multiscale modeling of collagenous tissues: connecting phenomena at the nano, micro and macro levels. 6th Workshop on Soft Tissue Modelling, Glasgow, UK, June 7-9, 2023 **(special invitation speaker).**

91. C.J. Cyron, K. Linka, S. Sherifova, C. Cavinato, J.D. Humphrey and G.A. Holzapfel: Predicting and understanding the mechanical behavior of soft tissue across the scales by deep learning. 18th International Symposium on Computer Methods in Biomechanics and Biomedical Engineering (CMBBE 2023 Symposium). Paris, France, May 3-5, 2023.

92. M.J. Sadeghinia, R.M. Persson, S. Urheim, G.A. Holzapfel, B. Skallerud and V. Prot: Myxomatous degeneration of the mitral valve: collagen structure and mechanical behavior. 18th International Symposium on Computer Methods in Biomechanics and Biomedical Engineering (CMBBE 2023 Symposium). Paris, France, May 3-5, 2023.

93. A Seeger, I. Stade, J. Romberg, J. Brüning, L. Goubergrits, M. Rolf-Pissarczyk, M. Terzano, G.A. Holzapfel and A. Arndt: Designing and testing an implantable sensor with in-silico techniques. 18th International Symposium on Computer Methods in Biomechanics and Biomedical Engineering (CMBBE 2023 Symposium). Paris, France, May 3-5, 2023.

94. M. Terzano, M. Wollner, M. Rolf-Pissarczyk and G.A. Holzapfel: Fibrous scaffolds for tissue engineering applications: experiments and modeling. International Conference on Structural Integrity and Reliability of Advanced Materials obtained through Additive Manufacturing – SIRAMM23. Timisoara, Romania, March 8-11, 2023.

95. Ch. Mayer, M. Agrafiotis, C. Nebert, P. Regitnig, D. Zimpfer, G.A. Holzapfel and H. Mächler: Early aortic stiffening after TEVAR – An in vitro Mock perfusion study. 52. Jahrestagung der Deutschen Gesellschaft für Thorax-, Herz- und Gefäßchirurgie (HERZMEDIZIN 2023). Hamburg, Germany, February 11-14, 2023.

96. Ch. Mayer, M. Agrafiotis, C. Nebert, P. Regitnig, D. Zimpfer, G.A. Holzapfel and H. Mächler: Aortic stiffening after TEVAR: A mock circulation study. 59th Annual Meeting of The Society of Thoracic Surgeons. San Diego, USA, January 21-23, 2023.

97. M. Amabili, G. Franchini, G.A. Holzapfel and I. Breslavsky: Smooth muscle activation in the static and dynamic mechanical characterization of human aortas. Society of Engineering Science – Annual Technical Meeting, SES2022. College Station, TX, USA, October 16-19, 2022.

98. G.A. Holzapfel: Modeling of fibrous soft tissues in health and disease: state of the art and challenges of the next decade. Society of Engineering Science – Annual Technical Meeting, SES2022. College Station, TX, USA, October 16-19, 2022 **(William Prager Lecture).**

99. C.-H. Lee, S. Pineda-Castillo, T. Gu, D. Laurence, E. Bradshaw, G.A. Holzapfel: Linking region-specific tissue microstructure to the biaxial mechanics of porcine left anterior descending artery. Society of Engineering Science – Annual Technical Meeting, SES2022. College Station, TX, USA, October 16-19, 2022.

100. D. Nordsletten, W. Zhang, J.J. Vallejos, A. Capilnasiu, M. Hadjicharalambous, G. Sommer, R. Sinkus, G.A. Holzapfel: Viscoelastic modeling: from bench to bedside. Society of Engineering Science – Annual Technical Meeting, SES2022. College Station, TX, USA, October 16-19, 2022.

101. M. Rolf-Pissarczyk, M.P. Wollner, G.M. Melito and G.A. Holzapfel: Sensitivity of aortic mechanics to smooth muscle orientation and function. Society of Engineering Science – Annual Technical Meeting, SES2022. College Station, TX, USA, October 16-19, 2022.

102. G.A. Holzapfel and D. Nordsletten: Viscoelastic modeling for the myocardium. Modelling the Cardiac Function: Theory, Numerical Methods, Clinical Applications. Cetraro (CS), Italy, September 30 – October 2, 2022 **(plenary speaker).**

103. A. Jafarinia, G.M. Melito, T.S. Müller, M. Rolf-Pissarcyzk, G.A. Holzapfel, G. Brenn, K. Ellermann and T. Hochrainer: Dominant morphological parameters impacting the false lumen thrombosis in type B aortic dissection. Modelling the Cardiac Function: Theory, Numerical Methods, Clinical Applications. Cetraro (CS), Italy, September 30 – October 2, 2022.

104. Kainz, S. Budday, E. Kuhl and P. Steinmann: The Joy of Brain Mechanics: Experimental Evidence, Modeling Aspects and Recent Advances. The Joy of Mechanics (JoyMech). Gothenburg, Sweden, August 24-26, 2022.

105. A. Greiner, N. Reiter, F. Paulsen, G.A. Holzapfel, P. Steinmann, E. Comellas, and Budday: Poro-viscoelastic effects during biomechanical testing of human brain tissue. 92nd Annual Meeting of the International Association of Applied Mathematics and Mechanics, Aachen, Germany, August 15-19, 2022.

106. A. Greiner, N. Reiter, F. Paulsen, G.A. Holzapfel, P. Steinmann, E. Comellas and S. Budday: Poro-viscoelastic effects during biomechanical testing of human brain tissue. World Congress on Computational Mechanics & 8th Asian Pacific Congress on Computational Mechanics (WCCM-APCOM), Yokohama, Japan, July 31 – August 5, 2022 (digital).

107. A. Greiner, N. Reiter, F. Paulsen, G.A. Holzapfel, P. Steinmann, E. Comellas and S. Budday: Poro-viscoelastic effects during biomechanical testing of human brain tissue. 92nd Annual Meeting of the International Association of Applied Mathematics and Mechanics (GAMM 2022), Aachen, Germany, August 15-19, 2022

108. G.A. Holzapfel, S. Teichtmeister and R.W. Ogden: The need for a constitutive model considering collagen cross-linking. International Workshop on the Evolving Nonlinear Continuum Panorama, Castro Urdiales, Spain, July 11-15, 2022.

109. A. Greiner, N. Reiter, F. Paulsen, G.A. Holzapfel, P. Steinmann, E. Comellas and S. Budday: Poro-viscoelastic effects during biomechanical testing of human brain tissue. 9th World Congress of Biomechanics, Taipei, Taiwan, July 10-14, 2022.

110. A. Pukaluk, H. Wolinski, Ch. Viertler, P. Regitnig, G.A. Holzapfel and G. Sommer: Changes in the microstructure of the human aortic media investigated by multi-photon microscopy under biaxial loading. 9th World Congress of Biomechanics, Taipei, Taiwan, July 10-14, 2022.

111. S. Sherifova, S. Avril and G.A. Holzapfel: Mechanical behavior of the aorta under radial tensile loading. 9th World Congress of Biomechanics, Taipei, Taiwan, July 10-14, 2022.

112. M. Terzano, M.P. Wollner, M. Rolf-Pissarczyk and G.A. Holzapfel: Numerical modeling of the inelastic anisotropic behavior of polymeric scaffolds for tissue engineering. 9th World Congress of Biomechanics, Taipei, Taiwan, July 10-14, 2022.

113. E. Agrafiotis, C. Mayer, G. Sommer, M. Grabenwöger, R. Portugaller, P. Regitnig, H. Mächler and G.A. Holzapfel: Early stiffening of human thoracic aortas after endovascular repair perfused in a mock circulation loop: an in vitro study. 11th European Solid Mechanics Conference (ESMC2022). Galway, Ireland, July 4-8, 2022.

114. C.J. Cyron, K. Linka, S. Sherifova, C. Cavinato, J.D. Humphrey and G.A. Holzapfel: Understanding and predicting the relation between microstructure and macroscopic mechanical properties of arteries by deep learning. 11th European Solid Mechanics Conference (ESMC2022). Galway, Ireland, July 4-8, 2022.

115. M. Dalbosco, M. Terzano, T.A. Carniel, E.A. Fancello and G.A. Holzapfel: Multiscale numerical study of the mechanobiology of abdominal aortic aneurysm growth. 11th European Solid Mechanics Conference (ESMC2022). Galway, Ireland, July 4-8, 2022.

116. D.C. Haspinger and G.A. Holzapfel: About the descriptive and predictive capabilities of two different modeling approaches considering collagen fiber dispersion in arteries. 11th European Solid Mechanics Conference (ESMC2022). Galway, Ireland, July 4-8, 2022.

117. C. Holzer, A. Pukaluk, A.W. Caulk, M. Eschbach, E.M. Contini, G. Sommer and G.A. Holzapfel: Mechanical characterization of porcine gastric tissue. 11th European Solid Mechanics Conference (ESMC2022). Galway, Ireland, July 4-8, 2022.

118. M.P. Kainz, A. Greiner, D. Kolb, M. Terzano, P. Steinmann, S. Budday, G. Sommer and G.A. Holzapfel: Mechanical and structural characterization of poro-viscoelastic properties of brain tissue. 11th European Solid Mechanics Conference (ESMC2022). Galway, Ireland, July 4-8, 2022.

119. M. Rolf-Pissarczyk, M. Wollner and G.A. Holzapfel: Semi-analytical study of the transmural alignment of vascular smooth muscle cells. 11th European Solid Mechanics Conference (ESMC2022). Galway, Ireland, July 4-8, 2022.

120. A. Pukaluk, H. Wolinski, C. Viertler, P. Regitnig, G.A. Holzapfel and G. Sommer: Differences in the microstructural changes induced by equibiaxial loading between the medial and adventitial layers of the human aortas. 11th European Solid Mechanics Conference (ESMC2022). Galway, Ireland, July 4-8, 2022.

121. M.J. Sadeghinia, R.M. Persson, S. Urheim, V.S. Ellensen, R. Haaverstad, G.A. Holzapfel, B. Skallerud and V. Prot: Biomechanics of Barlow mitral valve leaflets: second harmonic generation microscopy and mechanical testing. 11th European Solid Mechanics Conference (ESMC2022). Galway, Ireland, July 4-8, 2022.

122. S. Sherifova, S. Avril and G.A. Holzapfel: Shear strain localization precedes failure in the aortic media under radial tension. 11th European Solid Mechanics Conference (ESMC2022). Galway, Ireland, July 4-8, 2022.

123. G. Sommer, A. Pukaluk, D. Kolb, G. Leitinger and G.A. Holzapfel: Quantification of ultrastructural changes of collagen fibrils and proteoglycans in the biaxially loaded human aortic wall. 11th European Solid Mechanics Conference (ESMC2022). Galway, Ireland, July 4-8, 2022.

124. S. Teichtmeister and G.A. Holzapfel: A constitutive model for fibrous tissues including crosslinks and their dispersion. 11th European Solid Mechanics Conference (ESMC2022). Galway, Ireland, July 4-8, 2022.

125. M. Terzano, M. Dalbosco, S. Sherifova and G.A. Holzapfel: A poro-viscoelastic numerical investigation of dissipative effects in muscular arteries under cyclic loading. 11th European Solid Mechanics Conference (ESMC2022). Galway, Ireland, July 4-8, 2022.

126. M.P. Wollner, M. Rolf-Pissarczyk, M. Terzano and G.A. Holzapfel: Constitutive modeling of scaffold materials for implantable heart valves. 11th European Solid Mechanics Conference (ESMC2022). Galway, Ireland, July 4-8, 2022.

127. M. Amabili, I. Breslavsky, F. Giovanniello, G. Franchini, A. Kassab and G.A. Holzapfel: Effect of smooth muscle activation in the static and dynamic mechanical characterization of human aortas. Biomechanics: Challenges of the next Decade – International Symposium in Honor of Professor Gerhard A. Holzapfel's 60th Birthday, Graz, Austria, June 30 – July 1, 2022.

128. C.J. Cyron, K. Linka, S. Sherifova, C. Cavinato, J.D. Humphrey and G.A. Holzapfel: Predictive constitutive modelling of arterial tissue by machine learning. Biomechanics: Challenges of the next Decade – International Symposium in Honor of Professor Gerhard A. Holzapfel's 60th Birthday, Graz, Austria, June 30 – July 1, 2022.

129. G.A. Holzapfel: My scientific and private life, so far ... Biomechanics: Challenges of the next Decade – International Symposium in Honor of Professor Gerhard A. Holzapfel's 60th Birthday, Graz, Austria, June 30 – July 1, 2022.

130. S. Sherifova, S. Avril and G.A. Holzapfel: Mechanics of the aorta subjected to radial extension. Biomechanics: Challenges of the next Decade – International Symposium in Honor of Professor Gerhard A. Holzapfel's 60th Birthday, Graz, Austria, June 30 – July 1, 2022.

131. E. Agrafiotis, G. Sommer, C. Mayer, M. Grabenwöger, P. Regitnig, H. Mächler and G.A. Holzapfel: Global and local stiffening of human thoracic aortas undergoing TEVAR in vitro: a mock-loop study. 27th Congress of the European Society of Biomechanics (ESB2022), Porto, Portugal, June 26-29, 2022.

132. S. Sherifova, S. Avril and G.A. Holzapfel: Aortic media under radial tension: Global and local effects of relaxation. 27th Congress of the European Society of Biomechanics (ESB2022), Porto, Portugal, June 26-29, 2022.

133. R. Alberini, G.A. Holzapfel, M.J. Sadeghinia, B.H. Skallerud, A. Spagnoli and M. Terzano: Mechanical and microstructural characterization of skin for hyperelastic anisotropic constitutive modeling. 2022 International Conference of Nonlinear Solid Mechanics (2022 ICoNSoM), Alghero, Italy, June, 13-16, 2022.

134. G.A. Holzapfel: Fiber-reinforced biosolids: interaction of microstructure with mechanics. 2022 International Conference of Nonlinear Solid Mechanics (2022 ICoNSoM), Alghero, Italy, June, 13-16, 2022 **(plenary speaker).**

135. M. Terzano, M.P. Wollner, M. Rolf-Pissarczyk and G.A. Holzapfel: A pseudo-viscoelastic anisotropic model for soft fibrous tissues. 2022 International Conference of Nonlinear Solid Mechanics (2022 ICoNSoM), Alghero, Italy, June, 13-16, 2022.

136. Ch. Cyron, K. Linka, S. Sherifova, C. Cavinato, G.A. Holzapfel and J.D. Humphrey: Predictive constitutive modeling of arteries by deep learning: 8th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS Congress 2022), Oslo, Norway, June 5-9, 2022.

137. G.A. Holzapfel, S. Teichtmeister and R.W. Ogden: An arterial constitutive model accounting for collagen cross-linking. 8th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS Congress 2022), Oslo, Norway, June 5-9, 2022.

138. M.J. Sadeghinia, H.M. Aguilera, R.M. Persson, S. Urheim, V.S. Ellensen, R. Haaverstad, G.A. Holzapfel, B. Skallerud and V. Prot: Patient-specific simulation of degenerative mitral valve apparatus. 8th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS Congress 2022), Oslo, Norway, June 5-9, 2022.

139. N. Reiter, E. Griffiths, G.A. Holzapfel, E. Kuhl, P. Steinmann, Ch. Cyron, K. Linka, F. Paulsen and S. Budday: Microstructure-informed constitutive models for human brain tissue. EUROMECH Colloquium 627 on current challenges in soft tissue mechanics, Frankfurt, Germany, April 6-8, 2022.

140. G.A. Holzapfel, R.W. Ogden and St. Teichtmeister: Arterial constitutive modeling with a focus on collagen cross-linking. EUROMECH Colloquium 627 on current challenges in soft tissue mechanics, Frankfurt, Germany, April 6-8, 2022 **(keynote speaker).**

141. S. Sherifova, St. Avril and G.A. Holzapfel: Aortic media under radial tension. EUROMECH Colloquium 627 on current challenges in soft tissue mechanics, Frankfurt, Germany, April 6-8, 2022.

142. G.A. Holzapfel: Advances in mechanics, modeling and simulation of fiber-reinforced solids: applications to soft biological tissues. International Mechanical Engineering

Congress & Exposition (IMECE), Virtual Conference, November 1-5, 2021 **(Warner T. Koiter Lecture).**

143. G. Almer, M. Brunner, A. Schwarz, H. Wolinski, G. Sommer, C. Diwoky, D. Kolb, P. Opriessnig, G. Hörl, A. Groselj-Strele, G. Höfler, G.N. Rechberger, S. Frank, G.A. Holzapfel, D. Kratky, H. Mangge and O. Tehlivets: Vitamin deficiency and homocysteine in atherosclerosis-related changes in the aortic rabbit wall in the absence and presence of hypercholesterolemia. 13th ÖGMBT Annual Meeting (Austrian Association of Molecular Life Sciences and Biotechnology), Vienna, Austria (online), September 20 – October 14, 2021.

144. E. Klimstein, M. Dalbosco and G.A. Holzapfel: Effects of disease progression on mechanical stresses in human abdominal aortic aneurysms. ÖGBMT Annual Meeting 2021 (Austrian Society for Biomedical Engineering), Graz, Austria, September 30 – October 1, 2021.

145. A. Pukaluk, H. Wolinski, C. Viertler, P. Regitnig, G.A. Holzapfel and G. Sommer: An approach for visualization of the interaction between collagen and elastin in loaded human aortic tissues. ÖGBMT Annual Meeting 2021 (Austrian Society for Biomedical Engineering), Graz, Austria, September 30 – October 1, 2021.

146. O. Tehlivets, G. Almer, M. Brunner, A. Schwarz, C. Diwoky, M. Lechleitner, G. Sommer, D. Kolb, H. Wolinski, W.K. Oswald, P. Opriessnig, G. Hörl, A. Groselj-Strele, G. Höfler, G.N. Rechberger, S. Frank, G.A. Holzapfel, D. Kratky and H. Mangge: Involvement of homocysteine in atherosclerosis-related changes in the aortic rabbit wall in the absence and presence of hypercholesterolemia. 13th International Conference One-Carbon Metabolism, B Vitamins and Homocysteine, Poznań, Poland, September 12-16, 2021.

147. G. Almer, M. Brunner, A. Schwarz, C. Diwoky, M. Lechleitner, G. Sommer, D. Kolb, H. Wolinski, W.K. Oswald, P. Opriessnig, G. Hörl, A. Groselj-Strele, G. Höfler, G.N. Rechberger, S. Frank, G.A. Holzapfel, D. Kratky, H. Mangge and O. Tehlivets: Vitamin and choline deficient diet as well as elevation of plasma homocysteine levels induces atherosclerosis-related changes in the aortic rabbit wall in the absence and presence of hypercholesterolemia. VASCMED 2021, Graz, Austria, September 9-10, 2021.

148. M. Dalbosco, T.A. Carniel, E.A. Fancello and G.A. Holzapfel: Numerical aspects of the mechanobiology of collagen growth and remodeling in abdominal aortic aneurysms. 16th International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS XVI), Barcelona, Spain, September 7-10, 2021.

149. D.Ch. Haspinger, S. Klinge and G.A. Holzapfel: Computational modeling of the vesicle-mediated cell transport. 16th International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS XVI), Barcelona, Spain, September 7-10, 2021.

150. S. Klinge, T. Wiegold, R.P. Gilbert and G.A. Holzapfel: The infuence of binder mobility to the viral entry driven by the receptor diffusion. 16th International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS XVI), Barcelona, Spain, September 7-10, 2021.

151. K. Linka, S. Sherifova, C.J. Cyron and G.A. Holzapfel: Predictive constitutive modeling of arteries through deep learning. 16th International Conference on Computational

Plasticity. Fundamentals and Applications (COMPLAS XVI), Barcelona, Spain, September 7-10, 2021.

152. M. Rolf-Pissarczyk, G. Wolkerstorfer, S. Ranftl, A. Pepe, W. von der Linden and G.A. Holzapfel: Uncertainty quantification of stochastic, heterogeneously degraded aortic tissues. 16th International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS XVI), Barcelona, Spain, September 7-10, 2021.

153. S.S. Sajjadinia, B. Carpentieri, D. Shriram and G.A. Holzapfel: Biomechanical modeling of soft tissue multiphysics using hybrid machine learning and efficient finite element analysis. 17th International Symposium on Computer Methods in Biomechanics and Biomedical Engineering and 5th Conference on Imaging and Visualization, Bonn, Germany, September 7-9, 2021.

154. Ch. Mayer, E. Agrafiotis, G. Sommer, M. Grabenwöger, P. Regitnig, H. Portugaller, G.A. Holzapfel and H. Mächler: Effects of TEVAR-Implantation to Thoracic Aortic Tissue during MOCK-Perfusion – first results.

155. G. Almer, H. Wolinski, D. Kolb, G. Sommer, M. Lechleitner, M. Brunner, A. Schwarz, C. Diwoky, W.K. Oswald, P. Opriessnig, G. Hörl, A. Groselj-Strele, G. Höfler, G.N. Rechberger, S. Frank, G.A. Holzapfel, D. Kratky, H. Mangge and O. Tehlivets: Elevated homocysteine leads to macrophage accumulation, altered collagen organization, loss of biomechanical properties of the aorta and impaired vascular reactivity in the absence of hypercholesterolemia in a rabbit model of atherosclerosis. 28th Annual Meeting of the Austrian Atherosclerosis Society (AAS), St. Gilgen am Wolfgangsee, Austria, May 7-8, 2021.

156. G. Almer, M. Brunner, A. Schwarz, C. Diwoky, M. Lechleitner, G. Sommer, D. Kolb, H. Wolinski, W.K. Oswald, P. Opriessnig, G. Hörl, A. Groselj-Strele, G. Höfler, G.N. Rechberger, S. Frank, G.A. Holzapfel, D. Kratky, H. Mangge and O. Tehlivets: Hypercholesterolemia “masks” defects in homocysteine degradation in a rabbit model of atherosclerosis. 28th Annual Meeting of the Austrian Atherosclerosis Society (AAS), St. Gilgen am Wolfgangsee, Austria, May 7-8, 2021.

157. D.W. Laurence, H. Homburg, K.-M. Fung, G.A. Holzapfel, B.N. Bohnstedt and C.-H. Lee: A pilot study on the biomechanical properties of a resected human intracranial aneurysm tissue. BMES 2020 Virtual Annual Meeting, San Diego, California, USA, October 14-17, 2020.

158. G. Almer, P. Opriessnig, C. Diwoky, M. Brunner, W. Oswald, G. Hörl, G. Sommer, H. Wolinski, S. Frank, G. Hoefler, G.A. Holzapfel, G. Rechberger, D. Kratky, H. Mangge, and O. Tehlivets: Impact of elevated plasma homocysteine levels on atherosclerotic transformation of the aorta in a rabbit model. 12th ÖGMBT Annual Meeting (Austrian Association of Molecular Life Sciences and Biotechnology) – a virtual conference, September 21-23, 2020.

159. E. Agrafiotis, M.A. Geith, G.A. Holzapfel, and S. Spiliopoulos: A novel mock circulatory loop for realistic long-term testing of circulatory assist devices and cardiovascular implants. 47th ESAO Congress (European Society for Artificial Organs), Uxbridge, UK, September 8-12, 2020.
Abstract was published in “The International Journal of Artificial Organs”, 2020, Vol. 43(8), 506-555.

160. G. Almer, P. Opriessnig, C. Diwoky, T. Schierling, M. Brunner, W. Oswald, G. Hörl, D. Kolb, G. Sommer, H. Wolinski, S. Frank, G. Hoefler, G.A. Holzapfel, G. Rechberger, D. Kratky, H. Mangge, and O. Tehlivets: Development of atherosclerosis under hyperhomocysteinemic conditions in a rabbit model. ESC Congress 2020 (European Society of Cardiology), Amsterdam, Netherlands, August 29 – September 2, 2020.

161. G. Almer, P. Opriessnig, C. Diwoky, M. Brunner, W. Oswald, G. Hörl, G. Sommer, H. Wolinski, S. Frank, G. Hoefler, G.A. Holzapfel, G. Rechberger, D. Kratky, H. Mangge, and O. Tehlivets: Impact of elevated plasma homocysteine levels on atherosclerotic transformation of the aorta in the absence and presence of hypercholesterolemia in a rabbit model. The Folic Acid, Vitamin B12, and One-Carbon Metabolism Conference – a virtual conference, August 17-18, 2020.

162. S. Budday, F. Paulsen, E. Kuhl, P. Steinmann and G.A. Holzapfel: Microstructure-informed constitutive modeling of human brain tissue. 14th World Congress on Computational Mechanics (WCCM), ECCOMAS Congress 2020, Paris, France, July 19-24, 2020.

163. G.A. Holzapfel and R.W. Ogden: An arterial wall model considering cross-linking. 14th World Congress on Computational Mechanics (WCCM), ECCOMAS Congress 2020, Paris, France, July 19-24, 2020.

164. M. Rolf-Pissarczyk, M. Wollner and G.A. Holzapfel: Semi-analytical investigation on the transmural alignment of vascular smooth muscle cells. 14th World Congress on Computational Mechanics (WCCM), ECCOMAS Congress 2020, Paris, France, July 19-24, 2020.

165. A. Pukaluk, C. Edelsbrunner, H. Wolinski, C. Viertler, P. Regitnig, G.A. Holzapfel and G. Sommer: Multi-photon examination of the microstructure of the human aortic walls under biaxial loading. 26th Congress of the European Society of Biomechanics, Milan, Italy, July 12-15, 2020.

166. S. Sherifova, G. Sommer, B.E. Griffith and G.A. Holzapfel: Interlamellar failure properties of human thoracic aortic media in health and disease. 26th Congress of the European Society of Biomechanics, Milan, Italy, July 12-15, 2020.

167. G. Sommer, A. Pukaluk, D. Kolb-Lenz, G. Leitinger and G.A. Holzapfel: Ultrastructural investigation of collagen and proteoglycans in the loaded human aortic media. 26th Congress of the European Society of Biomechanics, Milan, Italy, July 12-15, 2020.

168. M. Rolf-Pissarczyk, K. Li and G.A. Holzapfel: Computational investigation on the pathological weakening of the aortic media in dissection. SB^3C2020, Summer Biomechanics, Bioengineering and Biotransport Conference, Vail, CO, USA, June 17-20, 2020.

169. G. Almer, P. Opriessnig, C. Diwoky, M. Brunner, W. Oswald, G. Hörl, G. Sommer, H. Wolinski, S. Frank, G. Hoefler, G.A. Holzapfel, G.N. Rechberger, D. Kratky, H. Mangge and O. Tehlivets: Development of atherosclerosis under hyperhomocysteinemic conditions in a rabbit model. AAS (Austrian Atherosclerotic Society) Annual Conference 2020, St. Gilgen, Austria, May 15-16, 2020.

170. G. Almer, P. Opriessnig, C. Diwoky, M. Brunner, W. Oswald, G. Hörl, G. Sommer, H. Wolinski, S. Frank, G. Hoefler, G.A. Holzapfel, G.N. Rechberger, D. Kratky, H. Mangge

and O. Tehlivets: Hyperhomocysteinemia-inducing diet leads to atherosclerotic transformation of the aorta in rabbits in the absence of hypercholesterolemia. 8th Symposium on Lipid and Membrane Biology, Graz, Austria, April 16-18, 2020.

171. D.C. Haspinger, S. Klinge and G.A. Holzapfel: Computational modeling of the passive vesicle-mediated cell transport. 91st Annual Meeting of the International Association of Applied Mathematics and Mechanics (GAMM 2020), Kassel, Germany, March 16-20, 2020.

172. S. Klinge, T. Wiegold, S. Aygün, R. Gilbert and G.A. Holzapfel: On the mechanical modeling of cell components. 91st Annual Meeting of the International Association of Applied Mathematics and Mechanics (GAMM 2020), Kassel, Germany, March 16-20, 2020.

173. G.A. Holzapfel, K. Li and R.W. Ogden: Advances in the modeling of fiber-reinforced solids: Application to fibrous tissues, ECCOMAS Thematic Conference on "Computational Modeling of Complex Materials across the Scales (CMCS)", Glasgow, UK, October 1-4, 2019.

174. G.A. Holzapfel: Patient-specific computer modeling: The potential for the future. Symposium on Solid (Bio)Mechanics: Challenges of the Next Decade, Trondheim, Norway, September 20, 2019.

175. N. Horvat, G.A. Holzapfel and I. Karšaj: Effect of fiber dispersion on abdominal aortic aneurysm growth. 8th International Conference on Computational Bioengineering (ICCB2019), Belgrade, Serbia September 4-6, 2019.

176. D.C. Haspinger, S. Klinge and G.A. Holzapfel: The influence of the cytoskeleton on vesicle-mediated cell transport. 15th International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS XV), Barcelona, Spain, September 3-5, 2019.

177. G.A. Holzapfel, O. Gültekin, S. Priska Hager and H. Dal: A crack phase-field model to analyze aortic dissections. 15th International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS XV), Barcelona, Spain, September 3-5, 2019.

178. K. Li and G.A. Holzapfel: Modeling strain-rate dependency of soft fibrous tissues with a discrete fiber dispersion method. 15th International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS XV), Barcelona, Spain, September 3-5, 2019.

179. M. Rolf-Pissarczyk, K. Li and G.A. Holzapfel: Modeling disease-dependent degradation of elastin during aortic dissection. 15th International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS XV), Barcelona, Spain, September 3-5, 2019.

180. W. Tillmann, S. Klinge, R.P. Gilbert and G.A. Holzapfel: Numerical simulation of the viral entry into a cell by receptor driven endocytosis. The 8th GACM Colloquium on Computational Mechanics (GACM 2019), Kassel, Germany, August 28-30, 2019.

181. O. Gültekin, G.A. Holzapfel and H. Dal: Phase-field approach to model fracture in human aorta. 1st International Workshop on Plasticity, Damage and Fracture of Engineering Materials (IWPDF 2019), Ankara, Turkey, August 22-23, 2019.

182. S. Budday, G.A. Holzapfel, P. Steinmann and E. Kuhl: Human brain tissue testing and modeling across time scales. 16th International Symposium on Computer Methods in Biomechanics and Biomedical Engineering and 4th Conference on Imaging and Visualization, New York City, USA, August 14-16, 2019.

183. N. Horvat, G.A. Holzapfel and I. Karšaj: Numerical implementation of fiber dispersion in a growth and remodeling model. 16th International Symposium on Computer Methods in Biomechanics and Biomedical Engineering and 4th Conference on Imaging and Visualization, New York City, USA, August 14-16, 2019.

184. J.A. Niestrawska, P. Regitnig, C. Viertler, T.U. Cohnert and G.A. Holzapfel: Tissue re-modeling during the pathogenesis of abdominal aortic aneurysms. 16th International Symposium on Computer Methods in Biomechanics and Biomedical Engineering and 4th Conference on Imaging and Visualization, New York City, USA, August 14-16, 2019.

185. A. Pukaluk, A. Wittgenstein, G. Leitinger, D. Kolb-Lenz, G.A. Holzapfel and G. Sommer: Multiscale biomechanical investigation of human aortas: Extracellular matrix ultrastructure under load. 16th International Symposium on Computer Methods in Biomechanics and Biomedical Engineering and 4th Conference on Imaging and Visualization, New York City, USA, August 14-16, 2019.

186. G. Sommer: Simultaneous multiscale assessment of human aortic biomechanics. 16th International Symposium on Computer Methods in Biomechanics and Biomedical Engineering and 4th Conference on Imaging and Visualization, New York City, USA, August 14-16, 2019.

187. S.P. Hager, O. Gültekin and G.A. Holzapfel: A crack phase-field approach to model aortic dissections. 25th Congress of the European Society of Biomechanics, Vienna, Austria, July 7-10, 2019.

188. G.A. Holzapfel and K. Li: A discrete fiber dispersion approach for modeling fiber recruitment and damage. 25th Congress of the European Society of Biomechanics, Vienna, Austria, July 7-10, 2019.

189. A. Pukaluk, H. Wolinski, G.A. Holzapfel and G. Sommer: Multi-photon microscopy examination of the microstructure of human aortic walls under loading. 25th Congress of the European Society of Biomechanics, Vienna, Austria, July 7-10, 2019.

190. S. Sherifova, G. Sommer, B.E. Griffith and G.A. Holzapfel: Influence of the microstructure on failure properties of soft fibrous tissues. 25th Congress of the European Society of Biomechanics, Vienna, Austria, July 7-10, 2019.

191. G. Sommer, A. Wittgenstein, A. Pukaluk, G. Leitinger, D. Kolb-Lenz and G.A. Holzapfel: Multiscale biomechanical investigation of human aortas. 25th Congress of the European Society of Biomechanics, Vienna, Austria, July 7-10, 2019.

192. G.A. Holzapfel, M. Rolf-Pissarczyk and K. Li: Mechanics, modeling and simulation of aortic dissection: the LEAD project of TU Graz. International Workshop on the Multiscale Modeling in Solid Mechanics, Castro Urdiales, Spain, July 1-5, 2019.

193. E. Agrafiotis, M.A. Geith, I. Anders, G.A. Holzapfel, V. Hergesell, O.E. Dapunt and S. Spiliopoulos: CFD analysis of segmented micro-CT data of ventricular assist devices: a comparative study. ASAIO 65th Annual Conference, San Francisco, USA, June 26-29, 2019.

194. C.-H. Lee, C. Ross, D. Laurence, L. Evans, J. Richardson, A. Babu, E. Beyer, Y. Wu, G.A. Holzapfel, A. Mir and H.M. Burkhart: Role of glycosaminoglycans in biaxial mechancal behaviors of porcine atrioventricular heart valve leaflets. Summer Biomechanics, Bioengineering and Biotransport Conference (SB^3C2019), Seven Springs, PA, USA, June 25 -28, 2019.

195. T. Sigaeva, G. Sommer, G.A. Holzapfel and E.S. Di Martino: Three-dimensional anisotropic residual stresses in the abdominal aorta. Summer Biomechanics, Bioengineering and Biotransport Conference (SB^3C2019), Seven Springs, PA, USA, June 25 -28, 2019.

196. N. Horvat, G.A. Holzapfel and I. Karšaj: Influence of fiber dispersion on growth and remodeling of abdominal aortic aneurysms. 6th International Conference on Computational and Mathematical Biomedical Engineering – CMBE2019, Sendai, Japan, June 10-12, 2019.

197. G.A. Holzapfel, K. Li and R.W. Ogden: Biomechanics of fibrous soft tissues: state-of-the-art and challenges ahead. 4th Workshop on Soft Tissue Modelling, Glasgow, UK, June 5-9, 2019 **(special invitation speaker).**

198. N. Horvat, G.A. Holzapfel and I. Karšaj: Influence of fiber dispersion on growth and remodeling of abdominal aortic aneurysms. 4th Workshop on Soft Tissue Modelling, Glasgow, UK, June 5-9, 2019.

199. D. Nordsletten, G. Sommer, R. Sinkus and G.A. Holzapfel: Viscoelastic model of human myocardium. 4th Workshop on Soft Tissue Modelling, Glasgow, UK, June 5-9, 2019.

200. M. Rolf-Pissarczyk, K. Li and G.A. Holzapfel: A continuum approach to model the heterogeneous distribution of elastin degradation in the aortic wall. 4th Workshop on Soft Tissue Modelling, Glasgow, UK, June 5-9, 2019.

201. W. Zhang, G. Sommer, G.A. Holzapfel and D. Nordsletten: Analyzing the role of viscoelasticity in the residual stress in soft tissues: a case study on human aortas. 4th Workshop on Soft Tissue Modelling, Glasgow, UK, June 5-9, 2019.

202. X. Liu, B.H. Skallerud, V.E. Prot and G.A. Holzapfel: An anisotropic growth model for fibrous tissues: continuum formulation and computational aspects. 10th National Conference on Computational Mechanics (MekIT'19), Trondheim, Norway, June 3-4, 2019.

203. S. Budday, G.A. Holzapfel, P. Steinmann and E. Kuhl: Challenges and perspectives in brain tissue testing and modeling. 90th Annual Meeting of the International Association

of Applied Mathematics and Mechanics (GAMM 2019), Vienna, Austria, February 18-22, 2019.

204. J. Eckmann, O. Gültekin and G.A. Holzapfel: Stability of crack growth in anisotropic materials at finite strains. 90th Annual Meeting of the International Association of Applied Mathematics and Mechanics (GAMM 2019), Vienna, Austria, February 18-22, 2019.

205. D.Ch. Haspinger, S. Klinge and G.A. Holzapfel: Modeling the vesicle motion through the cytoplasm. 90th Annual Meeting of the International Association of Applied Mathematics and Mechanics (GAMM 2019), Vienna, Austria, February 18-22, 2019.

206. G.A. Holzapfel, K. Li, R.W. Ogden, S. Sherifova, G. Sommer: Continuous versus discrete modeling of fiber dispersion in fibrous soft tissues. 90th Annual Meeting of the International Association of Applied Mathematics and Mechanics (GAMM 2019), Vienna, Austria, February 18-22, 2019.

207. M. Rolf-Pissarczyk, K. Li and G.A. Holzapfel: Modeling disease-dependent elastin fiber degradation in aortic dissection. 90th Annual Meeting of the International Association of Applied Mathematics and Mechanics (GAMM 2019), Vienna, Austria, February 18-22, 2019.

208. T. Wiegold, S. Klinge, G.A. Holzapfel and R.P. Gilbert: Computational modeling of adhesive contact between a virus and a cell during receptor driven endocytosis. 90th Annual Meeting of the International Association of Applied Mathematics and Mechanics (GAMM 2019), Vienna, Austria, February 18-22, 2019.

209. S. Budday, G. Sommer, M. Sarem, L. Starck, P. Shastri, F. Paulsen, P. Steinmann, E. Kuhl and G.A. Holzapfel: Towards microstructurally motivated constitutive modeling of brain tissue. European-Latin-American Conference of Theoretical and Applied Mechanics (ELACTAM 2019), Havana, Cuba, February 11-13, 2019.

210. M.E. Habenbacher, Z.J. Wang, G.A. Holzapfel, V.Y. Wang, A.A. Young and M.P. Nash: Influence of the reference state on estimators of cardiac contractility. 11th Australasian Biomechanics Conference 2018, Auckland, New Zealand, December 3-5, 2018.

211. S. Sherifova, G. Sommer, B.E. Griffith and G.A. Holzapfel: Failure properties of thoracic aortic media and its microstructure. 42nd Annual Meeting of the Austrian Society of Surgical Research (42. Jahrestagung der Österreichischen Gesellschaft für Chirurgische Forschung), Schladming, Austria, November 15-17, 2018.

212. G. Sommer, J. Niestrawska and G.A. Holzapfel: Importance of the microstructure to the mechanical properties of healthy and aneurysmatic abdominal aortas. 42nd Annual Meeting of the Austrian Society of Surgical Research (42. Jahrestagung der Österreichischen Gesellschaft für Chirurgische Forschung), Schladming, Austria, November 15-17, 2018.

213. M.A. Geith, K. Swidergal, T.G. Schratzenstaller, G.A. Holzapfel and M. Wagner: Numerical analysis of stent delivery systems during pre- and intraoperative processes. 15th German LS-DYNA Forum, Bamberg, Germany, October 15-17, 2018.

214. S. Budday, G. Sommer, P. Steinmann, G.A. Holzapfel and E. Kuhl: Biomechanical characterization of the brain. 13th World Congress in Computational Mechanics (WCCMXIII), New York, USA, July 22-27, 2018.

215. O. Gültekin, H. Dal and G.A. Holzapfel: Numerical modeling of rupture in human arterial walls. 8th World Congress of Biomechanics, Dublin, Ireland, July 8-12, 2018.

216. G.A. Holzapfel: Multiscale mechanics of cardiovascular tissues: from artery tissues to myocardium to filament networks. 8th World Congress of Biomechanics, Dublin, Ireland, July 8-12, 2018 **(special invitation speaker).**

217. K. Li and G.A. Holzapfel: Modeling fiber recruitment and damage with a discrete fiber dispersion method. 8th World Congress of Biomechanics, Dublin, Ireland, July 8-12, 2018.

218. S.-I. Murtada, J. D. Humphrey and G.A. Holzapfel: Multiscale and multiaxial mechanics of vascular smooth muscle contractility. 8th World Congress of Biomechanics, Dublin, Ireland, July 8-12, 2018.

219. J.A. Niestrawska, P. Regitnig, C. Viertler, T.U. Cohnert and G.A. Holzapfel: The role of tissue re-modelling in mechanics and pathogenesis of abdominal aortic aneurysms. 8th World Congress of Biomechanics, Dublin, Ireland, July 8-12, 2018.

220. D. Nordsletten, R. Sinkus and G.A. Holzapfel: Modeling viscoelasticity and frequency response in cardiac muscle. 8th World Congress of Biomechanics, Dublin, Ireland, July 8-12, 2018.

221. R.W. Ogden, G.A. Holzapfel and K. Li: Elasticity models for dispersion in fibrous soft biological tissues. 8th World Congress of Biomechanics, Dublin, Ireland, July 8-12, 2018.

222. S. Sherifova, G. Sommer, B.E. Griffith and G.A. Holzapfel: Failure properties of human thoracic aortas in relation to their microstructure. 8th World Congress of Biomechanics, Dublin, Ireland, July 8-12, 2018.

223. G. Sommer and G.A. Holzapfel: Experimental investigation of the biomechanical response and the microstructure of the ventricular myocardium. 8th World Congress of Biomechanics, Dublin, Ireland, July 8-12, 2018.

224. O. Gültekin, H. Dal and G.A. Holzapfel: A phase-field approach to model aortic dissections. 10th European Solid Mechanics Conference (ESMC2018), Bologna, Italy, July 2-6, 2018.

225. M. Hadjicharalambous, G. Sommer, A. Capilnasiu, A.S. Dokumaci, D. Fovargue, R. Sinkus, G.A. Holzapfel and D. Nordsletten: Understanding the frequency response of the myocardial tissue using rheology and MR-elastography. 10th European Solid Mechanics Conference (ESMC2018), Bologna, Italy, July 2-6, 2018.

226. D.Ch. Haspinger, S. Murtada, J.A. Niestrawska and G.A. Holzapfel: The interrelation between smooth muscle orientation and intracellular filament structure in the human

abdominal aorta: a numerical analysis. 10th European Solid Mechanics Conference (ESMC2018), Bologna, Italy, July 2-6, 2018.

227. G.A. Holzapfel, O. Gültekin and G. Sommer: Viscoelastic modeling of the passive myocardium. 10th European Solid Mechanics Conference (ESMC2018), Bologna, Italy, July 2-6, 2018.

228. K. Li, R.W. Ogden and G.A. Holzapfel: Excluding fibers under compression with a discrete fiber dispersion model. 10th European Solid Mechanics Conference (ESMC2018), Bologna, Italy, July 2-6, 2018.

229. X. Liu, B. Fereidoonnezhad, B. Skallerud and G.A. Holzapfel: Anisotropic growth of arterial walls during the restenosis process. 10th European Solid Mechanics Conference (ESMC2018), Bologna, Italy, July 2-6, 2018.

230. G. Sommer, G. Hohenberger, T.U. Cohnert and G.A. Holzapfel: Biomechanical properties of human subclavian and iliac arteries subjected to extension, inflation and torsion. 10th European Solid Mechanics Conference (ESMC2018), Bologna, Italy, July 2-6, 2018.

231. G.A. Holzapfel: Mechanics, modeling and simulation of aortic dissection. Two years of Method Development for Simulations at the Graz Center of Computational Engineering (40 Forum Akademie), Graz, Austria, June 21, 2018.

232. D.M. Pierce, T. Ricken and G.A. Holzapfel: A hyperelastic biphasic fiber-reinforced model of articular cartilage considering distributed collagen fiber orientations: continuum basis, computational aspects and applications. 15th International Symposium on Computer Methods in Biomechanics and Biomedical Engineering and 3rd Conference on Imaging and Visualization, Lisbon, Portugal, March 26-29, 2018 **(plenary speaker).** On the occasion of the "Best CMBBE Paper Award"

233. S. Budday, G. Sommer, G.A. Holzapfel, P. Steinmann and E. Kuhl: Region- and loading-specific finite viscoelasticity of human brain tissue. 89th Annual Meeting of the International Association of Applied Mathematics and Mechanics (GAMM), Munich, Germany, March 19-23, 2018.

234. G.A. Holzapfel: Cardiovascular tissue mechanics: perspectives in imaging and related modeling and simulation. 7th International Conference on Mechanics of Biomaterials and Tissues, Waikoloa, Hawaii, USA, December 11-14, 2017 **(plenary speaker).**

235. G.A. Holzapfel: How can imaging modalities be used to shed more light upon the modeling of cardiovascular diseases? The 2017 Utah Bioengineering Conference (UBEC), Salt Lake City, USA, December 8, 2017 **(keynote speaker).**

236. G.A. Holzapfel, J.A. Niestrawska and O. Gültekin: Modeling the microstructure and mechanics of human artery walls. 3rd ECCOMAS Thematic Conference on Biomedical Technology 2017 (ICBT17), Hannover, Germany, November 6-8, 2017 **(plenary speaker).**

237. G.A. Slinde, B. Skallerud, G.A. Holzapfel and V. Prot: Non-linear least square fitting of a hyperelastic model to soft tissue experimental data. International Conference on

Computational Science and Engineering – In memory of Hans Petter Langtangen (1962-2016), Oslo, Norway, October 23-25, 2017.

238. M.A. Geith, G. Sommer, T.G. Schratzenstaller and G.A. Holzapfel: Biomechanical and structural quantification of vascular damage: a unique investigation of stent implantation. ARTERY 2017, Pisa, Italy, October 12-14, 2017.
Abstract was published in Artery Research 2017, Volume 20, page 50.

239. S. Budday, G. Sommer, P. Steinmann, G.A. Holzapfel and E. Kuhl: Finite viscoelasticity of human brain tissue under multiple loading conditions. 14th International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS XIV), Barcelona, Spain, September 5-7, 2017.

240. O. Gültekin, H. Dal and G.A. Holzapfel: Phase-field modeling of rupture in soft biological tissues. 14th International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS XIV), Barcelona, Spain, September 5-7, 2017.

241. G.A. Holzapfel: On fiber dispersion models and phase-field modeling of fracture in soft biological tissues. 14th International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS XIV), Barcelona, Spain, September 5-7, 2017 (plenary speaker).

242. K. Li and G.A. Holzapfel: Excluding fibers under compression with a new general invariant in modeling of soft biological tissues. 14th International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS XIV), Barcelona, Spain, September 5-7, 2017.

243. J.A. Niestrawska, D.C. Haspinger and G.A. Holzapfel: Non-symmetric fiber dispersion of the aortic wall: a computational analysis. 14th International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS XIV), Barcelona, Spain, September 5-7, 2017.

244. S. Budday, G. Sommer, P. Steinmann, G.A. Holzapfel and E. Kuhl: Constitutive modeling of human brain tissue. 14th U.S. National Congress on Computational Mechanics (USNCCM14), Montréal, QC, Canada, July 17-20, 2017.

245. G.A. Holzapfel: Structure-function relationships of artery walls in health and disease: from experiments, to imaging and computational modeling. 11th International Conference on Advanced Computational Engineering and Experimenting, ACE-X 2017, Vienna, Austria, July 3-6, 2017 (plenary speaker).

246. M.A. Geith, G. Sommer, T.G. Schratzenstaller and G.A. Holzapfel: First approaches in quantifying acute vascular damage due to stenting. The 23rd Congress of the European Society of Biomechanics, Seville, Spain, July 2-5, 2017.

247. J.A. Niestrawska, D.C. Haspinger and G.A. Holzapfel: Modeling the non-symmetric microstructure of healthy and aneurysmatic abdominal aortas. The 23rd Congress of the European Society of Biomechanics, Seville, Spain, July 2-5, 2017.

248. S. Sherifova, G. Sommer and G.A. Holzapfel: Mechanical strength of human thoracic aortas in health and disease. The 23rd Congress of the European Society of Biomechanics, Seville, Spain, July 2-5, 2017.

249. E. Agrafiotis, S. Spiliopoulos, G. Sommer, M. Geith, G.A. Holzapfel, V. Hergesell and O. Dapunt: Development of a mock circulatory loop for in vitro testing of ventricular assist devices. ASAIO 63rd Annual Conference, Chicago, USA, June 21-24, 2017.
Oral presentation was awarded the second place within the category "ASAIO Mock Circulation Loop Challenge".

250. G.A. Holzapfel and R.W. Ogden: Modeling the microstructure of arterial tissues. Glasgow 3rd Workshop on Soft Tissue Modelling, Glasgow, UK, June 7-9, 2017 **(special invitation speaker).**

251. R.W. Ogden and G.A. Holzapfel: Comparison of elastic constitutive models for fibrous soft biological tissues with dispersed fibres. Glasgow 3rd Workshop on Soft Tissue Modelling, Glasgow, UK, June 7-9, 2017.

252. M. Vasta, A. Gizzi, K. Li, G.A. Holzapfel and A. Pandolfi: A generalized mechanical characterization of the statistical properties of fiber distributed soft solids. Glasgow 3rd Workshop on Soft Tissue Modelling, Glasgow, UK, June 7-9, 2017.

253. G.A. Holzapfel, J.A. Niestrawska, O. Gültekin and R.W. Ogden: The importance of considering the microstructure of soft biological tissues: A general fiber dispersion model with related analysis. Maths from the body, Brescia, Italy, May 29-31, 2017.

254. R.W. Ogden and G.A. Holzapfel: Inclusion and exclusion of compressed fibers in the mechanics of fibrous soft biological tissues. Maths from the body, Brescia, Italy, May 29-31, 2017.

255. C. Birkl, S. Budday, G. Sommer, M. Bauer, P. Steinmann, J. Haybaeck, E. Kuhl, G.A. Holzapfel, F. Fazekas, S. Ropele and C. Langkammer: Mechanical stiffness of human brain tissue is inversely correlated with FA and MTR. ISMRM 25th Annual Meeting & Exhibition, Honolulu, Hawaii, USA, April 22-27, 2017.

256. D. Nordsletten, L. Asner, M. Hadjicharalambous, R. Sinkus and G.A. Holzapfel: Viscoelastic power law model for the mechanical response of human myocardial tissue. 5th International Conference on Computational and Mathematical Biomedical Engineering – CMBE2017, Pittsburgh, PA, USA, April 10-12, 2017.

257. G. Sommer, J.A. Niestrawska, A.R. Babu and G.A. Holzapfel: Importance of the microstructure to the mechanical properties of healthy and aneurysmatic abdominal aortas. The 12th International Symposium on Biomechanics in Vascular Biology and Cardiovascular Disease. Rotterdam, The Netherlands, April 4-5, 2017.

258. H. Dal, O. Gültekin, F. Denli and G.A. Holzapfel: Phase field models for the failure of anisotropic continuum. 88th Annual Meeting of the International Association of Applied Mathematics and Mechanics (GAMM), Weimar, Germany, March 6-10, 2017.

259. S. Klinge, T. Wiegold, G.A. Holzapfel and R.P. Gilbert: The influence of binder mobility to the viral entry driven by the receptor diffusion. 88th Annual Meeting of the International Association of Applied Mathematics and Mechanics (GAMM), Weimar, Germany, March 6-10, 2017.

260. S. Budday, G. Sommer, P. Steinmann, E. Kuhl and G.A. Holzapfel: Experimental and constitutive analyses of human brain tissue investigated under multiple loading

conditions. EUROMECH Colloquium 585: Advanced experimental methods in tissue biomechanics, Burg Warberg, Germany, February 12-16, 2017.

261. G.A. Holzapfel: Biomechanics of aortic walls in health and disease: state of the art and challenges ahead. 6th Munich Vascular Conference 2016, Munich, Germany, December 1-3, 2016 **(keynote speaker).**

262. J. Niestrawska and G.A. Holzapfel: Modeling of microstructure and mechanics of healthy and aneurysmatic abdominal aortas. 14th International Symposium on Computer Methods in Biomechanics and Biomedical Engineering (CMBBE 2016), Tel Aviv, Israel, September 20-22, 2016.

263. M.B. Frank, G.A. Holzapfel and G. deBotton: Micromechanics motivated modeling of fibrous tissues. 24th International Congress of Theoretical and Applied Mechanics (ICTAM2016) of IUTAM, Montréal, Québec, Canada, August 21-26, 2016.

264. G.A. Holzapfel, O. Gültekin, S. Sherifova, G. Sommer and B.E. Griffith: Experimental and computational analysis of aortic dissection. 24th International Congress of Theoretical and Applied Mechanics (ICTAM2016) of IUTAM, Montréal, Québec, Canada, August 21-26, 2016.

265. R.W. Ogden and G.A. Holzapfel: Application of nonlinear elasticity to soft tissue biomechanics (the Hill prize lecture). 24th International Congress of Theoretical and Applied Mechanics (ICTAM2016) of IUTAM, Montréal, Québec, Canada, August 21-26, 2016.

266. M.B. Frank, G.A. Holzapfel and G. deBotton: A micro-mechanically based model for soft collagenous tissues. 7th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2016), Crete Island, Greece, June 5-10, 2016.

267. O. Gültekin, H. Dal and G.A. Holzapfel: A phase-field approach to model fracture of arterial walls. 7th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2016), Crete Island, Greece, June 5-10, 2016.

268. G.A. Holzapfel: Modeling of fiber-reinforced solids with application to soft tissues. 7th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2016), Crete Island, Greece, June 5-10, 2016 **(plenary speaker).**

269. K. Li and G.A. Holzapfel: Implementation of an exponential fiber dispersion model for excluding fibers under compression. 7th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2016), Crete Island, Greece, June 5-10, 2016.

270. J.A. Niestrawska, T.U. Cohnert and G.A. Holzapfel: Mechanics and microstructure of healthy human aortas and AAA tissues: experimental analysis and modeling. 7th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2016), Crete Island, Greece, June 5-10, 2016.

271. G.A. Holzapfel: Experimental, continuum and numerical model approaches to better understand structure and function of the cardiovascular system in health and disease. EPSRC Centre for Multiscale Soft Tissue Mechanics, SofTMech Launch Event, Glasgow, UK, April 21, 2016.

272. S. Klinge, S. Aygün and G.A. Holzapfel: Cross-linked actin networks: Micro- and macroscopic effects. 87th Annual Meeting of the International Association of Applied Mathematics and Mechanics (GAMM) – joint with the "Deutsche Mathematiker-Vereinigung" (DMV), Braunschweig, Germany, March 7-11, 2016.

273. G.A. Holzapfel: Computational modeling: from tissue to cell. 22nd Bioengineering Conference in Ireland, Galway, Ireland, January 22-23, 2016. (pLenary speaker).

274. G. Sommer, M. Andrä and G.A. Holzapfel: Multiaxial mechanical properties of the human myocardium including the microstructure. 6th International Conference on Mechanics of Biomaterials and Tissues, Waikoloa, Hawaii, USA, December 6-10, 2015.

275. G.A. Holzapfel, J.A. Niestrawska, R.W. Ogden and G. Sommer: Cardiovascular solid mechanics: from the cell to the organ. 2nd ECCOMAS Thematic Conference on Biomedical Technology 2015 (ICBT15), Hannover, Germany, October 28-30, 2015 (plenary speaker).

276. G.A. Holzapfel: Computational biomechanics: state of the art and future challenges. 1st Computational Life Sciences Day, Graz, Austria, October 21-22, 2015 (special invitation speaker).

277. R. Gehwolf, A. Liaunigg, C. Lehner, H. Tempfer, A.D. Bradshaw, J.A. Niestrawska, G.A. Holzapfel, H.-C. Bauer and A. Traweger: Age matters – molecular mechanisms contributing to tendon senescence. The BSMB satellite meeting "Advances in tendon research: from bench to bedside", London, UK, September 7-8, 2015.
Abstract was published in "Orthopaedic Proceedings", a supplement to The Bone & Joint Journal (Bone Joint J 2015, 97-B, Supp 11 20).

278. G.A. Holzapfel: A new structural and multiscale approach to model arteries. International Workshop on Modelling across the Biology-Mechanics Interface, Castro Urdiales, Spain, September 1-4, 2015.

279. G.A. Holzapfel: Actin networks: continuum formulation and computational analysis. 13th International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS XIII), Barcelona, Spain, September 1-3, 2015.

280. G.A. Holzapfel: Trends in computational biomechanics: recent developments and future challenges. 8th GRACM International Congress on Computational Mechanics, Volos, Greece, July 12-15, 2015 (plenary speaker).

281. L. Bollmann, R. Shahapure, K. Franze and G.A. Holzapfel: Mechanical characterization of glial cells. 9th European Solid Mechanics Conference (ESMC2015), Madrid, Spain, July 6-10, 2015.

282. J.L. Calvo Gallego, J. Dominguez and G.A. Holzapfel: Influence of periadventitial tissues on the mechanics of the thoracic aorta. 9th European Solid Mechanics Conference (ESMC2015), Madrid, Spain, July 6-10, 2015.

283. B. Fereidoonnezhad, G.A. Holzapfel and R. Naghdabadi: Modeling of stress softening and permanent deformation in abdominial and thoracic aortas. 9th European Solid Mechanics Conference (ESMC2015), Madrid, Spain, July 6-10, 2015.

284. T. Gajewski, K. Szajek, T. Łodygowski and G.A. Holzapfel: Elevated balloon inflation prevents balloon migration: numerical analysis of the medical device. 9th European Solid Mechanics Conference (ESMC2015), Madrid, Spain, July 6-10, 2015.

285. G.A. Holzapfel and R.W. Ogden: A continuum mechanical model for cross-linked F-actin networks. 9th European Solid Mechanics Conference (ESMC2015), Madrid, Spain, July 6-10, 2015 **(keynote speaker).**

286. I. Karšaj, V. Vindiš, L. Virag and G.A. Holzapfel: Arterial growth & remodeling – the finite element implementation. 9th European Solid Mechanics Conference (ESMC2015), Madrid, Spain, July 6-10, 2015.

287. K. Li, R.W. Ogden and G.A. Holzapfel: Computational aspects of a modified fiber distribution model accounting only fibers under extension. 9th European Solid Mechanics Conference (ESMC2015), Madrid, Spain, July 6-10, 2015.

288. J.A. Niestrawska, A.J. Reinisch, A.J. Schriefl, R.W. Ogden and G.A. Holzapfel: Computational modeling of non-symmetric collagen fiber dispersion. 9th European Solid Mechanics Conference (ESMC2015), Madrid, Spain, July 6-10, 2015.

289. R.W. Ogden and G.A. Holzapfel: Modelling non-symmetric collagen fibre dispersion in arterial walls. 9th European Solid Mechanics Conference (ESMC2015), Madrid, Spain, July 6-10, 2015.

290. G. Sommer, S.D. Kohlwein and G.A. Holzapfel: On the identification of the multiaxial mechanical properties of the human myocardium including its microstructure. 9th European Solid Mechanics Conference (ESMC2015), Madrid, Spain, July 6-10, 2015.

291. G.A. Holzapfel: Multiscale modeling of arterial walls considering collagen fiber dispersion and recruitment. Glasgow 2nd Workshop on Soft Tissue Modelling, Glasgow, UK, June 10-12, 2015 **(special invitation speaker).**

292. R.W. Ogden and G.A. Holzapfel: A model of collagen fibre dispersion in arterial walls accounting for recent data highlighting non-symmetry of the dispersion. Glasgow 2nd Workshop on Soft Tissue Modelling, Glasgow, UK, June 10-12, 2015.

293. N. Qi, H. Gao, R.W. Ogden, N.A. Hill, G.A. Holzapfel, H.C. Han and X.Y. Luo: Investigation of the optimal collagen fibre orientation in human iliac arteries. Glasgow 2nd Workshop on Soft Tissue Modelling, Glasgow, UK, June 10-12, 2015.

294. T. Cohnert, J.H. Tong, S. Koter and G.A. Holzapfel: Dissection properties and mass fractions of the AAA wall and the intraluminal thrombus. 4th Munich Aortic & Carotid Conference (MAC 2014), Munich, Germany, December 5-6, 2014.

295. G.A. Holzapfel: Multi-scale modeling of cross-linked actin networks: Continuum formulation and computational analysis. Eindhoven Multiscale Institute (EMI) Symposium on “Mechanically Driven Processes Across Scales”. Eindhoven, The Netherlands, November 7, 2014 **(special invitation speaker).**

296. T. Schmidt, A.J. Schriefl, D. Balzani and G.A. Holzapfel: Modeling supra-physiological loading of human arterial walls – damage, anisotropy and component-specific behavior. BMT 2014, 48th DGBMT Annual Conference, Hannover, Germany, October 8-10, 2014.

297. G.A. Holzapfel, J.H. Tong and T. Cohnert: Biomechanical behavior of diseased arteries with a focus on abdominal aortic aneurysms. 46th Annual Conference of the Austrian Society of Vascular Surgery, Graz, Austria, September 11-13, 2014 **(special invitation speaker).**

298. C. Gerstenberger, G. Sommer, S. Bachna-Rotter, M. Graupp, G.A. Holzapfel, G. Friedrich and M. Gugatschka: Development of a fundamental protocol to determine the biomechanical properties of porcine trachea (in German). 58th Annual Meeting of the Austrian Society of Oto-Rhino-Laryngology, Gmunden, Austria, September 10-14, 2014.

299. T. Gajewski, H. Weisbecker, K. Szajek, T. Łodygowski and G.A. Holzapfel: The influence of different balloon materials on the stress and damage distributions in human thoracic aortas. Biomechanics 2014 (International Conference of the Polish Society of Biomechanics), Łódź, Poland, September 1-3, 2014.

300. G. Sommer, M. Schwarz, A.J. Schriefl, H. Wolinski, S. Kohlwein, Ch. Viertler, P. Regitnig and G.A. Holzapfel: Biomechanical properties, microstructure and constitutive modeling of human ventricular myocardium. EMMC-14 – 14th European Mechanics of Materials Conference, Gothenburg, Sweden, August 27-29, 2014.

301. D.M. Pierce, T. Ricken and G.A. Holzapfel: A new continuum model of cartilage elasticity and permeability facilitates insights on structure-function relationships. 11th World Congress on Computational Mechanics (WCCM XI), 5th European Conference on Computational Mechanics (ECCM V), 6th European Conference on Computational Fluid Dynamics (ECFD VI), Barcelona, Spain, July 20-25, 2014.

302. B.E. Griffith, A. DeAnda, V. Flamini, G.A. Holzapfel, D.M. McQueen and C.S. Peskin: Simulating the dynamics of aortic dissection. 7th World Congress of Biomechanics, Boston, MA July 6-11, 2014.

303. G.A. Holzapfel, M.J. Unterberger and R.W. Ogden: Cross-linked F-actin networks with compliant linker proteins: continuum formulation and numerical analysis. 7th World Congress of Biomechanics, Boston, MA July 6-11, 2014.

304. I. Karšaj, L. Virag, J.D. Humphrey and G.A. Holzapfel: Numerical modeling of the aneurysmal abdominal aortic wall. 7th World Congress of Biomechanics, Boston, MA July 6-11, 2014.

305. D.M. Pierce, F. Maier, H. Weisbecker, C. Viertler, P. Verbrugghe, N. Famaey, I. Fourneau, P. Herijgers and G.A. Holzapfel: Human thoracic and abdominal aortic aneurysmal tissues: damage experiments, analysis and modeling. 7th World Congress of Biomechanics, Boston, MA July 6-11, 2014.

306. M.T. Walsh, E.M. Cunnane, J.J. Mulvihill, A.C. Akyildiz, F.J.H. Gijsen and G.A. Holzapfel: Uniaxial tensile testing approaches for characterisation of atherosclerotic plaques. 7th World Congress of Biomechanics, Boston, MA July 6-11, 2014.

307. J.H. Tong, T. Cohnert, P. Regitnig, J. Kohlbacher, R. Birner-Gruenberger, A.J. Schriefl, G. Sommer, G.A. Holzapfel: Effect of thrombus age in AAA on dissection properties and mass fractions of aneurysm wall. 63rd International Congress of the European Society for Cardiovascular and Endovascular Surgery (ESCVS), Nice, France, April 24-27, 2014.

308. D.M. Pierce, M.J. Unterberger, W. Trobin, T. Ricken and G.A. Holzapfel: A new continuum model incorporating patient-specific statistical fiber orientations provides insight on structure-function relationships in cartilage. 2nd USACM Thematic Conference on Multiscale Methods and Validation in Medicine and Biology, Berkeley, USA, February 13-14, 2014.

309. G.A. Holzapfel: Cardiovascular mechanics: perspectives and challenges. International Symposium on "Modeling and Simulation of the Cardiovascular System Including Processes in Cells and Tissues", Heidelberg University, Germany, February 10-12, 2014 **(special invitation speaker).**

310. G.A. Holzapfel: Mechanics of brain tissue: experimental evidence and modeling aspects. 2nd Oxford Brain Mechanics Workshop, Oxford, UK, January 13-14, 2014 **(special invitation speaker).**

311. G.A. Holzapfel: Biomechanics of arterial walls in health and disease: state of the art and challenges ahead. The 15th International Conference on Biomedical Engineering (ICBME 2013), Singapore, December 4-7, 2013 **(plenary speaker).**

312. G.A. Holzapfel: Structural modeling and simulation of fibrous soft biological tissues with a focus on the microstructure. Biomaterial Modeling Workshop, University of Oxford, UK November 22, 2013.

313. V. Flamini, G.A. Holzapfel, A. DeAnda and B. Griffith: Fluid-structure interaction model of aortic dissection driven by fluid forcing. BMES 2013 Annual Meeting, Seattle, Washington, USA, September 25-28, 2013.

314. T. Schmidt, D. Balzani, A.J. Schriefl and G.A. Holzapfel: Material modeling of the damage behavior of arterial tissues. BMT-2013 – 3-Länder-Tagung der Deutschen, Schweizerischen und Österreichischen Gesellschaft für Biomedizinische Technik, Graz, Austria, September 19-21, 2013 (appeared in „Biomedizinische Technik (Berl.)", 2013:58; Suppl. 1, doi: 10.1515/bmt-2013-4110).

315. A.J. Schriefl, T. Schmidt, D. Balzani and G.A. Holzapfel: Determination of mechanical and microstructural tissue quantities for modeling damage in arterial tissues. BMT-2013 – 3-Länder-Tagung der Deutschen, Schweizerischen und Österreichischen Gesellschaft für Biomedizinische Technik, Graz, Austria, September 19-21, 2013 (appeared in „Biomedizinische Technik (Berl.)", 2013:58; Suppl. 1, doi: 10.1515/bmt-2013-4109).

316. G. Sommer, M. Schwarz, M. Kutschera, R. Kresnik, P. Regitnig, A.J. Schriefl, H. Wolinski, S.D. Kohlwein and G.A. Holzapfel: Biomechanical properties of the human ventricular myocardium. BMT-2013 – 3-Länder-Tagung der Deutschen, Schweizerischen und Österreichischen Gesellschaft für Biomedizinische Technik, Graz, Austria, September 19-21, 2013 (appeared in „Biomedizinische Technik (Berl.)", 2013:58; Suppl. 1, doi: 10.1515/bmt-2013-4108).

317. G.A. Holzapfel, D.M. Pierce and T.E. Fastl: Incorporating three-dimensional residual stresses into patient-specific simulations: examples on abdominal aortic aneurysms. 12th International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS XII), Barcelona, Spain, September 3-5, 2013.

318. T. Schmidt, D. Balzani, A. Schriefl and G.A. Holzapfel: Modeling and experimental investigations of the stress-softening behavior of soft collagenous tissues. 12th

International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS XII), Barcelona, Spain, September 3-5, 2013.

319. M.J. Unterberger, R.W. Ogden and G.A Holzapfel: Constitutive modeling of cross-linked actin gels including the influence of linker proteins and viscoelasticity. 12th International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS XII), Barcelona, Spain, September 3-5, 2013.

320. Q. Nan, H. Gao, R.W. Ogden, N.A. Hill, G.A. Holzapfel and X.Y. Luo: The optimal fibre distribution in an iliac bifurcation model. EUROMECH Colloquium 551 on "Fibre-reinforced Materials: Theory and Applications", Nottingham, UK, September 2-5, 2013.

321. T. Gajewski, H. Weisbecker, G.A. Holzapfel and T. Łodygowski: Implementation of a hyperelastic model for arterial layers considering damage and distributed collagen fiber orientations. 20th International Conference on Computer Methods in Mechanics (CMM), Poznan, Poland, August 27-31, 2013.

322. A.J. Schriefl, T. Schmidt, D. Balzani and G.A. Holzapfel: The influence of supra-physiological loading on mechanical and microstructural tissue quantities. 19th Congress of the European Society of Biomechanics, Patras, Greece, August 25-28, 2013.

323. G.A. Holzapfel: Structurally-based modeling of nonlinear solids with applications to cardiovascular tissues. 4th Canadian Conference on Nonlinear Solid Mechanics (CanCNSM2013), Montréal, Québec, Canada, July 23-26, 2013 **(plenary speaker).**

324. D. Roy, C. Kauffmann, G.A. Holzapfel and G. Soulez: A new framework for finite element analysis of abdominal aortic aneurysms: robust implementation of an existing anisotropic hyperelastic model. 4th Canadian Conference on Nonlinear Solid Mechanics (CanCNSM2013), Montréal, Québec, Canada, July 23-26, 2013.

325. A.J. Schriefl, A.J. Reinisch, H. Wolinski, S.D. Kohlwein and G.A. Holzapfel: Structural differences between healthy and diseased human abdominal aortic walls. 4th Canadian Conference on Nonlinear Solid Mechanics (CanCNSM2013), Montréal, Québec, Canada, July 23-26, 2013.

326. D. Balzani, T. Schmidt, A. Schriefl and G.A. Holzapfel: Damage in arterial tissues – constitutive modeling and related experiments. 12th U.S. National Congress on Computational Mechanics (USNCCM12), Raleigh, North Carolina, July 22-25, 2013.

327. D.M. Pierce, M.J. Unterberger, T. Ricken and G.A. Holzapfel: A microstructurally-based continuum model of cartilage elasticity and Permeability. 12th U.S. National Congress on Computational Mechanics (USNCCM12), Raleigh, North Carolina, July 22-25, 2013.

328. D. Balzani, T. Schmidt, A. Schriefl and G.A. Holzapfel: Constitutive modeling of damage mechanisms in arterial walls and related experimental studies. The International Summer School-Conference “Advanced Problems in Mechanics”, St. Petersburg, Russia, July 1-6, 2013.

329. D.M. Pierce, T.E. Fastl, H. Weisbecker, G.A. Holzapfel, B. Rodriguez-Vila, E.J. Gómez, P. Verbrugghe, I. Fourneau, G. Maleux and P. Herijgers: Method for incorporating

three-dimensional residual stresses into patient-specific simulations of arteries. ASME 2013 Summer Bioengineering Conference, Sunriver, Oregon, USA, June 26-29, 2013.

330. G.A. Holzapfel and R.W. Ogden: The basic building block for a structural model: the past and challenges ahead. International Workshop on New Trends in Solid Mechanics: Coupled Fields and Multi-Scale Modelling, Castro Urdiales, Spain, June 24-28, 2013.

331. G.A. Holzapfel: Constitutive modeling of the myocardium. MPF2013 – V International Symposium on Modeling of Physiological Flows, Chia Laguna, Sardinia, June 11-14, 2013 **(special invitation speaker).**

332. G.A. Holzapfel, J. Tong and T.U. Cohnert: Biomechanical behavior of diseased arteries. 8th European Symposium of Vascular Biomaterials (ESVB 2013). Strasbourg, France, May, 10-11, 2013 **(special invitation speaker).**

333. T. Cohnert, J. Tong, A.J. Schriefl and G.A. Holzapfel: Gender-specific differences in the biomechanical properties of infrarenal aortic aneurysms (in German). 130th Congress of the German Society of Surgery, Munich, Germany, April 30 – May 3, 2013.

334. T. Schmidt, D. Balzani, A. Schriefl and G.A. Holzapfel: Experimental characterization and related modeling of damage mechanisms in soft biological tissues. 11th International Symposium on Computer Methods in Biomechanics and Biomedical Engineering (CMBBE 2013), Salt Lake City, Utah, USA, April 3-7, 2013.

335. T. Schmidt, D. Balzani and G.A. Holzapfel: Comparative study of the influence of statistically distributed microscopic quantities on the damage in collagenous tissues. 84th Annual Meeting of the International Association of Applied Mathematics and Mechanics (GAMM), Novi Sad, Serbia, March 18-22, 2013.

336. G.A. Holzapfel: Arterial wall modeling: state of the art and potential clinical impact. Artery 12, Vienna, Austria, October 18-20, 2012 **(opening lecturer).**

337. J.H. Tong, T. Cohnert and G.A. Holzapfel: Gender differences in the biomechanical properties of abdominal aortic aneurysms. XXVI Annual Meeting of the European Society for Vascular Surgery, Bologna, Italy, September 19-21, 2012.

338. D.M. Pierce, T.E. Fastl, H. Weisbecker, B. Rodriguez-Vila, E.J. Gómez, G.A. Holzapfel: A method for incorporating residual stresses into patient-specific finite element simulations of arteries with an example on AAAs. 6th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2012), Vienna, Austria, September 10-14, 2012.

339. M.J. Unterberger and G.A. Holzapfel: Computational analysis of cross-linked F-actin networks using multi-scale models. 6th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2012), Vienna, Austria, September 10-14, 2012.

340. G.A. Holzapfel, T.S.E. Eriksson, A.J. Prassl and G. Plank: A computational electromechanical model for the myocardium including fiber and sheet disarray. 23rd International Congress of Theoretical and Applied Mechanics (ICTAM2012) of IUTAM, Beijing, China, August 19-24, 2012.

341. D.M. Pierce, T. Ricken and G.A. Holzapfel: Biphasic fiber-reinforced modeling of cartilage with sample-specific distributed collagen fiber orientations. 23rd International Congress of Theoretical and Applied Mechanics (ICTAM2012) of IUTAM, Beijing, China, August 19-24, 2012.

342. J. Tong, T. Cohnert, P. Regitnig and G.A. Holzapfel: Biomechanics of abdominal aortic aneurysms: biaxial experiments and related modeling, tissue dissections and microstructural characterization. 23rd International Congress of Theoretical and Applied Mechanics (ICTAM2012) of IUTAM, Beijing, China, August 19-24, 2012.

343. P.N. Watton, A. Selimovic, H. Chen, G.A. Holzapfel and Y. Ventikos: Modeling the evolution of cerebral aneurysms: biomechanics, mechanobiology and multiscale modeling. 23rd International Congress of Theoretical and Applied Mechanics (ICTAM2012) of IUTAM, Beijing, China, August 19-24, 2012.

344. D. Albrecht, T. Ricken, D. Pierce and G.A. Holzapfel: A biphasic transverse isotropic EM model for cartilage. 8th European Solid Mechanics Conference (ESMC2012), Graz, Austria, July 9-13, 2012.

345. Ch. Augustin, E. Hoetzl, Th. Eriksson, A. Prassl, G.A. Holzapfel, O. Steinbach and G. Plank: Application of advanced bidomain solver techniques to cardiac electromechanics. 8th European Solid Mechanics Conference (ESMC2012), Graz, Austria, July 9-13, 2012.

346. T.S.E. Eriksson, G. Plank and G.A. Holzapfel: A structurally-motivated model for myocardial fiber and sheet disarray. 8th European Solid Mechanics Conference (ESMC2012), Graz, Austria, July 9-13, 2012.

347. T.E. Fastl, D.M. Pierce, H. Weisbecker and G.A. Holzapfel: A method for incorporating residual stresses into finite element simulations with an application to abdominal aortic aneurysms. 8th European Solid Mechanics Conference (ESMC2012), Graz, Austria, July 9-13, 2012.

348. A. Grytsan, P.N. Watton and G.A. Holzapfel: A thick-walled fluid-solid-growth model of abdominal aortic aneurysm evolution. 8th European Solid Mechanics Conference (ESMC2012), Graz, Austria, July 9-13, 2012.

349. D.M. Pierce, T. Ricken and G.A. Holzapfel: Predicting the sample-specific structural and diffusional response of cartilage using DT-MRI. 8th European Solid Mechanics Conference (ESMC2012), Graz, Austria, July 9-13, 2012.

350. A.J. Reinisch, A.J. Schriefl and G.A. Holzapfel: Modeling of dispersed fibers in continua. 8th European Solid Mechanics Conference (ESMC2012), Graz, Austria, July 9-13, 2012.

351. E.I. Romijn, M.B. Lilledahl, D.M. Pierce, G.A. Holzapfel and C. de Lange Davies: 3D quantitative structural analysis of second harmonic generation images of cartilage. 8th European Solid Mechanics Conference (ESMC2012), Graz, Austria, July 9-13, 2012.

352. T. Schmidt, D. Balzani and G.A. Holzapfel: Modeling of stress-softening in collagenous soft tissues. 8th European Solid Mechanics Conference (ESMC2012), Graz, Austria, July 9-13, 2012.

353. A.J. Schriefl, G.A. Holzapfel and J.D. Humphrey: Roles of thrombus and collagen remodeling in intramural dissecting aortic aneurysms. 8th European Solid Mechanics Conference (ESMC2012), Graz, Austria, July 9-13, 2012.

354. G. Sommer, G. Zeindlinger, A. Katzensteiner, A. Schriefl, H. Ainödhofer, A. Saxena and G.A. Holzapfel: Passive mechanical response and residual deformations of ovine esophagus: impact on esophagus tissue engineering. 8th European Solid Mechanics Conference (ESMC2012), Graz, Austria, July 9-13, 2012.

355. A. Truta, A.F. Pop, M. Arghir and G.A. Holzapfel: Aspects of cyclic loading in intervertebral discs. 8th European Solid Mechanics Conference (ESMC2012), Graz, Austria, July 9-13, 2012.

356. J. Tong, T. Cohnert, P. Regitnig, G. Sommer and G.A. Holzapfel: Association of thrombus age with the dissection properties of the intraluminal thrombus and the thrombus-covered wall in abdominal aortic aneurysms. 8th European Solid Mechanics Conference (ESMC2012), Graz, Austria, July 9-13, 2012.

357. M.J. Unterberger and G.A. Holzapfel: Multi-scale modeling of the viscoelastic behavior of cross-linked F-actin networks. 8th European Solid Mechanics Conference (ESMC2012), Graz, Austria, July 9-13, 2012.

358. A. Valentín, J.D. Humphrey and G.A. Holzapfel: A 3-D finite element constrained mixture model of aortic growth and remodeling: theoretical and numerical considerations. 8th European Solid Mechanics Conference (ESMC2012), Graz, Austria, July 9-13, 2012.

359. H. Weisbecker, D.M. Pierce and G.A. Holzapfel: Layer-specific modeling of damage-induced softening in the human aorta and the influence of residual stretches. 8th European Solid Mechanics Conference (ESMC2012), Graz, Austria, July 9-13, 2012.

360. G.A. Holzapfel: Multi-scale modeling of cardiovascular tissues. 18th Congress of the European Society of Biomechanics (ESB2012), Lisbon, Portugal, July 1-4, 2012 **(plenary speaker).**

361. H. Weisbecker, D.M. Pierce, P. Regitnig and G.A. Holzapfel: Damage modeling of the human aorta: influence of collagenase and elastase treatment. 18th Congress of the European Society of Biomechanics (ESB2012), Lisbon, Portugal, July 1-4, 2012.

362. G. Sommer, M. Eder, L. Kovacs, Ch. Müller, P. Regitnig and G.A. Holzapfel: Multiaxial mechanical properties and constitutive modeling of human adipose tissue. EUROMECH Colloquium 534 on Advanced Experimental Approaches and Inverse Problems in Tissue Biomechanics, Saint-Étienne, France, May 29-31, 2012.

363. G.A. Holzapfel, J. Tong, T. Cohnert, P. Regitnig: Recent advances in the biomechanics of abdominal aortic aneurysms. Endocardiovascular Biomechanics Research 2012, Marseille, France, May 3-4, 2012 **(special invitation speaker).**

364. G.A. Holzapfel: Aortic dissection. 3rd Meeting of the EPSRC Patient-Specific Modelling Network. Biomedical Modeling & Translational Research, London, UK, April 16-17, 2012 **(special invitation speaker).**

365. G.A. Holzapfel: Aortic dissection: a mixed numerical/experimental technique. Glasgow 1st Workshop on Soft Tissue Modelling, Glasgow, UK, March 14-16, 2012 **(special invitation speaker).**

366. T. Cohnert, J. Tong, P. Regitnig and G.A. Holzapfel: Biomechanics of AAA and treatment consequences – elastic properties of aneurysm wall and intraluminal thrombus. 12th International Vascular Endovascular Course & 5th European ISVS Congress, Milan, Italy, October 27-29, 2011.

367. G.A. Holzapfel: Modeling and simulation of stent implantation in arteries: opportunities for the future. Colloquium 2011 of the Collaborative Research Centre SFB 599 (Biomaterial Engineering) on "Sustainable Bioresorbable and Permanent Implants of Metallic and Ceramic Materials", Hannover, Germany, October 14-15, 2011.

368. T. Cohnert, J. Tong, P. Regitnig and G.A. Holzapfel: Biomechanische Untersuchungen von Aneurysmawand und intraluminalem Thrombus bei BAA – Einfluß auf die Therapieplanung bei Frauen. 43. Jahrestagung der Österreichischen Gesellschaft für Gefäßchirurgie und 11. Deutsch-Österreichisch-Ungarischer Gefäßkongress, Eisenstadt, Austria, September 29 – October 1, 2011.

369. G.A. Holzapfel: Developments and trends of computational biomechanics. SimTech-Symposium on „Mehrfeldprobleme, Plastizität und Biomechanik", Stuttgart, Germany, September 23, 2011 **(special invitation speaker).**

370. E. Biro, G. Zeindlinger, G.A. Holzapfel and A.K. Saxena: Quantification of structural changes after stretching of ovine esophageal muscle tissue: possible implications in long-gap esophageal atresia repair. 24th International Symposium on Pediatric Surgical Research, Graz, Austria, September 8-10, 2011.

371. G.A. Holzapfel: Modeling and simulation of stent implantation in arteries: opportunities for the future. Hannover, Germany, October 14-15, 2011.

372. E. Ruttenstock, G. Zeindlinger, G. Sommer, G.A. Holzapfel and A. Saxena: Passive mechanical response of Gore-Tex and Surgisis in comparison to native ovine diaphragm: implication on CDH repair. 24th International Symposium on Pediatric Surgical Research, Graz, Austria, September 8-10, 2011.

373. G. Zeindlinger, H. Ainödhofer, G. Sommer, A. Katzensteiner, G.A. Holzapfel and A. Saxena: Passive mechanical response and residual deformations of ovine esophagi: impact on esophagus tissue engineering. 24th International Symposium on Pediatric Surgical Research, Graz, Austria, September 8-10, 2011.

374. G.A. Holzapfel: Structurally-based computation of the biomechanical response of cardiovascular tissues. 11th International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS XI), Barcelona, Spain, September 7-9, 2011 **(plenary speaker).**

375. D. Balzani, G.A. Holzapfel and S. Brinkhues: Modeling of damage in soft biological tissues and application to arterial walls. 11th International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS XI), Barcelona, Spain, September 7-9, 2011.

376. T. Ricken, D.M. Pierce and G.A. Holzapfel: A biphasic transverse isotropic FEM model for cartilage. 11th International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS XI), Barcelona, Spain, September 7-9, 2011.

377. D.M. Pierce, H. Weisbecker, A.J. Schriefl, B.R. Vila, E.J. Gómez Aguilera and G.A. Holzapfel: Modeling aortic tissue and intraluminal thrombus: experimental and numerical results. 2nd International Conference on Material Modelling and 12th European Mechanics of Materials Conference, Paris, France, August 31 – September 2, 2011.

378. G.A. Holzapfel, A. Schriefl, A. Reinisch, D. Pierce, S.C. Murtada, M. Böl and J. Stålhand: Advances in the modeling of soft collagenous tissues: the role of distributed collagen fiber orientations and active tone in arteries. IUTAM-Symposium on Computer Models in Biomechanics: from Nano to Macro, Stanford University, California, USA, August 29 – September 2, 2011 (special invitation speaker).

379. D.M. Pierce, T. Ricken and G.A. Holzapfel: A hyperelastic biphasic fiber-reinforced model of cartilage: formulation, numerical examples and applications. 11th US National Congress on Computational Mechanics (USNCCM 11), Minneapolis and St. Paul, Minnesota, USA, July 25-29, 2011.

380. N. Famaey, E. Kuhl, G.A. Holzapfel and J. Vander Sloten: Experimental study and numerical analysis of arterial clamping. Joint Workshop on New Technologies for Computer/Robot Assisted Surgery, Graz, Austria, July 11-13, 2011.

381. A.J. Schriefl, G. Zeindlinger, D.M. Pierce, P. Regitnig and G.A. Holzapfel: Experimental quantification of the layer-specific distribution of collagen fiber orientations in human descending oarta and common iliac arteries. Joint Workshop on New Technologies for Computer/Robot Assisted Surgery, Graz, Austria, July 11-13, 2011.

382. H. Weisbecker, D.M. Pierce and G.A. Holzapfel: Modeling of damage-induced softening for arterial tissues. Joint Workshop on New Technologies for Computer/Robot Assisted Surgery, Graz, Austria, July 11-13, 2011.

383. N. Famaey, J. Vander Sloten and G.A. Holzapfel: Experimental study and numerical analysis of arterial clamping. International Society of Biomechanics (ISB) 2011, Brussels, Belgium, July 3-7, 2011.

384. A.J. Schriefl, P. Regitnig, D.M. Pierce and G.A. Holzapfel: Layer-specific distributed collagen fiber orientations in human arteries, from thoracic aorta to common iliac artery. ASME 2011 Summer Bioengineering Conference, Farmington, Pennsylvania, USA, June 22-25, 2011.

385. A. Valentín, J.D. Humphrey and G.A. Holzapfel: Roles of elastin, muscle contractility and collagenous stiffening in aortic aging: a thick-walled multi-layered model. ASME 2011 Summer Bioengineering Conference, Farmington, Pennsylvania, USA, June 22-25, 2011.

386. M.J. Unterberger and G.A. Holzapfel: Mechanical properties and multi-scale modeling of biopolymer networks. Workshop on Microscale Modeling in Biomechanics and Mechanobiology, Ericeira, Portugal, May 30 – June 1, 2011.

387. G.A. Holzapfel: How to evaluate the mechanical properties of fresh autologous tissues. 7th European Symposium of Vascular Biomaterials (ESVB 2011). New Endovascular Technologies – From Bench Test to Clinical Practice. Strasbourg, France, May, 13-14, 2011 (special invitation speaker).

388. Ch. Augustin, O. Steinbach and G.A. Holzapfel: Finite element and domain decomposition methods for modeling of biological tissue. 82nd Annual Meeting of the International Association of Applied Mathematics and Mechanics (GAMM), Graz University of Technology, Austria, April 18-22, 2011.

389. M. Böl and G.A. Holzapfel: On a coupled modeling approach for the description of smooth muscle contraction. 82nd Annual Meeting of the International Association of Applied Mathematics and Mechanics (GAMM), Graz University of Technology, Austria, April 18-22, 2011.

390. T. Eriksson, G. Plank and G.A. Holzapfel: A coupled model of the left ventricle including regional differences in structure and function. 82nd Annual Meeting of the International Association of Applied Mathematics and Mechanics (GAMM), Graz University of Technology, Austria, April 18-22, 2011.

391. T.E. Fastl, D.M. Pierce and G.A. Holzapfel: Revisiting the mechanical testing of human arterial tissue considering residual stresses. 82nd Annual Meeting of the International Association of Applied Mathematics and Mechanics (GAMM), Graz University of Technology, Austria, April 18-22, 2011.

392. S.C. Murtada, A. Arner and G.A. Holzapfel: Studying the relevance of filament overlap in smooth muscle contractile units through a structural mechanical framework. 82nd Annual Meeting of the International Association of Applied Mathematics and Mechanics (GAMM), Graz University of Technology, Austria, April 18-22, 2011.

393. D.M. Pierce, T. Ricken and G.A. Holzapfel: A hyperelastic biphasic fiber-reinforced model of articular cartilage: formulation and numerical examples. 82nd Annual Meeting of the International Association of Applied Mathematics and Mechanics (GAMM), Graz University of Technology, Austria, April 18-22, 2011.

394. A.J. Schriefl, D.M. Pierce, P. Regitnig and G.A. Holzapfel: Experimental determination of the distributed collagen fiber orientations in the human descending aorta and common iliac artery. 82nd Annual Meeting of the International Association of Applied Mathematics and Mechanics (GAMM), Graz University of Technology, Austria, April 18-22, 2011.

395. G. Sommer, M. Eder, L. Kovacs, Ch. Müller and G.A. Holzapfel: Mechanical properties of human adipose tissue. 82nd Annual Meeting of the International Association of Applied Mathematics and Mechanics (GAMM), Graz University of Technology, Austria, April 18-22, 2011.

396. J. Tong, T. Cohnert, P. Regitnig and G.A. Holzapfel: An experimental study to investigate the rupture patterns of aortic wall tissue in abdominal aortic aneurysms. 82nd Annual Meeting of the International Association of Applied Mathematics and Mechanics (GAMM), Graz University of Technology, Austria, April 18-22, 2011.

397. M.J. Unterberger and G.A. Holzapfel: Multi-scale modeling of a cell's actin cortex. 82nd Annual Meeting of the International Association of Applied Mathematics and Mechanics (GAMM), Graz University of Technology, Austria, April 18-22, 2011.

398. A. Valentín, J.D. Humphrey and G.A. Holzapfel: A multi-layered, thick-walled constrained mixture model of aortic aging: a computational approach. 82nd Annual Meeting of the International Association of Applied Mathematics and Mechanics (GAMM), Graz University of Technology, Austria, April 18-22, 2011.

399. H. Weisbecker, D.M. Pierce and G.A. Holzapfel: Pseudo-elastic modeling of damage for healthy human aortas with nonatherosclerotic intimal thickening. 82nd Annual Meeting of the International Association of Applied Mathematics and Mechanics (GAMM), Graz University of Technology, Austria, April 18-22, 2011.

400. G. Zeindlinger, A.J. Schriefl, P. Regitnig, D.M. Pierce and G.A. Holzapfel: A sample preparation method for the measurement of distributed collagen fiber orientations in human soft tissues. 82nd Annual Meeting of the International Association of Applied Mathematics and Mechanics (GAMM), Graz University of Technology, Austria, April 18-22, 2011.

401. G.A. Holzapfel: Present and future aspects of biomechanics and modeling in mechanobiology. Meeting on Computer Simulations in Bioengineering, Institution of Mechanical Engineers, London, UK, March 16, 2011 **(keynote speaker).**

402. M.B. Lilledahl, D.M. Pierce, T. Ricken, G.A. Holzapfel and C. de Lange Davies: Structural analysis of articular cartilage using multiphoton microscopy: input for biomechanical modeling. Conference on Multiphoton Microscopy in the Biomedical Sciences XI, San Francisco, USA, January 23-25, 2011.

403. R. Bustamante and G.A. Holzapfel: The problem of computing 3D residual stress distributions in a neo-Hookean tube. 47th Annual Technical Meeting of Society of Engineering Science, Iowa, USA, October 4-6, 2010.

404. G.A. Holzapfel and S. Murtada: Arterial modeling considering the mechanochemical response of smooth muscle cells. 47th Annual Technical Meeting of Society of Engineering Science, Iowa, USA, October 4-6, 2010 **(special invitation speaker).**

405. J.H. Tong, T. Cohnert and G.A. Holzapfel: Experimental investigation and modeling of the intraluminal thrombus and the thrombus-covered wall in abdominal aortic aneurysms. XXIV Annual Meeting of the European Society for Vascular Surgery, Amsterdam, The Netherlands, September 16-19, 2010.

406. T.S.E. Eriksson, R. Höller, G. Plank and G.A. Holzapfel: New material model for the passive response of the myocardium: numerical realization and new experimental data. 6th World Congress on Biomechanics, Singapore, August 1-6, 2010.

407. S. Murtada, A. Arner and G.A. Holzapfel: Relevance of filament overlap in smooth muscle contractile units: experimental and numerical studies. 6th World Congress on Biomechanics, Singapore, August 1-6, 2010.

408. D.M. Pierce, M.B. Lilledahl, C. de Lange Davies and G.A. Holzapfel: Morphological analysis of articular cartilage using multiphoton microscopy as input for constitutive modeling: experiment and mathematical implementation. 6th World Congress on Biomechanics, Singapore, August 1-6, 2010.

409. A. Semilovic, J. Penrose, H. Bogunovic, M.-C. Villa-Uriol, G.A. Holzapfel, Y. Ventikos and P. Watton: A computational framework to explore the role of the pulsatile haemodynamic environment on the development of cerebral aneurysms for patient-specific arterial geometries. 6th World Congress on Biomechanics, Singapore, August 1-6, 2010.

410. J.H. Tong, P. Regitnig and G.A. Holzapfel: Dissection properties and mechanical strength of tissue components in human carotid bifurcations. 6th World Congress on Biomechanics, Singapore, August 1-6, 2010.

411. F.E. Gunawan, M. Boel and G.A. Holzapfel: Finite element framework of the electromechanical coupling of smooth muscles. 9th World Congress on Computational Mechanics and 4th Asian Pacific Congress on Computational Mechanics, Sydney, Australia, July 19-23, 2010.

412. A. Valentín, J.D. Humphrey G.A. Holzapfel: Possible consequences of elastin loss and vascoactive dysfunction in aortic aging, hypertension, and Marfan's syndrome: a thick-walled constrained mixture model. 16th US National Congress of Theoretical and Applied Mechanics (USNCTAM2010), State College, Pennsylvania, USA, June 27-July 2, 2010.

413. G.A. Holzapfel: Modeling of atherosclerotic coronary plaques. Vulnerable Plaque Meeting, VPM 2010, Cascais, Portugal, June 20-23, 2010 **(special invitation speaker).**

414. P. Mortier, G.A. Holzapfel, M. De Beule, D. Van Loo, Y. Taeymans, P. Segers, P. Verdonck and B. Verhegghe: Virtual stent implantation: A novel tool to assess the impact of stent choice. EuroPCR Paris, www.europcr.com, May 25-28, 2010.

415. G.A. Holzapfel: Modeling soft biological tissues with an emphasis on the material characterization of the passive myocardium. SFB Workshop: Methods and Applications of Cardiac Electromechanical Models, Graz, Austria, October 28-31, 2009 **(special invitation speaker).**

416. G.A. Holzapfel: Recent advances in the analysis of evolving discontinuities in biological tissues. 6th International Conference of the Croatian Society of Mechanics (ICCSM), Dubrovnik, Croatia, September 30 – October 2, 2009 **(plenary speaker).**

417. S. Murtada, M. Kroon and G.A. Holzapfel: Dispersion effects of active contractile filaments in smooth muscle cells. 4th International Congress on Computational Bioengineering (ICCB2009) and First European Symposium on Biomedical Integrative Research, Bertinoro (Forli), Italy, September 16-18, 2009.

418. D. Balzani, S. Brinkhues and G.A. Holzapfel: Comparative study of polyconvex strain-energy functions used for the modeling of damage hysteresis in overstretched arterial walls. 7th European Solid Mechanics Conference (ESMC2009), Lisbon, Portugal, September 7-11, 2009.

419. G.A. Holzapfel and R.W. Ogden: A new structurally-based framework for the material characterization of passive myocardium. 7th European Solid Mechanics Conference (ESMC2009), Lisbon, Portugal, September 7-11, 2009.

420. J. Stålhand, A. Klarbring and G.A. Holzapfel: A unified theory for the three-dimensional mechanochemical contraction of smooth muscles. 7th European Solid Mechanics Conference (ESMC2009), Lisbon, Portugal, September 7-11, 2009.

421. P.N. Watton, Y. Ventikos and G.A. Holzapfel: Constitutive modelling of arterial tissue for cerebral aneurysmal disease. 7th European Solid Mechanics Conference (ESMC2009), Lisbon, Portugal, September 7-11, 2009.

422. M. Böl and G.A. Holzapfel: Soft biological tissue activation. Electro-chemomechanical aspects in tissue contraction. 10th International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS X), Barcelona, Spain, September 2-4, 2009.

423. G.A. Holzapfel: Computational mechanics of multi-layered collagenous soft tissues: state of the art and challenges ahead. 10th International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS X), Barcelona, Spain, September2-4, 2009 **(plenary speaker).**

424. G.A. Holzapfel: New tracks in biomechanics in the context of biomedical engineering, biochemistry and biophysics. European Forum Alpbach – Technology Forum, Alpbach, Austria, August 27-29, 2009 **(special invitation speaker).**

425. G.A. Holzapfel: Multi-layered soft collagenous tissues: constitutive modeling and inverse analysis. 1st International Conference on Computational & Mathematical Biomedical Engineering (CMBE), Swansea, UK, June 29 – July 1, 2009 **(keynote speaker).**

426. D. Balzani, S. Brinkhues and G.A. Holzapfel: Modeling aspects of softening hysteresis in soft biological tissues. 8th European Conference on Numerical Mathematics and Advanced Applications (ENUMATH 2009), Uppsala, Sweden, June 29 – July 3, 2009.

427. G.A. Holzapfel: Biomechanics in the interdisciplinary context of bioengineering, biology, chemistry and medicine. NAWI-Graz Workshop, Graz, Austria, June 26, 2009. **(plenary speaker).**

428. P. Mortier, B. Verhegghe, M. De Beule, P. Verdonck and G.A. Holzapfel: Biomechanical analysis of stent placement in a coronary bifurcation considering the anisotropic response of the wall. ASME 2009 Summer Bioengineering Conference, Lake Tahoe, CA, USA, June 17-21, 2009; published in: Proceedings of the ASME Summer Bioengineering Conference – 2009, PT A and B, 1319-1320.

429. D.M. Pierce, W. Trobin, S. Trattnig, H. Bischof and G.A. Holzapfel: DT-MRI based numerical simulation of collagen fiber deformation in human articular cartilage. ASME 2009 Summer Bioengineering Conference, Lake Tahoe, CA, USA, June 17-21, 2009; published in: Proceedings of the ASME Summer Bioengineering Conference – 2009, PT A and B, 275-276.

430. P.N. Watton, Y. Ventikos and G.A. Holzapfel: Coupling the hemodynamic environment to the evolution of cerebral aneurysms. ASME 2009 Summer Bioengineering Conference, Lake Tahoe, CA, USA, June 17-21, 2009; published in: Proceedings of the ASME Summer Bioengineering Conference – 2009, PT A and B, 161-162.

431. S. Murtada, M. Kroon and G.A. Holzapfel: Effekter av statistisk spridning hos de kontraktila filamentents riktning i glatt muskulatur. 2009 Svenska mekanikdagarna, Södertälje, Sweden, June 15-17, 2009.

432. J. Stålhand, A. Klarbring and G.A. Holzapfel: En tredimensionell modell för gladd muskelkontraktion. 2009 Svenska mekanikdagarna, Södertälje, Sweden, June 15-17, 2009.

433. G.A. Holzapfel: Influence of the stent design on the outcome of angioplasty: computational assessment by considering a patient-specific stenosis. 6th European Symposium of Vascular Biomaterials (ESVB 2009). Connecting Biomaterials to Arterial Structures. Strasbourg, France, May, 13-15, 2009 **(special invitation speaker).**

434. G.A. Holzapfel: How to model atherosclerotic plaques and interventional treatments? The 4th International Symposium on Biomechanics in Vascular Biology and Cardiovascular Disease. Rotterdam, The Netherlands, April 16-17, 2009 **(special invitation speaker).**

435. G.A. Holzapfel: Computational biomechanics: implications for clinical medicine. 17th UK National Conference on Computational Mechanics in Engineering (ACME-UK). Nottingham, UK, 6-8, April, 2009 **(plenary speaker).**

436. G.A. Holzapfel and M. Kroon: Wall mechanics of saccular cerebral aneurysms. @neurIST Symposium, Barcelona, Spain, February 11-13, 2009.

437. S. Brinkhues, D. Balzani and G.A. Holzapfel: Simulation of damage hysteresis in soft biological tissues. 80th Annual Meeting of the International Association of Applied Mathematics and Mechanics (GAMM), Gdańsk University of Technology, Poland, February 9-13, 2009.

438. G.A. Holzapfel: Biomechanics illustrated on the cardiovascular system. Colloquium on "Biomedical Engineering on a New Track" organized by the Scientific Society of MDs in the State of Styria. Medical University Graz, January 8, 2009.

439. G.A. Holzapfel and D.E. Kiousis: Experiments, modeling and simulation of vascular implants. Third Viennese Symposium on Biomaterials. Vienna, Austria, November 19-21, 2008 **(keynote speaker).**

440. D.E. Kiousis and G.A. Holzapfel: Vulnerability analysis of atherosclerotic plaques at the carotid bifurcation: a parametric study based on MRI and computational mechanics. Third Viennese Symposium on Biomaterials. Vienna, Austria, November 19-21, 2008.

441. G. Sommer, P. Regitnig and G.A. Holzapfel: Mechanical properties of human carotid arteries: a layer-specific experimental study. Third Viennese Symposium on Biomaterials. Vienna, Austria, November 19-21, 2008.

442. G.A. Holzapfel: Experimental measurements and modeling of 3D fracture in biological

tissues. 11th Engineering Mechanics Symposium. Lunteren, The Netherlands, October 30-31, 2008 **(keynote speaker).**

443. M. Jabareen, L. Sultan, E. Mazza, M. Bauer, M. Bajka and G.A. Holzapfel: Measurement of the mechanical response of the human uterine cervix. Seventh International Conference on the Ultrasonic Measurement and Imaging of Tissue Elasticity, Lake Travis, Austin, Texas, USA, October 27-30, 2008.

444. G.A. Holzapfel: Biomechanical aspects of cerebral aneurysms and stented carotid stenosis. 16st Annual Meeting of the Österreichische Gesellschaft für Neuroradiologie (Neuroradiology), Graz, Austria, October 2-4, 2008 **(special invitation speaker).**

445. G.A. Holzapfel: Numerical treatments of strong discontinuities within soft tissue biomechanics: state of the art and challenges ahead. 21st Chemnitzer FEM Symposium 2008, Chemnitz, Germany, September 22-24, 2008 **(keynote speaker).**

446. G.A. Holzapfel: Biomechanics of the aorta. 2008 Stanford AAA Summit: Strategies for Multidisciplinary Research, Stanford University, USA, September 4-5, 2008 **(special invitation speaker).**

447. M. Kroon and G.A. Holzapfel: Material characterization of biological membranes by inverse analysis. XXII International Congress of Theoretical and Applied Mechanics (ICTAM), Adelaide, Australia, August 24-30, 2008.

448. D. Balzani, S. Brinkhues, G. Sommer and G.A. Holzapfel: Modeling of damage hysteresis in overstretched soft biological tissues. 8th World Congress on Computational Mechanics (WCCM8), 5th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2008), Venice, Italy, June 30 – July 5, 2008.

449. F. Cacho-Nerín, F. Schmid, G.A. Holzapfel, P. Laggner and H. Amenitsch: The microstructure of the adventitia explains its macroscopic mechanical behavior. 8th World Congress on Computational Mechanics (WCCM8), 5th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2008), Venice, Italy, June 30 – July 5, 2008.

450. G.A. Holzapfel, D.E. Kiousis and M. Kroon: On modeling multi-layered soft collagenous tissues. 8th World Congress on Computational Mechanics (WCCM8), 5th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2008), Venice, Italy, June 30 – July 5, 2008.

451. D.E. Kiousis and G.A. Holzapfel: Effects of tissue components on the vulnerability of atherosclerotic plaques: A computational study. 8th World Congress on Computational Mechanics (WCCM8), 5th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2008), Venice, Italy, June 30 – July 5, 2008.

452. M. Kroon and G.A. Holzapfel: Fibroblast-controlled aneurysm growth in a human cerebral artery. 8th World Congress on Computational Mechanics (WCCM8), 5th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2008), Venice, Italy, June 30 – July 5, 2008.

453. S. Murtada, M. Kroon and G.A. Holzapfel: A mechanochemical model for smooth muscle cells and its finite element implementation. 8th World Congress on

Computational Mechanics (WCCM8), 5th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2008), Venice, Italy, June 30 – July 5, 2008.

454. D.M. Pierce, W. Trobin, H. Bischof, S. Trattnig and G.A. Holzapfel: A sample-specific computational model of articular cartilage based on MRI, histology, computer vision and mechanical testing. 8th World Congress on Computational Mechanics (WCCM8), 5th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2008), Venice, Italy, June 30 – July 5, 2008.

455. V. Prot, B. Skallerud and G.A. Holzapfel: Mitral valve finite element analysis using human uniaxial tensile data. 8th World Congress on Computational Mechanics (WCCM8), 5th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2008), Venice, Italy, June 30 – July 5, 2008.

456. G. Sommer, P. Regitnig, L. Koeltringer and G.A. Holzapfel: Biaxial mechanical properties of intact and layer-dissected human carotid arteries at physiological and supra-physiological loadings. 8th World Congress on Computational Mechanics (WCCM8), 5th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2008), Venice, Italy, June 30 – July 5, 2008.

457. G.A. Holzapfel: Current topics in biomechanics within the area of engineering, medicine and biology. Inaugural Lecture (Antrittsvorlesung), Graz University of Technology, Austria, June 5, 2008.

458. M. Kroon and G.A. Holzapfel: Modelling of thin anisotropic collagenous soft biological tissue. 2nd International Conference on Heterogeneous Material Mechanics (ICHMM-2008), Huangshan, P.R. China, June 3-8, 2008.

459. M. Bauer, E. Mazza, A. Nava, M. Bajka, U. Lang and G.A. Holzapfel: Assessment of biomechanical properties of the human uterine cervix. Reproductive Bioengineering 2008, Wenns im Pitztal, Austria, April 1-5, 2008.

460. M. Kroon and G.A. Holzapfel: An inverse method to estimate the material parameters and wall stresses of a saccular cerebral aneurysm. 11th EUROMECH – MECAMAT conference: Mechanics of microstructured solids: cellular materials, fibre reinforced solids and soft tissues, Torino, Italy, March 10-14, 2008.

461. G.A. Holzapfel: Computational aspects in soft tissue mechanics with a focus on the cardiovascular system. Workshop on “Biomechanics and Chemotaxis”, Linz, Austria, December 10-14, 2007 **(special invitation speaker).**

462. G.A. Holzapfel: Failure mechanisms of artery walls: challenge for medicine and engineering. Rotary Club, Graz, Austria, November 26, 2007

463. G.A. Holzapfel: Ein strukturelles Materialmodell für gesunde und erkrankte Arterienwände. ANSYS Conference & 25th CADFEM Users’ Meeting, International Congress Center Dresden, Germany, November 21-23, 2007 **(special invitation speaker).**

464. M. Kroon and G.A. Holzapfel: Saccular aneurysm growth in a human middle cerebral artery: deformation and stress analysis. 44th Annual Technical Meeting Society of Engineering Science (SES), College Station, USA, October 21-24, 2007.

465. P. Watton, Y. Ventikos, P. Hunter, G.A. Holzapfel: Computational modelling of cerebral aneurysm formation and evolution. @neurIST Symposium, Barcelona, Spain, September 13, 2007.

466. G.A. Holzapfel: New aspects of physical modeling and computer simulation of blood vessels: Patient-specific analysis and future trends. The 1st IMACS International Conference on Computational Biomechanics and Biology, University of West Bohemia, Plzeň, Czech Republic, September 10-13, 2007 **(special invitation speaker).**

467. E. Mazza, M. Bauer, M. Bajka and G.A. Holzapfel. Characterizing the mechanical response of soft human tissue for medical applications. IX International Conference on Computational Plasticity (COMPLAS IX), within the Invited Session on "Computational Methods in Biomechanics and Mechanobiology", Barcelona, Spain, September 5-7, 2007.

468. G.A. Holzapfel, G. Sommer and T.C. Gasser: Modeling of arterial dissection. IX International Conference on Computational Plasticity (COMPLAS IX), within the Invited Session on "Computational Methods in Biomechanics and Mechanobiology", Barcelona, Spain, September 5-7, 2007.

469. D.E. Kiousis and G.A. Holzapfel: Computational contact analysis of stents interacting with patient-specific stenotic arteries using smooth surface discretization. IX International Conference on Computational Plasticity (COMPLAS IX), within the Invited Session on "Computational Methods in Biomechanics and Mechanobiology", Barcelona, Spain, September 5-7, 2007.

470. J. Rodríguez, C. Ruiz, M. Doblaré and G.A. Holzapfel: Mechanical Stresses in Abdominal Aortic Aneurysm. Material Anisotropy a Parametric Study. IX International Conference on Computational Plasticity (COMPLAS IX), within the Invited Session on "Computational Methods in Biomechanics and Mechanobiology", Barcelona, Spain, September 5-7, 2007.

471. G.A. Holzapfel: Patient-specific analysis of cardiovascular biomechanics. 2007 Summer Workshop of the European Society of Biomechanics on "Finite Element Modelling in Biomechanics and Mechanobiology", Trinity College Dublin, Ireland, August 26-28, 2007 **(special invitation speaker).**

472. F. Cacho, F. Schmid, G.A. Holzapfel, P. Laggner and H. Amenitsch: From micro to macro: explaining the mechanical behavior of fibrous tissues through their structure. 9th US National Congress on Computational Mechanics, San Francisco, USA, July 22-26, 2007.

473. V. Prot, B. Skallerud and G.A. Holzapfel: Effects of connective tissue pathologies on mitral valve response. International Conference on Modelling of Heterogeneous Materials with Applications in Construction and Biomedical Engineering. Mini-Symposium on "Modelling of biological tissues in health and desease", Prague, Czech Republic, June 25-27, 2007.

474. M. Kroon and G.A. Holzapfel: Theoretical model for saccular cerebral aneurysm growth: Deformation and Stress-analysis. ASME 2007 Summer Bioengineering Conference (SBC2007), Keystone, Colorado, USA, June 20-24.

475. G.A. Holzapfel and M.L. Oyen: Evolving discontinuities in biological tissues. A review and future needs. International Conference on Computational Fracture and Failure of Materials and Structures (ECCOMAS Thematic Conference). Mini-Symposium on "Evolving discontinuities in composite (bio)materials", Nantes, France, June 11-13, 2007.

476. G.A. Holzapfel and D.E. Kiousis: Mechanobiology – Mathematical computation and clinical application with emphasis on smooth contact modeling of balloon angioplasty with stenting. SFB Research Center: Mathematical Optimization and Applications in Biomedical Sciences, Graz, Austria, May 11, 2007.

477. G.A. Holzapfel: Biomechanik – Schulterschluss zwischen Technik und Medizin am Beispiel des Herz-Kreislauf-Systems. Veranstaltungsreihe des Forums Technik und Gesellschaft zum Thema „Mensch und Computer", Graz University of Technology, Austria, May 9, 2007.

478. G.A. Holzapfel and D. Kiousis: Biomechanical characterization of the stented artery. 5th European Symposium of Vascular Biomaterials (ESVB 2007). Fundamentals About Stents II, Strasbourg, France, April 26-27, 2007 **(special invitation speaker).**

479. G.A. Holzapfel: Assessment of plaque stability: A MRI-based computational approach. 2nd Symposium on Biomechanics in Cardiovacular Disease: Shear Stress in Vascular Biology, Rotterdam, The Netherlands, April 19-20, 2007 **(special invitation speaker).**

480. E. Kuhl and G.A. Holzapfel: Stress versus strain-based remodeling in arterial walls. 2nd GAMM Seminar on Continuum Biomechanics, Freudenstadt-Lauterbad, Germany, November 22-24, 2006.

481. G.A. Holzapfel, G. Sommer, T.C. Gasser and P. Regitnig: Patient-specific biomechanical analysis of plaque rupture during balloon angioplasty using MRI and mechanical testing. 11th International Conference on "Human Biomechanics 2006", Hrotovice, Czech Republic, November 13-16, 2006 **(keynote speaker)**.

482. G.A. Holzapfel: Computational biomechanics of atherosclerotic plaques based on MRI. Seminar on Computational Biomechanics (organized by the SINTEF ICT and SINTEF Health Research), Trondheim, Norway, November 2, 2006.

483. G.A. Holzapfel, C.T. Gasser and G. Sommer: Rupture analysis for human atherosclerotic plaques. 19th Nordic Seminar on Computational Mechanics hosted by Lund University, Faculty of Engineering, Lund, Sweden, October 20-21, 2006 **(keynote speaker)**.

484. G.A. Holzapfel: Soft living tissues and rubberlike materials. a comparative study. International Conference on "New Trends in Biomechanical Modelling: from Molecular Statistics to Continuum Mechanics", hosted by the International Center of Mathematical Encouters, Castro Urdiales, Cantabria, Spain, September 25 - 29, 2006.

485. G.A. Holzapfel, C.T. Gasser: Modeling of evolving discontinuities in biological tissues. IUTAM Symposium on "Discretization Methods for Evolving Discontinuities", Lyon, France, September 4-7, 2006 **(special invitation speaker).**

486. G.A. Holzapfel, C.T. Gasser, G. Sommer and R.W. Ogden: Constitutive modeling of soft biological tissue: applications to arterial walls. 6th European Solid Mechanics Conference (ESMC2006), Budapest, Hungary, August 28 – September 1, 2006 **(plenary speaker).**

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512. G.A. Holzapfel: Mechanics of soft biological tissue: multi-disciplinary challenges of academic, industrial and clinical importance. 76th Annual Meeting of the International Association of Applied Mathematics and Mechanics (GAMM), Université du Luxembourg, Luxembourg, March 28 – April 1, 2005 **(plenary speaker)**.

513. G.A. Holzapfel: Challenges in Biomechanics. Workshop on "Biomechanics. An innovative area for present and future experimental and clinical applications", Royal Institute of Technology (KTH), Stockholm, Sweden, March 17, 2005.

514. G.A. Holzapfel: Material stability analysis of soft biological tissues. 1st GAMM Seminar on Continuum Biomechanics, Freudenstadt-Lauterbad, Germany, November 24-26, 2004.

515. G.A. Holzapfel: 3D-Rekonstruktion von atherosklerotischen Arterien basierend auf MRI – Automatische Separierung von Geweben einer Läsion. 1st Partnering Day der Medizinischen Universität Graz. Innovative Forschung für erfolgreiche Unternehmungen, Graz, Austria, November 22, 2004.

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528. M. Auer, P. Regitnig and G.A. Holzapfel: Non-rigid registration for stained histological sections of atherosclerotic arteries. 2nd IASTED International Conference on Biomedical Engineering, CD-ROM", Innsbruck, Austria, February 16-18, 2004.

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530. G.A. Holzapfel, M. Stadler, M. Auer and T.C. Gasser: Effects of mechanical factors such as stent designs on the risk of restenosis after balloon angioplasty – A computational approach. World Congress on Medical Physics and Biomedical Engineering (WC2003). Mini-Symposium on "Vascular Mechanics", Sydney Convention & Exhibition Centre, Sydney, Australia, August 24-29, 2003.

531. F. Cacho, M. Doblare, T.C. Gasser and G.A. Holzapfel: A structural model for arterial walls incorporating the statistical distribution of collagen fiber directions. 7th U.S. National Congress on Computational Mechanics, Albuquerque Convention Center. Mini-Symposium on "Physical and Computational Modeling of Biological Tissues", Albuquerque, New Mexico, July 27-31, 2003.

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(ICMAT) & IUMRS-ICA 2003, Symposium J – Synchrotron Radiation for Advanced Materials Analysis and Processing, Suntec Singapore International Convention & Exhibition Centre, Singapore, 29 June- 4 July, 2003.

536. G.A. Holzapfel: Why do we need more insights in the biomechanics of diseased arteries? Clifford Lectures and Conference on the topic of "Theoretical Fluid Mechanics in Biology", Tulane University, USA, March 23-27, 2003 **(special invitation speaker).**

537. G.A. Holzapfel: FE-Analyse von Arterienwänden und vaskulären Implantaten. Workshop bei SULZER Innotec – Sulzer Markets and Technology AG, Winterthur, Schweiz, March 11, 2003 **(special invitation speaker).**

538. P.J. Elbischger, H. Bischof and G.A. Holzapfel: Robust Segmentation of Homogeneously Oriented Fibrils in Microscopic Biological Soft Tissue Images. 8th Computer Vision Winter Workshop 2003 (Computer Vision – CVWW'03). Valtice, Czech Republic, February 3-6, 2003.

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540. G.A. Holzapfel: Biomechanics and Modeling in Mechanobiology: An Essential Requirement for the Future Direction in Biomedicine and Engineering. Annual Spanish Congress on Biomedical Engineering (XX Congreso Anual de la Sociedad Espanola de Ingeniería Biomédica), Universidad de Zaragoza, Centro Politécnico Superior, Spain, November 27-29, 2002 **(plenary speaker).**

541. G.A. Holzapfel and T.C. Gasser: Discontinuous FE modeling of interface delamination in composites: Application to diseased arteries. Annual Conference on the "Analyses of Structures by means of the Finite Element Method", Prague, Czech Republic, November 14, 2002 **(plenary speaker).**
Abstract was published in *Výpočty konstrukci metodou konečných prvků*, Eds.: J. Plešek and D. Gabriel, p.13.

542. G.A. Holzapfel, T.C. Gasser and C.A.J. Schulze-Bauer: Can we identify vulnerable plaques and the location of plaque rupture with numerical methods? SES 2002 – 39th Annual Technical Meeting Society of Engineering Science. Mini-Symposium on "Active and Passive Models of Biological Tissue and Functional Engineered Tissue", Penn State University, University Park, State College, Pennsylvania, USA, October 13-16, 2002 **(special invitation speaker).**

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551. R. Eberlein, G.A. Holzapfel and C.A.J. Schulze-Bauer: Assessment of a spinal implant by means of accurate FE modeling of intact human intervertebral discs. 5th World Congress on Computational Mechanics, Vienna, Austria, July 7-12, 2002.

552. T.C. Gasser and G.A Holzapfel: Failure analysis of arteries by means of discontinuous FE Modeling. 5th World Congress on Computational Mechanics, Vienna, Austria, July 7-12, 2002.

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554. G.A. Holzapfel and T.C. Gasser: A model for the viscoelastic behavior of fiber-reinforced rubber. Constitutive formulation and FE realization. Workshop on inelasticity and viscoelasticity of rubber: from theory to applications, Vienna, Austria, July 18–19, 2002 (special invitation speaker).

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561. G.A. Holzapfel: Calcification of the Vessel in the Computer. ScienceWeek @ Austria, Highlights of Austrian's Research, Vienna, Austria, June 8-9, 2002.

562. M. Sonka, D.R. Thedens, C. Schulze-Bauer, G.A. Holzapfel, R. Stollberger, L. Bolinger and A. Wahle: Towards MR assessment of plaque vulnerability: image acquisition and segmentation. In: 10th Scientific Meeting of the International Society for Magnetic Resonance in Medicine, (Berkeley, CA), p. 1570, ISMRM, 2002.

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Calcifications, Leucorea, Lutherstadt Wittenberg, June 14-15, 2001 **(special invitation speaker).**

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583. G.A. Holzapfel and T.C. Gasser: Finite element implementation of anisotropic continuum damage for finite elastic strains. 1st European Conference on Computational Mechanics, Munich, Germany, August 31-September 3, 1999.

584. G.A. Holzapfel, C.A.J. Schulze-Bauer and T.C. Gasser: Constitutive formulation and computational aspects of soft tissues. 5th U.S. National Congress on Computational Mechanics, University of Colorado at Boulder, USA, August 4-6, 1999 **(special invitation speaker).**

585. T.C. Gasser and G.A. Holzapfel: An anisotropic multi-surface damage model at large elastic strains and its numerical implementation. EUROMECH Colloquium 394, Theory and Numerics of Anisotropic Materials at Finite Strains, Graz, Austria, March 29-31, 1999.

586. T.C. Gasser and G.A. Holzapfel: A fibre-matrix model for arteries including viscous effects. 3rd World Congress of Biomechanics, Sapporo, Hokkaido, Japan, August 2-8, 1998.

587. G.A. Holzapfel, T.C. Gasser and C.A.J. Schulze-Bauer: Recent developments in the numerical characterization of arterial walls and angioplasty. 3rd World Congress of Biomechanics, Sapporo, Hokkaido, Japan, August 2-8, 1998.

588. G.A. Holzapfel: Recent developments in the numerical simulation of vascular walls and PTA. 4th U.S. National Cong. on Comput. Mech. – 2nd Memorial seminar for Juan C. Simo, San Francisco, CA, USA, August 6-8, 1997 **(special invitation speaker).**

589. G.A. Holzapfel: Balloon angioplasty - new computational trends. 1st Int. Interdisciplinary Conference on Cardiovascular Medicine, Surgery, Science, and Mechanics, Washington DC, USA, June 6-9, 1997 **(special invitation speaker).**

590. G.A. Holzapfel, G.W. Desch and H.W. Weizsäcker: A computational approach in characterizing the biomechanical behavior of vascular walls. 1st Int. Interdisciplinary Conference on Cardiovascular Medicine, Surgery, Science, and Mechanics, Washington DC, USA, June 6-9, 1997.

591. G.A. Holzapfel and T.C. Gasser: A micro-mechanical based constitutive model for vessel walls. 1st Int. Interdisciplinary Conference on Cardiovascular Medicine, Surgery, Science, and Mechanics, Washington DC, USA, June 6-9, 1997.

592. G.A. Holzapfel, S. Reese, M. Schleich and P. Wriggers: A continuum damage model for arteries undergoing balloon angioplasty. 1st Int. Interdisciplinary Conference on

Cardiovascular Medicine, Surgery, Science, and Mechanics, Washington DC, USA, June 6-9, 1997.

593. G.A. Holzapfel: Computer simulation of PTA – a training tool for interventional physicians. Symposium on Surgery of Arteries in femoropopliteal regions, Ljubljana, Slovenia, April 10-12, 1997.

594. G.A. Holzapfel: Physical modeling and finite element analysis in finite elasticity. Annual Scientific Meeting of the Society of Applied Mathematics and Mechanics, University Regensburg, Regensburg, Germany, March 24-27, 1997 **(special invitation speaker).**

595. G.A. Holzapfel: Finite element modelling in vascular mechanics. An application to balloon-angioplasty. Symposium on Continuum Mechanics in Cardiovascular Research, Graz, Austria, October 18, 1996.

596. G.A. Holzapfel: A continuum based framework for the Finite-Element analysis of proximal arteries. 9th International Conference on Mechanics and Biology, Ljubljana, Slovenia, June 30-July 4, 1996.

597. G.A. Holzapfel: A Mathematical Model for Highly Deformable, Thermoelastic Materials with Dissipation. Annual Scientific Meeting of the Society of Applied Mathematics and Mechanics, Charles University Prague, Prague, Czech Republic, May 27-31, 1996.

598. G.A. Holzapfel: Unconditionally stable staggered method for nonlinear thermoviscoelasticity. 3rd Int. Cong. on Indust. Appl. Math., Hamburg, Germany, July 3-7, 1995.

599. G.A. Holzapfel: On the coupled thermomechanical treatment of rubber-elasticity by an unconditionally stable fractional-step method. 3rd U.S. National Cong. on Comput. Mech. – Memorial seminar for Juan C. Simo, Dallas, Texas, USA, June 12-14, 1995 **(special invitation speaker).**

600. G.A. Holzapfel: Tangent moduli for rubber-like materials. 23rd Midwestern Mechanics Conference, University of Nebraska-Lincoln, Lincoln, Nebraska, USA, October 10-13, 1993.

601. G.A. Holzapfel: Application of the two-dimensional hermitian finite-difference method to Reissner-Mindlin-theory of thin shell structures undergoing finite rotations. International Conference on Computational Engineering Science (ICES'91), Melbourne, Australia, August 12-16, 1991.

602. G.A. Holzapfel: Zur Berechnung von endlichen Rotationen schubelastischer Flächentragwerke mit dem Mehrstellenverfahren. Annual Meeting of the International Association of Applied Mathematics and Mechanics (GAMM), Universität Hannover, Hannover, Germany, April 8-12, 1990.

Poster Presentations – (Extended) Abstracts:

603. M.S. Brunner, F. Bogoni, C. Viertler, G.N. Rechberger, D. Kolb, G. Leitinger, Y.G. Tehlivets, G. Almer, G. Hörl, M. Herrmann, G. Sommer, G.A. Holzapfel and O. Tehlivets: Homocysteine leads to an accumulation and fragmentation of aortic elastin, aortic stiffening and media calcification in a rabbit model of atherosclerosis. Gordon

Research Conference: Molecules, Mechanics, and Mechanisms of Elastic Fiber Disease. Manchester, New Hampshire, USA, July 27 – August 1, 2025.

604. S. Lo Franco, M. Terzano, G. Borino, G.A. Holzapfel and F. Parrinello: On a flux-preserving hybrid element for finite poroelasticity. New Horizons in Structural Mechanics, Elasticity and Homogenization, Lucca, Italy, July 28-31, 2025.

605. M.P. Kainz, M. Polz, D. Ziesel, K. Binter, T. Rath, G. Trimmel, M. Nowakowska, M. Üçal, N. Ghaffari-Tabrizi-Wizsy, S. Kienesberger-Feist, R. Winter, S. Hasiba Pappas, T. Rienmüller, C. Baumgartner, M. Terzano and G.A. Holzapfel: Design and characterization of brain tissue mimicking hydrogels for bioelectronics coatings and substrates. 2nd INGE St.-Day, Graz, Austria, December 2, 2024.
In **March 2025,** the paper was awarded the "Inge – St. Best Poster Award 2025". Inge – St aims at bundling the Styrian research potential in neuro-sciences, improving the framework for scientists in this area, and increasing public awareness for the various aspects of this topic.

606. M.P. Kainz, M. Polz, D. Ziesel, J. Fuchs, T. Rienmüller, M. Terzano, Ch. Baumgartner and G.A. Holzapfel: Design and characterization of biomimetic soft tissue hydrogels for coatings and substrates of biomedical devices. OrBItaly (Organic BIoelectronics Italy), Bologna, Italy, September 23-25, 2024.

607. C.S. Holzer, A. Pukaluk, C. Viertler, P. Regitnig, H. Wolinski, A.W. Caulk, M. Eschbach and G.A. Holzapfel: Mechanical and microstructural differences between human and porcine tissues: light shed on the stomach. 29th Congress of the European Society of Biomechanics (ESB24), Edinburgh, Scotland, June 30 – July 3, 2024.

608. M.P. Kainz, M. Polz, D. Ziesel, N.G. Tabrizi-Wizsyn, T. Rienmüller, C. Baumgartner, M. Terzano and G.A. Holzapfel: Evaluation of the biomechanical properties and biointegrability of tissue-mimicking hydrogels. 29th Congress of the European Society of Biomechanics (ESB24), Edinburgh, Scotland, June 30 – July 3, 2024.

609. M.P. Kainz, M. Polz, D. Ziesel, K. Binter, T. Rath, G. Trimmel, M. Nowakowska, M. Üçal, N.G. Tabrizi-Wizsy , S. Kienesberger-Feist, R. Winter, S. Hasiba-Pappas, T. Rienmüller, C. Baumgartner, M. Terzano and G.A. Holzapfel: GELECTRODE: Biomechanical characterization of hydrogel-based soft optoelectronic electrodes for neural tissue stimulation. The 16th Hamlyn Symposium on Medical Robotics, London, UK, June 25-28, 2024.
Poster was awarded with the "Best Poster Presentation Award (1st place)" at the Hamlyn Symposium on Medical Robotics 2024, Imperial College, June 25, 2004.

610. K. Kopczynski, M. Yusefi, E. Agrafiotis, G. Laufer, G. Sommer, G.A. Holzapfel and H. Mächler: Biaxial stretch tests to measure stiffening of the ex vivo perfused human thoracic aortas: aortic arch TEVAR intervention versus Dacron prosthesis. Annual meeting of the Austrian Society for Cardiothoracic Surgery, Salzburg, Austria, May 29, 2024.
Abstract was published in Wiener klinische Wochenschrift, **136 (Suppl. 6)**, 2024, p. 206.

611. J. Mädge, M. Yusefi, E. Agrafiotis, G. Laufer, G. Sommer, G.A. Holzapfel and H. Mächler: Method for measuring the hemodynamic profile after ex vivo-perfused human thoracic aortas: aortic arch TEVAR intervention versus Dacron prosthesis. Annual meeting of the Austrian Society for Cardiothoracic Surgery, Salzburg, Austria, May 29, 2024.
Abstract was published in Wiener klinische Wochenschrift, **136 (Suppl. 6)**, 2024, p. 207.

612. M. Yusefi, E. Agrafiotis, D. Zimpfer, G. Sommer, G.A. Holzapfel and H. Mächler: TEVAR as well as Dacron grafts are no physiological tools for therapy in aortic pathologies. Annual meeting of the Austrian Society for Cardiothoracic Surgery, Salzburg, Austria, May 29, 2024.
Abstract was published in Wiener klinische Wochenschrift, **136 (Suppl. 6)**, 2024, p. 248.

613. O. Tehlivets, G. Almer, M. Brunner, M. Lechleitner, G. Sommer, D. Kolb, G. Leitinger, C. Diwoky, H. Wolinski, H. Habisch, P. Opriessnig, F. Bogoni, D. Pernitsch, M. Kavertseva, B. Bourgeois, J. Kukilo, Y. Tehlivets, A. Schwarz, T. Züllig, V. Bubalo, S. Schauer, A. Groselj-Strele, G. Hoefler, G. Rechberger, M. Herrmann, K. Eller, A.R. Rosenkranz, T. Madl, S. Frank, G.A. Holzapfel, D. Kratky, H. Mangge and G. Hörl: Homocysteine contributes to atherogenic transformation of the aorta in rabbits in the absence of hypercholesterolemia. 9th International Graz Symposium on Lipid and Membrane Biology, Graz, Austria, April 18-20, 2024.

614. C.S. Holzer, A. Pukaluk, M.P. Wollner, H. Wolinski, S. Dietzel, C. Viertler, P. Regitnig, E.M. Charry, A.W. Caulk, M. Eschbach, E.M. Contini and G.A. Holzapfel: Mechanical and structural characterization and comparison of the porcine and human stomach wall. 17th Zurich Summer School on Multiscale Biomedical Imaging. Zurich, Switzerland, September 4-15, 2023.

615. S. Saeidi, M. Terzano and G.A. Holzapfel: Towards the biomechanics of Alzheimer's disease: Computational models. Alzheimer´s Association International Conference, AAIC2023. Amsterdam, Netherlands, July 16-20, 2023.

616. O. Tehlivets, G. Almer, M. Brunner, D. Kolb, G. Leitinger, M. Lechleitner, H. Wolinski, G. Sommer, F. Bogoni, H. Habisch, B. Bourgeois, A.N. Schwarz, S. Schauer, A.Groselj-Strele, C. Diwoky, T. Madl, G. Höfler, G.N. Rechberger, Herrmann, S. Frank, G.A. Holzapfel, D. Kratky, H. Mangge and G. Hörl: Mild elevation of homocysteine leads to fragmentation of aortic elastin, massively decreased total arginine methylation and significantly different metabolic profile in the absence of hypercholesterolemia. 30th Annual Meeting of the Austrian Atherosclerosis Society (AAS). St. Gilgen, Austria, May 12-13, 2023.

617. S.S. Sajjadinia, B. Carpentieri and G.A. Holzapfel: Large-scale numerical modeling of pre-stress in articular cartilage. 18th International Symposium on Computer Methods in Biomechanics and Biomedical Engineering (CMBBE 2023 Symposium). Paris, France, May 3-5, 2023.

618. S.S. Sajjadinia, B. Carpentieri and G.A. Holzapfel: Bridging tissue-scale multi-physics to organ-scale biomechanics through multi-fidelity machine learning. 18th International Symposium on Computer Methods in Biomechanics and Biomedical Engineering (CMBBE 2023 Symposium). Paris, France, May 3-5, 2023.

619. O. Tehlivets , G. Almer, M.S. Brunner, A.N. Schwarz, C. Diwoky, G. Sommer, H. Wolinski, M. Lechleitner, D. Kolb, H. Habisch, B. Bourgeois, G. Leitinger, V. Bubalo, P. Opriessnig, T. Niedrist, S. Schauer, W. Oswald, G. Schoiswohl, G. Marsche, A. Groselj-Strele, G. Hoefler, T. Madl, G.N. Rechberger, M. Herrmann, S. Frank, G.A. Holzapfel, D. Kratky, H. Mangge and G. Hörl: Deficiency of B vitamins and elevated homocysteine lead to atherogenic changes in the absence of hypercholesterolemia in a rabbit of atherosclerosis. FASEB Science Research Conference (SRC) – The Folate, Vitamin B12, and One-Carbon Metabolism Conference. Asheville, NC, USA, August 14–19, 2022.

620. S. Ranftl, M. Rolf-Pissarczyk, G. Wolkerstorfer, A. Pepe, J. Egger, W. von der Linden and G.A. Holzapfel: Modeling of aortic dissection with Beta random fields and uncertainty propagation with a Bayesian variational auto-encoder. International Conference on Bayesian and Maximum Entropy Methods in Science and Engineering (41th MaxEnt2022 Conference), Paris, France, July 18-22, 2022.

621. C. Holzer, A. Pukaluk, H. Wolinski, Ch. Viertler, P. Regitnig, A.W. Caulk, M. Eschbach, E.M. Contini, G. Sommer and G.A. Holzapfel: Mechanical characterization of the porcine stomach wall, complemented by histological staining and second-harmonic generation microscopy. 9th World Congress of Biomechanics, Taipei, Taiwan, July 10-14, 2022.

622. M.P. Kainz, A. Greiner, D. Kolb, M. Terzano, P. Steinmann, S. Budday, G. Sommer and G.A. Holzapfel: Experimental study on the influence of poro-viscoelastic properties of brain tissue. 9th World Congress of Biomechanics, Taipei, Taiwan, July 10-14, 2022.

623. G. Almer, M. Brunner, A. Schwarz, C. Diwoky, M. Lechleitner, G. Sommer, D. Kolb, H. Wolinski, W.K. Oswald, P. Opriessnig, G. Hörl, A. Groselj-Strele, G. Höfler, G.N. Rechberger, S. Frank, G.A. Holzapfel, D. Kratky, H. Mangge and O. Tehlivets: Elevated homocysteine induces atherosclerosis-related changes in aortic rabbit walls in the absence of hypercholesterolemia. P480/#1173, E-Posters Topics: 3. Dyslipidemia and risk factors / 3.08 Novel Risk Factors and Biomarkers. Published in: *Atherosclerosis,* **331** (2021) e208.

624. S.S. Sajjadinia, B. Carpentieri and G.A. Holzapfel: A pointwise evaluation metric to visualize errors in machine learning surrogate models. 3rd International Conference on Machine Learning and Intelligent Systems (MLIS 2021), Xiamen, China, November 8-11, 2021 (online conference).

625. M. Aram, E. Bürk, K. Brodbeck, G. Sommer, G.A. Holzapfel and S. Peldschus: Is axial failure of the arteria meningea media the main mechanism of epidural hematoma? 99. Jahrestagung der Deutschen Gesellschaft für Rechtsmedizin (DGRM 2020) – 99th annual meeting of the German society for forensic medicine, Luzern, Switzerland, September 1-4, 2020.

626. A.R. Babu, T.U. Cohnert and G.A. Holzapfel: Investigation of the microstructural organization and mechanical properties of human abdominal aortic aneurysms. Mechanobiology of Disease, Singapore, September 27-30, 2016.

627. L. Bollmann, R. Shahapure, D.E. Koser, G.A. Holzapfel and K. Franze: Mechanosensitivity of microglia. BIOTEC Forum 2014 on “Biomechanics across scales – molecules, cells, tissues”, Dresden, Germany, December 8-9, 2014.

628. C.M. Augustin, G.A. Holzapfel, O. Steinbach and G. Plank: Scalable parallel methods for the simulation of cardiovascular tissues. 7th World Congress of Biomechanics, Boston, USA, July 6-11, 2014.

629. N. Qi, H. Gao, R.W. Ogden, N.A. Hill, G.A. Holzapfel, H.C. Han and X.Y. Luo: Mechanical analysis of the optimal fibre orientation in human iliac arteries using the kappa-rho model. 7th World Congress of Biomechanics, Boston, USA, July 6-11, 2014.

630. G. Sommer, M. Schwarz, A. Schriefl, H. Wolinski, S. Kohlwein, C. Viertler, P. Regitnig and G.A. Holzapfel: Biomechanical properties and constitutive modeling of human ventricular myocardium. The 15th International Conference on Biomedical Engineering (ICBME 2013), Singapore, December 4-7, 2013.

631. S.C. Murtada, A. Arner and G.A. Holzapfel: Characterizing carotid wall viscosity from smooth muscle active tone. IUTAM-Symposium on Computer Models in Biomechanics: from Nano to Macro, Stanford University, California, USA, August 29 – September 2, 2011.

632. M.J. Unterberger and G.A. Holzapfel: Microstructurally-based modeling of the viscoelastic properties of cross-linked F-actin networks. IUTAM-Symposium on Computer Models in Biomechanics: from Nano to Macro, Stanford University, California, USA, August 29 – September 2, 2011.

633. H. Weisbecker, D.M. Pierce and G.A. Holzapfel: Pseudo-elastic finite element modeling of damage in arterial tissue. IUTAM-Symposium on Computer Models in Biomechanics: from Nano to Macro, Stanford University, California, USA, August 29 – September 2, 2011.

634. T.S.E. Eriksson, G. Plank and G.A. Holzapfel: Structural effects on ventricular response: 4th Cardiac Physiome Workshop, Oxford, UK, July 8-10, 2011.

635. D.M. Pierce, T.U. Cohnert, J. Vander Sloten and G.A. Holzapfel: A study of stresses in the intraluminal thrombus and arterial wall of abdominal aortic aneurysms: Input for the European Commission Project SCATh – Smart Catheterization. 6th World Congress on Biomechanics, Singapore, August 1-6, 2010.

636. M. Bauer, E. Mazza, M. Jabareen, L. Sultan, M. Bajka, U. Lang, R. Zimmermann, G.A. Holzapfel: In vivo biomechanical testing of the human uterine cervix in pregnancy using an aspiration device. 56th Annual Scientific Meeting of the Society for Gynecologic Investigation. Glasgow, Scotland, March 17-21, 2009.
Abstract was published in Reproductive Sciences, 16 (Supplement), 197A-197A, March 2009, 197A.

637. T. Eriksson, G. Plank and G.A. Holzapfel: Constitutive models describing the mechanics of the heart. Third Viennese Symposium on Biomaterials. Vienna, Austria, November 19-21, 2008.

638. J.H. Tong, P. Regitnig and G.A. Holzapfel: Dissection properties and mechanical strength of tissue components in human carotid bifurcations. Third Viennese Symposium on Biomaterials. Vienna, Austria, November 19-21, 2008.

639. S. Murtada, M. Kroon and G.A. Holzapfel: Mechanical modeling of calcium activated contraction of smooth muscle cells. IUTAM Symposium on "Cellular, Molecular and Tissue Mechanics", Woods Hole, Cape Cod, Massachusetts, USA, June 18-21, 2008.

640. M. Kroon and G.A. Holzapfel: Estimation of elastic properties of cerebral aneurysms by inverse analysis. @neurIST Symposium, Barcelona, Spain, September 13, 2007.

641. F. Schmid, H. Amenitsch, G. Sommer, M. Rappolt, P. Regitnig, P. Laggner and G.A. Holzapfel: Biomechanics of human arteries studied with small angle x-ray scattering. European Materials Research Society Spring Meeting, E-MRS 2005 SPRING

MEETING – Synchrotron Radiation and Materials Science (Symposium O), Strasbourg, France, May 31 – June 3, 2005.

642. D. Laroche, S. Delorme, J. Buithieu, G.A. Holzapfel and R. DiRaddo: Computer tools for improving balloon angioplasty and stenting. International New Cardiovascular Technologies Congress – INCTC, Québec City Hilton Hotel, September 10-11, 2004.

643. S. Delorme, D. Laroche, G.A. Holzapfel, M. Stadler, J. Buithieu and R. DiRaddo: Finite element simulation of stent implantation in a multi-layer artery model. 13th Biennial Conference for the Canadian Society for Biomechanics (CSB), Halifax, Nova Scotia, Canada, August 4-7, 2004.

644. M. Auer, R. Stollberger, P. Regitnig, F. Ebner and G.A. Holzapfel: MRI-based morphological 3D reconstruction of atherosclerotic lesions. IUTAM-Symposium on Mechanics of Biological Tissue, Graz, Austria, June 27-July 2, 2004.

645. F. Cacho, P.J. Elbischger, M. Doblaré, T.C. Gasser and G.A. Holzapfel: From image data to numerical simulation: a constitutive model for arterial walls considering statistical fiber distribution. IUTAM-Symposium on Mechanics of Biological Tissue, Graz, Austria, June 27-July 2, 2004.

646. S. Delorme, D. Laroche, R. DiRaddo, J. Buithieu, M. Stadler and G.A. Holzapfel: Interaction of the deployment system and arterial wall during balloon angioplasty. IUTAM-Symposium on Mechanics of Biological Tissue, Graz, Austria, June 27-July 2, 2004.

647. M. Auer, R. Stollberger, P. Regitnig, G.A. Holzapfel and F. Ebner: Generation of Morphological models of atherosclerotic arteries from high resolution MR images. International Society for Magnetic Resonance in Medicine (ISMRM), 12th Scientific Meeting and Exhibition in Kyoto, Japan. May 15-21, 2004 (published in the Proc. Intl. Soc. Mag. Reson. Med. 11 (2004), p. 1921, ISSN 1545 4436).

648. F. Yang, D. Thedens, L. Bolinger, G.A. Holzapfel, C.A.J. Schulze-Bauer, R. Stollberger and M. Sonka: Vascular MR segmentation: Wall and plaque. Medical Imaging 2003, San Diego, California, USA, February 15-20, 2003.

649. C.A.J. Schulze-Bauer, P. Regitnig and G.A. Holzapfel: Mechanics of the human adventitia. 13th Conference of the European Society of Biomechanics, Wrocław, Poland, September 1-4, 2002.

650. M. Stadler and G.A. Holzapfel: A novel approach for smooth contact surfaces using NURBS: application to the FE simulation of stenting. 13th Conference of the European Society of Biomechanics, Wrocław, Poland, September 1-4, 2002.

651. G.A. Holzapfel, M. Auer, C.T. Gasser, C.A.J. Schulze-Bauer and M. Stadler: Numerical simulation of balloon angioplasty. BioNet – Biomechanics in the Decade of the Bone & Joint, Brussels, April 27-29, 2002.

652. G.A. Holzapfel, C.A.J. Schulze-Bauer, T.C. Gasser, R. Eberlein and M. Fröhlich: Extensibility and anisotropic material model of single annulus lamellae in extension experiments. International Society of Biomechanics, 18th Congress, Zurich, Switzerland, July 8-13, 2001.

653. C.A.J. Schulze-Bauer, T.C. Gasser and G.A. Holzapfel: Experimental multiaxial investigation and numerical fibre-matrix modelling of human iliac arteries. EUROMECH Colloquium 389, Physiological Flows and Flow-Structure Interactions, Graz, Austria, April 20-24, 1999.

Invited Lectures/Seminars at Universities

1. University of Oxford, England. June 5, 2025
   (invited by Alain Goriely, Mathematical Institute, University of Oxford, UK)
2. Simula Research Laboratory, Oslo, Norway. November 28, 2024
   (invited by Joakim Sundes – Chief Research Scientist/Research Professor, Director of Simula Research Laboratory, Research, and by Mohammad Javad Sadeghinia, Postdoctoral Fellow)
3. University of Parma, Italy. May 23, 2024
   (invited by Andrea Spagnoli, Department of Engineering and Architecture, University of Parma, Italy)
4. Westlake University, China. April 12, 2024
   (invited by Marco Amabili, School of Engineering, Westlake University, Hangzhou, China)
5. Cambridge University, England. February 17, 2023
   (invited by Vikram Deshpande, Department of Engineering, University of Cambridge, UK)
6. Uppsala University, Sweden. August 29 and 30, 2022
   (invited by B. Emek Abali, Department of Materials and Engineering, Division of Applied Mechanics, Uppsala University, Sweden)
7. University of Porto, Portugal. March 4, 2022
   (invited by Renato Natal Jorge and Marco Parente, Department of Mechanical Engineering, University of Porto, Portugal)
8. University of Michigan, USA. January 20, 2022 – virtual seminar
   (invited by David Nordsletten, Department of Biomedical Engineering and Cardiac Surgery, University of Michigan, USA)
9. University of Leeds, UK. May 17, 2021 – virtual seminar
   (invited by Alejandro F. Frangi, School of Computing and School of Medicine, University of Leeds, UK)
10. University of Minnesota, USA. February 22, 2021 – virtual seminar
    (invited by Victor Barocas, Department of Biomedical Engineering, University of Minnesota, USA)
11. Bilkent University, Ankara, Turkey. December 20, 2019
    (invited by Luca Biancofiore and Ali Javili, Department of Mechanical Engineering, Bilkent University, Ankara Turkey)
12. Koç University, Istanbul, Turkey. December 17, 2019
    (invited by Özgür Barış Akan, College of Engineering, Koç University, Istanbul Turkey)
13. Eindhoven University of Technology, The Netherlands. October 15, 2018
    (invited by Carlijn Bouten and Frans van de Vosse, Department of Biomedical Engineering, Eindhoven, The Netherlands)
14. University of Southampton, UK. June 5, 2018
    (invited by Georges Limbert, Engineering and the Environment, University of Southampton, UK)
15. University of Utah (distinguished lecture for the Scientific Computing and Imaging (SCI) Institute), USA. December 8, 2017
    (invited by Jeffrey A. Weiss and Chris Johnson, SCI Institute, School of Computing, University of Utah, USA)
16. Braunschweig University of Technology, Germany. November 9, 2017
    (invited by Markus Böl, Department of Mechanical Engineering, Braunschweig University of Technology, Germany)
17. École Polytechnique, Palaiseau, France. April 27, 2017
    (invited by Martin Genet, Mechanics Department & Solid Mechanics Laboratory, École Polytechnique, France)
18. ETH Zürch, Basel, Switzerland. April 25, 2017

(invited by Dagmar Iber, Department of Biosystems Science and Engineering, Computational Biology Group, ETH Zürich)

19. Norwegian University of Science and Technology (NTNU), Trondheim. January 13, 2017
(invited by Bjørn Torger Stokke, Department of Physics, Faculty of Natural Sciences, NTNU, Trondheim)
20. Eindhoven University of Technology, The Netherlands. December 15, 2016
(invited by Richard G.P. Lopata, Department of Biomedical Engineering, Cardiovascular BioMechanics Group, Eindhoven, The Netherlands)
21. Università di Pavia, Italy. September 6, 2016
(invited by Ferdinando Auricchio, Dipartimento di Meccanica Strutturale, Pavia, Italy)
22. University of California at Berkeley, USA. August 17, 2016
(invited by Grace O'Connell, Department of Mechanical Engineering, University of California at Berkeley)
23. Stanford University, USA, 3rd Stanford Aortic Mini-Symposium. August 13 and 16, 2016
(invited by Dominik Fleischmann, School of Medicine, Stanford University)
24. Norwegian University of Science and Technology (NTNU), Trondheim. June 16, 2016
(invited by Bjørn Skallerud, Faculty of Engineering Science and Technology, NTNU, Trondheim)
25. University of Zagreb, Croatia. December 22, 2014
(invited by Igor Karšaj, Faculty of Mechanical Engineering, Institute of Applied Mechanics)
26. Yale University, USA. July 31, 2013
(invited by Jay D. Humphrey, Department of Biomedical Engineering, Yale University)
27. Universidad de Zaragoza, Spain. June 27, 2013
(Lecture within the seminar series "Modeling and Simulation in Mechanics and Materials", MOSIMM-network: http://institucional.us.es/mosimm/index.php/en/actividades-2/seminarios-en)
28. Universidad Politécnica de Madrid, Spain. June 26, 2013
(Lecture within the seminar series "Modeling and Simulation in Mechanics and Materials", MOSIMM-network: http://institucional.us.es/mosimm/index.php/en/actividades-2/seminarios-en)
29. Universidad de Sevilla, Spain. June 25, 2013
(Lecture within the seminar series "Modeling and Simulation in Mechanics and Materials", MOSIMM-network: http://institucional.us.es/mosimm/index.php/en/actividades-2/seminarios-en)
30. Universidad de Granada, Spain. June 24, 2013
(Lecture within the seminar series "Modeling and Simulation in Mechanics and Materials", MOSIMM-network: http://institucional.us.es/mosimm/index.php/en/actividades-2/seminarios-en)
31. University of Limerick, Ireland. May 28, 2013
(invited by Michael Walsh, Department of Mechanical, Aeronautical and Biomedical Engineering and Materials and Surface Science Institute)
32. Universidad de Sevilla, Spain. November 28-29, 2012
(four lectures; invited by Jaime Dominguez, Department of Mechanical and Material Engineering, Universidad de Sevilla, Spain)
33. École Polytechnique Fédérale de Lausanne (EPFL), Switzerland. February 28, 2012
(invited by John Botsis, and Alessandro Spadoni, Institute of Mechanical Engineering)
34. Katholieke Universiteit Leuven, Heverlee, Belgium. January 27, 2012
(invited by Jos Vander Sloten, Mechanical Engineering Department – Biomechanics Section)
35. Universität Heidelberg, Germany. June 27, 2011
(invited by Willi Jäger, Interdisciplinary Center for Scientific Computing, IWR)
36. RWTH Aachen University, Germany. May 17, 2010
(invited by Marek Behr, Chair for Computational Analysis of Technical Systems, Center for Computational Engineering Science and AICES Graduate School)
37. University Duisburg-Essen, Germany. February 5, 2010
(invited by Axel Klawonn, Department of Mathematics)
38. Cambridge University, Cambridge, England. March 14, 2008
(invited by Michelle L. Oyen, Department of Engineering)

39. University of Ghent, Belgium. March 3, 2008
    (invited by Pasquale Verdonck, Institute for Biomedical Technology, Hydraulics Laboratory)
40. University of Glasgow, Glasgow, Scotland. November 16, 2006
    (invited by Ray W. Ogden, School of Mathematics and Statistics)
41. Tallinn University of Technology, Estonia. October 9-10, 2006
    (invited by Jüri Engelbrecht, Tallinn University of Technology, Estonia)
42. Faculty of Science, University of Cape Town, South Africa. Nov 26 - Dec 4, 2005
    (invited by Daya D. Reddy, Department of Mathematics and Applied Mathematics; and Peter Zilla – successor of Christiaan Barnard; Head/Chairman of Cardiothoracic Surgery at the University of Cape Town, Groote Schuur Hospital and Red Cross Childrens Hospital)
43. Delft University of Technology, The Netherlands. May 3, 2005
    (invited by Garth N. Wells, Faculty of Civil Engineering and Geosciences)
44. National Centre for Biomedical Engineering Science, National University of Ireland, Galway, Ireland. May 6, 2004
    (invited by Peter McHugh, Director of the Micromechanics Research Unit, and Research Director, National Centre for Biomedical Engineering Science)
45. University of Kaiserslautern, Kaiserslautern, Germany. May 5, 2004
    (invited by Paul Steinmann, Chair of Applied Mechanics)
46. KTH - Department of Solid Mechanics, Stockholm, Sweden. April 20, 2004
    (invited by Peter Gudmundson, Department of Solid Mechanics)
47. Chalmers University of Technology, Göteborg, Sweden. December 18, 2003
    (invited by Peter Olsson and Mikael Enelund, Department of Applied Mechanics)
48. Delft University of Technology, The Netherlands. May 27, 2003
    (invited by Peter V. Pistecky, Department of Mechanical Engineering, Man Machine Systems)
49. LEMTA ENSEM, Vandœuvre-lès-Nancy, France. May 12, 2003
    (invited by Jean-François Ganghoffer)
50. UPC-Barcelona, Spain. April 25 and May 6, 2003
    (invited by Eugenio Oñate, Department of Civil Engineering and CIMNE)
51. University of Tokyo, Japan. January 20, 2003
    (invited by Marie Oshima, Institute of Industrial Science)
52. Dalian University of Technology, Department and Research Institute of Engineering Mechanics, State Key Laboratory of Structural Analysis for Industrial Equipment, Peoples Republic of China. August 10, 2002
    (invited by Yuanxian Gu, Head of the Department SAOCS – Structural Analysis, Optimization and CAE/CAD Section)
53. Munich University of Technology, Germany. May 14, 2002
    (invited by Horst Baier, Department of Mechanical Engineering, Institute for Light Weight Structures)
54. Munich University of Technology, Germany. May 13, 2002
    (invited by Kai-Uwe Bletzinger, Department of Civil Engineering, Institute for Statics)
55. Darmstadt University of Technology, Germany. April 17, 2002
    (invited by Kolumban Hutter, Department of Mechanics)
56. Vienna University of Technology, Austria. March 7, 2002
    (invited by Peter Lugner, Department of Mechanical Engineering, Institute for Mechanics)
57. Stuttgart University of Technology, Lecture Series of the Institute for Mechanics, Germany. January 22, 2002
    (invited by Wolfgang Ehlers, Civil Engineering, Institute for Mechanics)
58. University of Kassel, Germany. October 18, 2001
    (invited by H. Irretier, Director of Mechanics, Department of Mechanical Engineering)

59. Ruhr-Universität Bochum, Colloquium in Mechanics Bochum-Dortmund, Germany. February 9, 2001
    (invited by Klaus Hackl, Institute of Mechanics)
60. Stuttgart University of Technology, Lecture Series of the Institute for Structural Analysis, Germany. February 8, 2001
    (invited by Ekkehard Ramm, Institute for Structural Analysis)
61. Brigham and Women's Hospital, Boston, USA. November 15, 2000
    (invited by Jeffrey J. Popma, Interventional Cardiology, Division of Cardiovascular Medicine)
62. Georgia Institute of Technology, Atlanta, USA. November 14, 2000
    (invited by David N. Ku, School of Mechanical Engineering and Emory University)
63. Florida International University, Miami, USA. November 13, 2000
    (invited by Richard T. Schoephoerster, Director of the Biomedical Engineering Institute, and by James M. Moore, Mechanical Engineering Department)
64. The University of Iowa, Iowa City, USA. August 31, 2000
    (invited by Milan Sonka, Department of Electrical and Computer Engineering, College of Engineering)
65. Politecnico di Milano, Milano, Italy. September 13, 2000
    (invited by Riccardo Pietrabissa, Laboratory of Biological Structure Mechanics, Dipartimento di Bioingegneria)
66. Università di Pavia, Italy. September 12, 2000
    (invited by Ferdinando Auricchio, Dipartimento di Meccanica Strutturale, Pavia, Italy)
67. Universita' degli studi di Trento, Trento, Italy. September 11, 2000
    (invited by Giorgio Novati, Dipartimento di Meccanica Strutturale, Trento, Italy)
68. University of Hannover, Germany. February 15, 2000
    (invited by Peter Wriggers, Institute of Mechanics and Computational Mechanics)
69. University of Glasgow, Scotland. February 11, 2000
    (invited by Ray W. Ogden, School of Mathematics and Statistics)
70. Vienna University of Technology, Austria. February 2, 2000
    (invited by Peter Lugner, Institute for Mechanics)
71. Karl-Franzens Universität Graz, Austria. June 25, 1996
    (invited by Thomas Kenner, Institute for Physiology)
72. Darmstadt University of Technology, Germany. May 3, 1995
    (invited by Peter Wriggers, Department of Mechanics)
73. Stanford University, Department of Mechanical Engineering, Division of Applied Mechanics, Department of Aeronautics & Astronautics, Department of Civil Engineering, Stanford, CA, USA, Seminar in Solid Mechanics. February 9, 1995
    (invited by Charles R. Steele)
74. Stanford University, Department of Applied Mathematics, Stanford, CA, USA, Seminar in Scientific Computing and Computational Mathematics. May 16, 1994
    (invited by Andrew Stewart)
75. College of Engineering & Mines, Department of Aerospace & Mechanical Engineering, Seminar in Mechanics, Tucson, Arizona, USA. October 22, 1993
    (invited by Abhijit Chandra)
76. Iowa State University, Aerospace Engineering & Engineering Mechanics, Seminar in Mechanics, Ames, Iowa State, USA. October 14, 1993
    (invited by Thomas Rudolphi)
77. Stanford University, Department of Mechanical Engineering, Division of Applied Mechanics, Department of Aeronautics & Astronautics, Department of Civil Engineering, Stanford, CA, USA, Seminar in Solid Mechanics. April 1, 1993
    (invited by Juan C. Simo)
78. Technical University Berlin, Germany. January 1991
    (invited by H. Schoop, Institute for Mechanics)

Research Grants

2025 – 2032 *"Mechanical Characterization of Soft Tissue In Vivo by Microstructural Imaging and Physics-Informed Neural Networks: Bridging the Gap Between Biomechanics and Clinical Practice (MechVivo)"* (Principal Investigator) – ERC Synergy Grant, granted by the "European Research Council", Proposal ID 101167207

Principal Investigators from the German and Swiss sides are Christian Cyron (Hamburg University of Technology and Helmholtz-Zentrum Hereon, Germany) and Sebastian Kozerke (ETH Zürich and University of Zürich, Switzerland), respectively

2025 – 2027 *"Passive and Active Mechanical Properties of Arteries"* (Co-Investigator), granted by the "FWF Austrian Science Fund", No.: PIN2443524

Principal Investigator: Gerhard Sommer, Institute of Biomechanics, Graz University of Technology, Austria

2023 – 2024 *"Understanding the Effects of Standard Angioplasty Balloon Deployment on Arterial Tissue by Modeling Balloon Deployment in Healthy and Diseased Vessels"* (Principal Investigator), granted by the industry

2021 – 2025 *"Mechanical and Microstructural Analysis of Stomach Tissue"* (Principal Investigator), granted by the industry

2021 – 2024 *"In-Silico Development- and Clinical-Trial-Platform for Testing In-Situ Tissue Engineered Heart Valves (SimInSitu)"* (Co-Investigator), Horizon 2020 Framework Program: Call H2020-SC1-DTH-2018-2020 (Digital Transformation in Health and Care)

Coordinator: Nils Götzen, 4RealSim (www.4realsim.com), Ijsselstein, The Netherlands

2021 – 2024 *"Cardiovascular Function and Biomechanics in HHcy"* (Co-Investigator), granted by the "FWF Austrian Science Fund", No.: P 33672

Principal Investigator: Oksana Tehlivets, Institute of Molecular Biosciences, University of Graz, Austria

2020 – 2024 *"Does Time Heal All Wounds? Predicting Acute and Long-Term Damage in Blood Vessels"* (Principal Investigator), granted by the "FWF Austrian Science Fund", No.: I 4545-B

FWO/FWF-Project: Principal Investigator from the Flemish side (Flanders) is Nele Famaey, Biomechanics Section, KU Leuven, Belgium

2021 – 2024 *"In Silico Testing and Validation of Cardiovascular Implantable Devices (SIMCOR)"* (Co-Investigator), Horizon 2020 Framework Program: Call H2020-SC1-DTH-2018-2020 (Digital Transformation in Health and Care)

Coordinator: Titus Kühne, Charité – Universitätsmedizin Berlin, Campus Virchow-Klinikum, Institute for Cardiovascular Computer-assisted Medicine & German Heart Center, Berlin, Germany

2019 – 2024 *"Biomechanical Investigation of Arterial Damage during In Vitro Stenting Simulation"* (Co-Investigator), granted by the "FWF Austrian Science Fund", No.: P 32713

Principal Investigator: Gerhard Sommer, Institute of Biomechanics, Graz University of Technology, Austria

2018 – 2024 *"Lead Project: Mechanics, Modeling, and Simulation of Aortic Dissection"*

(Head of the Consortium), granted by "Graz University of Technology (TUG)" (cooperation between 10 institutes of TUG involving scientists from biomechanical-, civil-, electrical-, and mechanical engineering, computer science, mathematics, and physics)

2021 – 2024 *"Experiments, Modeling and Computational Simulations to Characterize the Porous and Viscous Behavior of Human Brain Tissue"* (Principal Investigator), granted by the "FWF Austrian Science Fund", No.: I 4828-N

DFG/FWF-Project (D-A-CH): Principal Investigator from the German side is Paul Steinmann, Institute of Applied Mechanics, University of Erlangen-Nuremberg, Germany

2017 – 2020 *"Computational Modeling of Vesicle-Mediated Cell Transport"* (Principal Investigator), granted by the "FWF Austrian Science Fund", No.: I 3431-N32

DFG/FWF-Project (D-A-CH): Principal Investigator from the German side is Sandra Klinge, Institute of Mechanics, TU Dortmund, Germany

2017 – 2019 *"Multiscale Biomechanical Investigation of Human Aortas"* (Co-Investigator), granted by the "FWF Austrian Science Fund", No.: P 30260-B31

Principal Investigator: Gerhard Sommer, Institute of Biomechanics, Graz University of Technology, Austria

2013 – 2018 *"Mathematical Modeling and Computer Simulation of Aortic Dissection"* (Co-Investigator), National Institutes of Health, USA
NIH grant R01HL-117063

Principal Investigator: Boyce Griffith, Leon H. Charney Division of Cardiology, New York University School of Medicine, USA

2015 – 2016 *"Biomechanical and Microstructural Changes of the Aneurysmatic Aorta: Insights from Novel Imaging and Modeling Approaches"* (with Professor Tina U. Cohnert, Medical University Graz, and Professor Sepp D. Kohlwein, University of Graz), granted by BioTechMed-Graz (cooperation between the University of Graz, the Medical University of Graz, and Graz University of Technology at the interface between bio-medical research, technological developments and medical implementation)

2014 – 2015 *"In Vitro Optical 3D Deformation Analysis on Human Intraluminal Thrombus"*, granted by the "Centre for International Cooperation & Mobility at the Österreichischer Austauschdienst GmbH (OeAD-GmbH)"
Project No.: HR 09/2014: Scientific and Technological Agreement with Croatia 2014-15 (with Igor Karšaj, Institute of Applied Mechanics, University of Zagreb, Croatia)

2011 – 2015 *"Biaxial Tensile and Triaxial Shear Measurements and Modeling of Human Myocardium"* (Co-Investigator), granted by the "FWF Austrian Science Fund", No.: P 23830-N13

Principal Investigator: Gerhard Sommer, Institute of Biomechanics, Graz University of Technology, Austria

2012 – 2014 *"Biomechanics of Arterial Walls under Supra-Physiological Loading Conditions"* (Principal Investigator), granted by the "FWF Austrian Science Fund", No.: I 503-B11

DFG/FWF-Project (D-A-CH): Principal Investigator from the German side is Daniel Balzani, Institute of Mechanics, University of Duisburg-Essen, Germany

2013 – 2014 *"Modeling of Intraluminal Thrombus Formation"* (Lise-Meitner-Program), granted by the "FWF Austrian Science Fund", No.: M1524-B23

Principal Investigator: Igor Karšaj, Institute of Applied Mechanics, U. of Zagreb, Croatia

2010 – 2013 *"Smart Catheterization: Towards Sustainable and Personalised Healthcare (SCATh)"* (Co-Investigator), an integrated EU Project: Call Identifier FP7-ICT-2009-4

Coordinator: Jos Vander Sloten, Katholieke Universiteit Leuven, Division of Biomechanics and Engineering Design, Heverlee, Belgium

2009 – 2012 *"Biomechanical Simulation of Evolving Aortic Aneurysms for Designing Intervention"* (Co-Investigator), National Institutes of Health, USA
NIH grant HL-86418 via Collaborations with National Centers for Biomedical Computing (SimBios at Stanford University)

Principal Investigator: Jay D. Humphrey, Department of Biomedical Engineering, Yale University, USA

2008 – 2011 *"Biomechanical and Pharmacokinetic Effects of Drug-Eluting Stents. A Computational Study"* (Principal Investigator), granted by the "Swedish Research Council (VR)", VR 621-2007-6217

2008 – 2010 *"Three-Dimensional Mechanical Modelling of Biopolymer Networks"* (Co-Investigator), Royal Society International Project Award for research collaboration with Professor Ray W. Ogden, University of Glasgow, UK. Austria-UK project grant

2008 Carnegie Trust Grant for research collaboration with Professor Ray W. Ogden, University of Glasgow, UK

2007 – 2009 *"Integrated Biomedical Informatics for the Management of Cerebral Aneurysms (@neurIST)"* (Co-Investigator), an integrated EU Project: Call Identifier FP6-2004-IST-4

Coordinator: Alejandro Frangi, Computational Imaging Lab, Department of Technology, Pompeu Fabra University, Barcelona, Spain

2006 – 2010 *"Non-Linear Physical and Computational Analyses of Soft Biological Tissues: A Microstructural Approach"* (Principal Investigator), granted by the "Swedish Research Council (VR)", VR 2005-6167 and 2009-4302

2006 – 2008 *"Visualization of Biomechanical Properties of Articular Cartilage in the Knee and Ankle Joint by Means of Multi-Parametric MR Imaging"* (Co-Investigator), granted by the "FWF Austrian Science Fund", No.: P18110-B15 and L243-B15

2005 – 2007 *"Grid Based Decision Support System for Assisting Clinical Diagnosis and Interventions in Cardiovascular Problems (DISHEART)"* (Co-Investigator), a cooperative EU Project: Call Identifier: FP6-2002-SME-1

Coordinator: Eugenio Oñate, CIMNE, Barcelona, Spain

2003 – 2005 *"Computer Vision Based Analysis of Collagen Organization in Human Arteries"* (Co-Investigator), granted by the "Austrian Academy of Sciences (ÖAW)" (with Professor Horst Bischof and Pierre Elbischger, Computer Graphics and Vision, Graz University of Technology, Austria)

2002 – 2004 *"Arterial Tissue Biomechanics",* granted by "The Royal Society": Reference No.: 14467, Royal Society International Joint Project for research collaboration with Professor Ray W. Ogden, University of Glasgow, UK. Austria-UK project grant

2001 – 2003 *"High-Resolution Magnetic Resonance Imaging of Human Atherosclerotic Arteries with Three-Dimensional Characterization of Wall and Plaque Components"* (Principal Investigator), granted by the "Jubiläumsfonds der Österreichischen Nationalbank"

2001 – 2002 *"Implementation of a Constitutive Model for Transformation Induced Plasticity (TRIP)"* (Principal Investigator), granted by the "Österreichischer Akademischer Austauschdienst, Wien" (with the Academy of Sciences of the Czech Republic)

2001 – 2002 *"FE Modeling of Intravascular Stents"* (Principal Investigator), granted by the "Österreichischer Akademischer Austauschdienst, Wien" (with the Academy of Sciences of the Czech Republic)

2001 – 2002 *"Automatic 3D-Segmentation of High Resolution MRI of Atherosclerotic Arteries"* (Principal Investigator), granted by the "State of Styria"

1999 – 2000 *"Experimental Investigations of Human Intervertebral Discs"* (Principal Investigator), granted by "Sulzer Innotec, Sulzer Markets and Technology Ltd.", Winterthur, Switzerland

1998 – 2004 START-Award 1997: *"Physical Modeling and Computer Simulation of Balloon Angioplasty"* (Principal Investigator), granted by the "FWF Austrian Science Fund"

1997 – 1999 *"Finite Element Modeling of Atherosclerotic Arteries"* (Principal Investigator), granted by the "FWF Austrian Science Fund"

1995 *"A General Concept for the Numerical Simulation of Complex Constitutive Structures Undergoing Finite Deformations"* (Erwin Schrödinger Scholarship for foreign countries), granted by the "FWF Austrian Science Fund"

1994 *"Thermomechanical Treatment of Three-Dimensional Continua with Finite Elements"* (Erwin Schrödinger Scholarship for foreign countries), granted by the "FWF Austrian Science Fund"

Service to the Scientific Community

Editor/Member of the Editorial/Advisory Board of Scientific Journals/Lecture Notes

Since 2025 Journal of the Royal Society Interface
https://royalsocietypublishing.org/journal/rsif

Since 2025 Brain Research Bulletin
https://www.sciencedirect.com/journal/brain-research-bulletin

Since 2022 Discover Mechanical Engineering
https://www.springer.com/journal/44245/editors

Since 2020 Life – Open Access Journal
www.mdpi.com/journal/life

2019 – 2024 Brain Multiphysics
www.journals.elsevier.com/brain-multiphysics

Since 2018 Mechanics of Soft Materials
https://www.springer.com/engineering/mechanics/journal/42558 (Associate Editor)

Since 2016 Journal of Elasticity
http://link.springer.com/journal/10659

Since 2015 Transactions of FAMENA

https://famena.fsb.hr/

2013 – 2015 American Journal of Physiology: Heart and Circulatory Physiology
http://ajpheart.physiology.org/

Since 2014 International Biomechanics
http://www.tandfonline.com/action/journalInformation?show=aimsScope&journalCode=tbbe20#.UzIILIU-o0N

Since 2013 Artery Research
http://www.arteryresearch.com/

Since 2013 Journal of the Mechanical Behavior of Materials
http://www.degruyter.com/view/j/jmbm

Since 2012 Lecture Notes in Computational Vision and Biomechanics
http://www.springer.com/series/8910

Since 2010 International Journal for Numerical Methods in Biomedical Engineering
onlinelibrary.wiley.com/journal/10.1002/%28ISSN%292040-7947/issues

2009 – 2018 Acta Technica Napocensis, Series: Applied Mathematics, Mechanics and Engineering
http://atna-mam.utcluj.ro/index.php/Acta

Since 2007 International Journal for Computational Vision and Biomechanics
https://www.mukpublications.com/ijcvb-board.php

Since 2006 Zeitschrift für Angewandte Mathematik und Mechanik
https://onlinelibrary.wiley.com/journal/15214001

Since 2001 Biomechanics and Modeling in Mechanobiology, Editor
http://www.springer.com/engineering/mechanics/journal/10237

Member of Societies

2025 – 2030 Member of Advisory Board of *EUROMECH* (European Mechanics Society)

2021 – lifetime Member of *SES* (Society of Engineering Science)

2014 – 2026 Member of *World Council of Biomechanics*

2013 – 2015, 2016 – 2024 Member of *ESMCC* (European Solid Mechanics Conference Committee), since 2017 co-chairman, since 2018 chairman

Since 2012 Founding Fellow of *EAMBES* (European Alliance for Medical and Biological Engineering & Science)

Since 2004 Member of *ÖGBMT* (Österreichische Gesellschaft für Biomedizinsche Technik)

Since 1999 Member of *EUROMECH* (European Mechanics Society)

1999 – 2004, since 2009 Member of *ESB* (European Society of Biomechanics)

Since 1998 Member of *ASME* (American Society of Mechanical Engineers)

Since 1990 Member of *GAMM* (International Association of Applied Mathematics and Mechanics)

Member of Committees and Panels (130 entities)

2026

- *17th Computational World Congress on Computational Mechanics & 10th European Congress on Computational Methods in Applied Sciences and Engineering (WCCM-ECCOMAS 2026).* Munich, Germany, July 19-24, 2026 (Scientific Advisory Committee).
- *9th International Conference on Computational & Mathematical Biomedical Engineering (CMBE2026),* Kobe, Japan, June 22-24, 2026 (International Advisory Committee).

2025
- *VI International Conference on Biomedical Technology (ICBT2025),* Hannover, Germany, November 17-19, 2025 (Scientific Committee).
- *18th International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS XVIII).* Barcelona, Spain, September 2-5, 2025 (Scientific Committee).
- *EUROMECH Colloquium 655 on "Cutting Mechanics of Soft Tissues: Nonlinear Fracture and Contact Mechanics".* Graz, Austria, August 25-27, 2025 (Honorary Chairman and Scientific Committee).

2024
- *8th International Conference on Computational & Mathematical Biomedical Engineering (CMBE24),* Arlington, USA, June 24-26, 2024 (International Advisory Committee).
- 2024 3rd International Conference of Nonlinear Solid Mechanics (2024 ICoNSoM). Cagliari, Italy, June, 11-14, 2024 (Scientific Committee).
- *9th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS Congress 2024),* Lisbon, Portugal, June 3-7, 2024 (Scientific Committee).
- *10th International Biofluid & Mechanobiology Symposium,* Red Sea & Dead Sea, *I*srael, April 7-12, 2024 (International Advisory Committee).
- *6th African Conference on Computational Mechanics (AfriComp6),* Cape Town, South Africa, February 26-28, 2024 (Scientific Committee & Advisory Board).

2023
- Member of the ERC Advanced Grant Panel PE8
- *V International Conference on Biomedical Technology (ICBT2023),* Hannover, Germany, November 6-8, 2023 (Scientific Committee).
- *17th International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS XVII).* Barcelona, Spain, September 5-7, 2023 (Scientific Committee).
- *14th International Conference on the Mechanical Behaviour of Materials.* Santiago, Chile, July 12-14, 2023 (International Scientific Committee).

2022
- *International Workshop on "The Evolving Nonlinear Continuum Panorama",* Castro Urdiales, Spain, July 11-15, 2022 (Scientific Committee).
- *11th European Solid Mechanics Conference (ESMC2022).* Galway, Ireland, July 4-8, 2022 (Chair of the Scientific Committee).
- *7th International Conference on Computational & Mathematical Biomedical Engineering (CMBE22),* Milan, Italy, June 27-29, 2022 (International Advisory Committee).
- 2022 International Conference of Nonlinear Solid Mechanics (2022 ICoNSoM). Alghero, Italy, June, 13-16, 2022 (Scientific Committee).
- *9th International Conference on Computational Bioengineering (ICCB2022),* Lisbon, Portugal, April 11-13, 2022 (Scientific Committee).

2021
- Member of the ERC Advanced Grant Panel PE8
- *10th International Congress of the Croatian Society of Mechanics (10th ICCSM),* Pula, Croatia, September 26-29, 2021 (International Scientific Committee).
- *16th International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS XVI).* Barcelona, Spain, September 7-10, 2021 (Scientific Committee).
- 16th US National Congress on Computational Mechanics (USNCCM16), Chicago, USA, July 25-29, 2021 (International Scientific Committee).

2020
- *5th African Conference on Computational Mechanics (AfriComp5),* Cape Town, South Africa, November 30 – December 2, 2020 (Scientific Committee & Advisory Board).

2019
- Member of the ERC Advanced Grant Panel PE8
- *The 17th International Conference on Biomedical Engineering (ICBME 2019),* Singapore, December 9-12, 2019 (International Advisory Board).

- *IV International Conference on Biomedical Technology (ICBT2019),* Hannover, Germany, November 18-20, 2019 (Scientific Committee).
- *VIPIMAGE.* VII ECCOMAS Thematic Conference on "Computational Vision and Medical Image Processing", Porto, Portugal, October 16-18, 2019 (Scientific Committee).
- *8th International Conference on Computational Bioengineering (ICCB2019),* Belgrade, Serbia, September 4-6, 2019 (Scientific Committee).
- *15th International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS XV).* Barcelona, Spain, September 3-5, 2019 (Scientific Committee).
- *International Conference on Stents: Materials, Mechanics and Manufacturing (ICS3M 2019),* London, UK, July 15-17, 2019 (Scientific Committee).

2018

- *6th International Symposium CompIMAGE'18 – Computational Modeling of Objects Presented in Images: Fundamentals, Methods and Applications,* Cracow, Poland, July 2-5, 2018 (Program Committee).

2017

- Member of the ERC Advanced Grant Panel PE8
- *III International Conference on Biomedical Technology (ICBT2017),* Hannover, Germany, November 6-8, 2017 (Scientific Committee).
- *VII International Conference on Computational Bioengineering (ICCB'2017).* Compiègne, France, September 6-8, 2017 (Scientific Committee).
- *14th International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS XIV).* Barcelona, Spain, September 5-7, 2017 (Scientific Committee).
- *23th Congress of the European Society of Biomechanics (ESB2017).* Seville, Spain, July 2-5, 2017 (Scientific Committee).
- *5th International Conference on Computational & Mathematical Biomedical Engineering (CMBE17).* Pittsburgh, Pennsylvania, USA, April 10-12, 2017 (International Advisory Committee).

2016

- *Annual poster contest – Materials Technology (MaTe).* Eindhoven University of Technology (TU/e), The Netherlands, December 15, 2016 (Jury Member).
- *The 17th International Conference on Biomedical Engineering (ICBME 2016).* Singapore, December 7-10, 2016 (Scientific Committee).
- *Computational Modeling of Objects Presented in Images: Fundamentals, Methods and Applications (*Comp*IMAGE'16),* Niagara Falls, USA, September 21-23, 2016 (Program Committee).
- *22nd Congress of the European Society of Biomechanics (ESB2016).* Lyon, France, July 10-13, 2016 (Scientific Committee).
- *4th International Conference on Biodental Engineering (BioDENTAL 2016).* Porto, Portugal, June 21-23, 2016 (Scientific Committee).

2015

- *International Conference on Biomedical Technology 2015 (ICBT2015),* Hannover, Germany, October 28-30, 2015 (Scientific Committee).
- *VIPIMAGE.* V ECCOMAS Thematic Conference on "Computational Vision and Medical Image Processing", Tenerife, Canary Islands, Spain, October 19-21, 2015 (Scientific Committee).
- *8th International Conference of the Croatian Society of Mechanics (ICCSM2015),* Opatija, Croatia, September 29 – October 2, 2015 (Scientific Committee).
- *VI International Conference on Computational Bioengineering (ICCB'2015).* Barcelona, Spain, September 14-16, 2015 (Scientific Committee).
- *13th International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS XIII).* Barcelona, Spain, September 1-3, 2015 (Scientific Committee).
- *9th European Conference on Constitutive Models for Rubbers (ECCMR IX).* Prague, Czech Republic, September 1-4, 2015 (Scientific Committee).
- *9th European Solid Mechanics Conference (ESMC2015).* Leganés, Madrid, Spain, July 6-10, 2015 (Scientific Committee).

- *21st Congress of the European Society of Biomechanics (ESB2015).* Prague, Czech Republic, July 5-8, 2015 (Scientific Committee).
- *4th International Conference on Computational & Mathematical Biomedical Engineering (CMBE15).* Cachan, France, June 29 – July 1, 2015 (International Advisory Committee).
- *BioMedWomen – International Conference on Clinical and BioEngineering for Women's Health*, Porto, Portugal, June 20-23, 2015 (Scientific Committee).

2014
- *3rd International Conference on Biodental Engineering.* Porto, Portugal, June 22-23, 2014 (Scientific Committee).
- *IUTAM Symposium on "Transition and Turbulence in Flow Through Deformable Tubes and Channels".* Bangalore, India, January, 2014 (Scientific Committee).

2013
- *3rd International Conference on Computational & Mathematical Biomedical Engineering (CMBE13).* Hong-Kong, December 16-18, 2013 (Executive Committee).
- *First International Conference on Biomedical Technology (ICBT 2013).* Hannover, Germany, November 20-22, 2013 (Scientific Committee).
- *International Conference on Computational and Experimental Biomedical Sciences (ICCEBS2013).* Ponta Delgada, São Miguel, Azores, October 20-22, 2013 (Scientific Committee).
- *XIII Mediterranean Conference on Medical and Biological Engineering and Computing (MEDICON2013).* Sevilla, Spain, September 25-28, 2013 (International Program Committee).
- *Biomedizinische Technik 2013; 3. Ländertagung D-A-CH Gemeinsame Jahrestagung ÖGBMT, SGBT, DGBMT.* Graz, Austria, September 19-21, 2013 (Program Committee).
- *V International Congress on Computational Bioengineering (ICCB2013).* Leuven, Belgium, September 11-13, 2013 (Scientific Committee).
- *3rd International Conference on Material Modelling* incorporating *13th European Mechanics of Materials Conference.* Warsaw, Poland, September 8-11, 2013 (Scientific Committee).
- *12th International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS XII).* Barcelona, Spain, September 3-5, 2013 (Scientific Committee).
- 551st Colloquium of the European Mechanics Society (EUROMECH) on *Mechanics of Fibre-Reinforced Materials: Theory and Applications*. Nottingham, UK, September 2-5, 2013 (Scientific Committee).
- *19th Congress of the European Society of Biomechanics (ESB2013).* Patras, Greece, August 25-28, 2013 (Scientific Committee).
- *4th Canadian Conference on Nonlinear Solid Mechanics (CanCNSM2013).* Montréal, Québec, Canada, July 23-26, 2013 (Scientific Committee).
- *8th European Conference on Constitutive Models for Rubbers (ECCMR VIII)*. San Sebastian, Spain, June 25-28, 2013 (Scientific Committee).
- *8th European Symposium of Vascular Biomaterials (ESVB 2013).* Strasbourg, France, May, 10-11, 2013 (Scientific Committee).

2012
- *2012 ESB Huiskes Medal Award of the European Society of Biomechanics (ESB)* (Committee Member).
- *S.M. Perren Award of the European Society of Biomechanics (ESB)* (Committee Member).
- *Computational Modeling of Objects Presented in Images: Fundamentals, Methods and Applications (*Comp*IMAGE 2012),* Rome, Italy, September 5-7, 2012 (Scientific Committee).
- *18th Congress of the European Society of Biomechanics (ESB2012),* Lisbon, Portugal, July 1-4, 2012 (Scientific Committee).
- *7th International Conference of the Croatian Society of Mechanics (ICCSM2012),* Zadar, Croatia, May 22-25, 2012 (Scientific Committee).

2011
- *6th IASTED International Conference on Biomechanics (BioMech 2011),* Pittsburgh, USA, November 7-9, 2011 (International Program Committee).
- *VIPIMAGE.* III ECCOMAS Thematic Conference on "Computational Vision and Medical Image Processing", Olhão, Portugal, October 12-14, 2011 (Scientific Committee).
- *7th European Conference on Constitutive Models for Rubber (ECCMR 2011),* Dublin, Ireland, September 20-23, 2011 (Scientific Committee).
- *11th International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS XI),* Barcelona, Spain, September 7-9, 2011 (Technical Advisory Panel).
- *2nd International Conference on Material Modeling (ICMM),* Paris, France, August 31 – September 2, 2011 (Scientific Committee).
- IUTAM Symposium on *"Computer Models in Biomechanics: from Nano to Macro Mechanics"*, Stanford University, USA, August 29 – September 2, 2011 (Scientific Committee, co-chairman).
- *The IASTED International Conference on Computational Bioscience (CompBio 2011),* Cambridge, UK, July 11-13, 2011 (International Program Committee).
- *Microscale Modeling in Biomechanics and Mechanobiology. Workshop,* Ericeira, Portugal, May 30 – June 1, 2011 (International Scientific Committee).
- *7th European Symposium of Vascular Biomaterials (ESVB 2011). New endovascular technologies from bench test to clinical practice.* Strasbourg, France, May, 13-14, 2011 (Member of Program Directors).
- *2nd International Conference on Computational & Mathematical Biomedical Engineering (CMBE),* Washington D.C., USA, March 30 – April 1, 2011 (Executive Committee).

2010 – 2015 Member of the International Advisory Board of the "**Ce**ntre for **N**onlinear **S**tudies (CENS) – Estonian Centre of Excellence in Research", Institute of Cybernetics at Tallinn University of Technology; Institute of Physics at University of Tartu, Estonia (CENS conference with International Advisory Board meeting in Tallinn at Sept 13-14, 2015). *http://cens.ioc.ee/cen*

2010
- *6th International Conference on Technology and Medical Sciences (TMSi2010),* Porto, Portugal, October 21-23, 2010 (Scientific Committee).
- *Fourth European Conference on Computational Mechanics. Solids, Structures and Coupled Problems in Engineering,* Paris, France, May 16-21, 2010 (International Advisory Board).
- *S.M. Perren Award of the European Society of Biomechanics (ESB)* (Committee Member).

2009
- *VIPIMAGE.* II ECCOMAS Thematic Conference on "Computational Vision and Medical Image Processing", Porto, Portugal, October 14-16, 2009 (Scientific Committee).
- *6th International Conference of the Croatian Society of Mechanics (ICCSM2009),* Dubrovnik, Croatia, September 30 – October 2, 2009 (Scientific Committee).
- *IV International Congress on Computational Bioengineering (ICCB2009)* and the *First European Symposium on Biomedical Integrative Research,* Bertinoro (Forli), Italy, September 16-18, 2009 (Scientific Committee).
- *1st International Conference on Material Modeling (ICMM),* Dortmund, Germany, September 15-17, 2009 (Scientific Committee).
- *6th European Conference on Constitutive Models for Rubber (ECCMR 2009),* Dresden, Germany, September 7-10, 2009 (Scientific Panel).
- *10th International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS X),* Barcelona, Spain, September 2-4, 2009 (Technical Advisory Panel).
- *1st International Conference on Computational & Mathematical Biomedical Engineering (CMBE),* Swansea, UK, June 29-July 1, 2009 (Executive Committee).

- *1st International Conference on Biodental Engineering.* Porto, Portugal, June 26-27, 2009 (Scientific Committee).

2008

- *Third Viennese Symposium on Biomaterials.* Vienna, Austria, November 19-21, 2008 (Program Committee).
- *16th Congress of the European Society of Biomechanics.* Lucerne, Switzerland, July 6-9, 2008 (Scientific Review Board).
- *IUTAM Symposium on "Cellular, Molecular and Tissue Mechanics",* Woods Hole, Cape Cod, Massachusetts, USA, June 18-21, 2008 (Scientific Committee).
- *Reproductive Bioengineering 2008*. Wenns im Pitztal, Austria, April 1-5, 2008 (Local Organizing Committee and International Scientific Committee).
- *Mechanics of microstructured solids: cellular materials, fibre reinforced solids and soft tissues.* EUROMECH-MECAMAT Conference No. 11, University of Torino, Italy, March 10-14, 2008 (Scientific Committee).

2007

- *VIPIMAGE.* I ECCOMAS Thematic Conference on *"Computational Vision and Medical Image Processing"* (ECCOMAS), Porto, Portugal, October 17-19, 2007 (Scientific Committee).
- *III International Conference on Computational Bioengineering (ICCB2007),* Island of Margarita, Venezuela, September 17-19, 2007 (Scientific Committee).
- *International Conference on Computational Biomechanics and Biology (ICCBB),* Pilsen, Czech Republic, September 10-14, 2007 (Scientific Committee).
- *9th International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS 2007),* Barcelona, Spain, September 5-7, 2007 (Technical Advisory Panel).
- *5th European Conference on Constitutive Models for Rubber (ECCMR 2007),* Ecole Nationale Supérieure des Mines de Paris, France, September 4-7, 2007 (Scientific Panel).
- *The Fourth IASTED International Conference on Biomechanics,* Honolulu, Hawaii, August 20-22, 2007 (International Program Committee).
- *International Workshop on The Interplay Between Mechanics and Biology on Multiple Length Scales*, Castro Urdiales, Spain, July 1-4, 2007 (Scientific Committee).
- *International Conference on Modelling of Heterogeneous Materials with Applications in Construction and Biomedical Engineering,* Prague, Czech Republic, June 25-27, 2007 (Technical Advisory Panel).
- *International Conference on Computational Fracture and Failure of Materials and Structures (CFRAC),* Ecole Centrale of Nantes, France, June 11-13, 2007 (Scientific Advisory Committee).
- *Fourth International Conference on Functional Imaging and Modeling of the Heart (FIMH 2007).* Spencer F. and Cleone P. Eccles Health Sciences Education Building, Salt Lake City, June 7-9, 2007 (Scientific Committee).

2006

- *Computational Modelling of Objects represented in Images. Fundamentals, Methods and Applications (CompIMAGE),* Coimbra, Portugal, October 20-21, 2006 (Scientific Committee).
- *International Conference* on "New Trends in Biomechanical Modelling: from Molecular Statistics to Continuum Mechanics", hosted by the International Center of Mathematical Encouters, Castro Urdiales, Cantabria, Spain, September 25-29, 2006 (Scientific Committee).
- *The Third IASTED International Conference on Biomechanics,* Palma de Mallorca, Spain, August 28-30, 2006 (International Program Committee).
- *5th World Congress on Biomechanics*, Munich, Germany, July 29 – August 4, 2006 (Scientific Organizing Committee).
- *III European Conference on Computational Mechanics. Solids, Structures and Coupled Problems in Engineering,* Lisbon, Portugal, June 5-9, 2006 (Scientific Committee).
- STEP project funded by the European Commission. Brussels, May 15-16, 2006

and November 5-7, 2006 (Panel Member).

2005 – 2008 Member of the Scientific Council of the "**I**nterdisziplinäres **Z**entrum für **K**linische **F**orschung (IZKF) – Biomaterialien und Material-Gewebsinteraktion bei Implantaten (BIOMAT.)", Universitätsklinikum der RWTH Aachen
www.ukaachen.de/content/page/2376179
Meetings in Aachen, Germany, March 2-4, 2005 and March 10-11, 2008.

2005
- *ICCB2005 – II International Conference on Computational Bioengineering,* Lisbon, Portugal, September 14-16, 2005 (Scientific Committee).
- *The Second IASTED International Conference on Biomechanics,* Benidorm, Spain, September 7-9, 2005 (International Program Committee).
- *VIII International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS 2005),* Barcelona, Spain, September 5-8, 2005 (Technical Advisory Panel).
- *4th European Conference on Constitutive Models for Rubber (ECCMR 2005)*, Royal Institute of Technology (KTH), Stockholm, Sweden, June 27-29, 2005 (Scientific Panel).
- *FIMH'2005 - Third International Conference on Functional Imaging and Modeling of the Heart,* Barcelona, June 2-4, 2005 (Scientific Committee).

2004
- *The 14th European Society of Biomechanics (ESB) conference*, 's-Hertogenbosch, The Netherlands, July 4-7, 2004 (Technical Committee).
- IUTAM Symposium on the *"Mechanics of Biological Tissue"*, Graz, Austria, June 27 – July 2, 2004 (Scientific Committee, Chairman).

2003 – 2012 Member of the Working Party on Biomechanics (WP6) within IUTAM (**I**nternational **U**nion of **T**heoretical and **A**pplied **M**echanics), Chair: 2007 – 2012

2003 – 2007
- Member of the Scientific Council of the "Inter-Polytechnic Doctorate School (Torino, Bari and Milano)" – Italy, approved and funded by the Italian Ministry for Research and the University (MIUR); meetings in Torino, Italy in April 28-29, 2003; April 22-23, 2004; Feb 21-23, 2005.
- Member of the Board of Experts of the Committee for Research Evaluation (CIVR), Italian Ministry of Education, University and Scientific Research (MIUR)

2003 *International Congress on Computational Bioengineering,* Zaragoza, Spain, September 24-26, 2003 (Scientific Committee).

2002 *13th Conference of the European Society of Biomechanics*, Wrocław, Poland, September 1-4, 2002 (Scientific Committee).

2001 *EUROMECH Colloquium 430, Formulations and Constitutive Laws for Very Large Strains,* Prague, Czech Republic, October 3-5, 2001 (Scientific Committee).

Organizer/Chairman of Symposia, Workshops and Summer Schools (86 entities)

2026
- Co-organizer and co-chairman of the Mini-Symposium on "Exploring-Brain-Mechanics" at the 17th World Congress on Computational Mechanics, 10th European Congress on Computational Methods in Applied Sciences and Engineering (WCCM-ECCOMAS2026), Munich, Germany, July 19-24, 2026 (Silvia Budday and Paul Steinmann, Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Erlangen, Germany).

2025
- Coordinator of the 11th Summer School on "Physics-Informed Modeling, Simulation and Experiments with Emphasis on the Cardiovascular System", Graz, Austria, September 15-19, 2025 (with R.W. Ogden, Glasgow, UK) – Lecturer: S Avril, C Cyron, GA Holzapfel, D Nordsletten, RW Ogden, A Quarteroni
www.summerschool.tugraz.at

2024
- Co-organizer and co-chairman of the Mini-Symposium on "From Cells to Systems: Computational Modeling of Soft Tissues Across Scales" at the 19th International Symposium on Computer Methods in Biomechanics and Biomedical Engineering (CMBBE 2024), Vancouver, Canada, July 30 – August 1, 2024 (with Behrooz Fereidoonnezhad, Delft University of Technology, the Netherlands).
https://www.cmbbe-symposium.com/2024/

- Co-organizer and co-chairman of the Mini-Symposium on “Biomechanics” at the 3rd International Conference of Nonlinear Solid Mechanics (ICoNSoM 2024), Cagliari, Italy, June, 11-14, 2024 (with Marco Amabili, Massimiliano Zingales, Michele Tepedino and Mergen H. Ghayesh).
  http://www.memocsevents.eu/iconsom2024/
- Co-organizer and co-chairman of the Mini-Symposium on “Microstructure-Based Modeling of Biomechanical Systems” at the 9th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS Congress 2024), Lisbon, Portugal, June 3-7, 2024 (with Michele Terzano and Sivlia Budday).
  https://eccomas2024.org/
- Co-organizer and chairman of the 4th international workshop on “Mechanics, Modeling and Simulation of Aortic Dissection”, Riegersburg, Austria May 7-8, 2024 (with M. Rolf-Pissarczyk, TU Graz).

2023

- Co-organizer and co-chairman of the Mini-Symposium on “Advanced Modeling and Simulation in Biomechanics: from Molecules to Tissues” at the 17th International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS XVII), Barcelona, Spain, September 5-7, 2023 (with José Manuel García-Aznar, University of Zaragoza, Spain and Adrian Buganza Tepole, Purdue University, USA).
  https://complas2023.cimne.com/invited_minisymposia
- Coordinator of the 10th Summer School on “Biomechanics of Soft Tissues: From the Heart to the Cardiovascular System to the Brain”, Graz, Austria, September 11-15, 2023 (with RW Ogden, Glasgow, UK) – Lecturer: S Avril, A. Goriely, GA Holzapfel, E Kuhl, D Nordsletten, RW Ogden.
  www.summerschool.tugraz.at

2022

- Co-organizer and chairman of the 3rd international workshop on “Mechanics, Modeling and Simulation of Aortic Dissection”, Ehrenhausen, Austria November 9-11, 2022 (with S. Ranftl, TU Graz).
- Co-organizer and co-chairman of the Mini-Symposium on “Mechanics of Soft Biological Tissues” at the 11th European Solid Mechanics Conference (ESMC2022). Galway, Ireland, July 4-8, 2022 (with R.W. Ogden, University of Glasgow, UK).
  www.esmc2022.org/ms-2-2
- Co-organizer and co-chairman of the Mini-Symposium on “Continuum and Computational Biomechanics” at the 2022 International Conference of Nonlinear Solid Mechanics (2022 ICoNSoM), Alghero, Italy, June, 13-16, 2022 (with Michele Terzano, Michele Marino and Alexander Ehret)
  http://www.memocsevents.eu/iconsom2022/
- Co-organizer and co-chairman of the Mini-Symposium on “Soft Biological Tissue: Microstructure-Based Modeling and Simulation” at the ECCOMAS Congress 2022 (8th European Congress on Computational Methods in Applied Sciences and Engineering), Oslo, Norway, June 5-9, 2022 (with Bjørn Skallerud, NTNU, Trondheim, Norway).
  http://www.eccomas2022.org/frontal/default.asp

2021

- Co-organizer and co-chairman of the Mini-Symposium on “Advanced Modeling and Simulation in Biomechanics: from Molecules to Tissues” at the 16th International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS XVI), Barcelona, Spain, September 7-10, 2021 (with José Manuel García-Aznar, University of Zaragoza, Spain).
  https://congress.cimne.com/complas2021/frontal/InvitedSessions.asp
- Co-organizer and co-chairman of the Mini-Symposium on “Advances in Brain Mechanics” at the 17th International Symposium on Computer Methods in Biomechanics and Biomedical Engineering (CMBBE 2021) and the 5th Conference on Imaging and Visualization. Bonn, Germany, September 7-9, 2021 (with S. Budday, University of Erlangen-Nuremberg, Germany and P. Bayly, Washington University in St. Louis, USA).
  www.cmbbe-symposium.com/2021

- Coordinator of the 9th Summer School on "Biomechanical Modeling, Simulation and Experimental Methods: From Cells to Organs", Graz, Austria, August 30 – September 3, 2021 (with RW Ogden, Glasgow, UK) – Lecturer: S Avril, GA Holzapfel, CT Lim, AD McCulloch, RW Ogden, W Wall.
  www.summerschool.tugraz.at

2020

- Co-organizer and chairman of the 2nd international workshop on "Mechanics, Modeling and Simulation of Aortic Dissection", Schloss Seggau, Austria October 19-21, 2019 (with M. Rolf-Pissarczyk, TU Graz).
- Co-organizer and co-chairman of the Mini-Symposium on "Mechanics-Driven Modeling of Cells and Biological Tissues" at ECCOMAS Congress 2020 & 14th World Congress on Computational Mechanics (WCCM), Paris, France, July 19-24, 2020 (with J. Weickenmeier, S. Rudraraju, R. Sauer, A. Ehret).

2019

- Co-organizer and co-chairman of the Mini-Symposium on "Biomechanics and Clinical Demands" at the 4th ECCOMAS Thematic Conference on Biomedical Technology 2019 (ICBT19), Hannover, Germany, November 18-20, 2019 (with U. Nackenhorst and H. Windhagen, Hannover).
- Co-organizer and chairman of the 1st international workshop on "Mechanics, Modeling and Simulation of Aortic Dissection", Riegersburg, Austria October 9-11, 2019 (with B. Marussig, TU Graz).
- Co-organizer and co-chairman of the Symposium on "Solid (Bio)Mechanics: Challenges of the Next Decade", Trondheim, Norway, September 20, 2019 (with V. Prot and Z. Zhang, NTNU, Trondheim).
- Co-organizer and co-chairman of the Mini-Symposium on "Computational Biomechanics" at the 15th International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS XV), Barcelona, Spain, September 3-5, 2019 (with S.C. Shadden, UC Berkeley, USA).
  https://congress.cimne.com/complas2019/frontal/Invited.asp

2018

- Coordinator of the 8th Summer School on "Biomechanics, from Protein to Tissue to Organ: Modeling and Computation", Graz, Austria, September 3-7, 2018 (with RW Ogden, Glasgow, UK) – Lecturer: A Gefen, JW Holmes, GA Holzapfel, E Kuhl, RW Ogden, D. Wirtz.
  www.summerschool.tugraz.at/home/past-events/ss-2018
- Co-organizer and co-chairman of the Mini-Symposium on "Biomechanics and Mechanobiology of Soft Tissues" at the World Congress on Computational Mechanics held jointly with the 2nd Pan American Congress on Computational Mechanics (WCCMXIII and PANACM II). New York City, NY, July 22-27, 2018 (with M. Böl, C. Cyron, R. Grytz, J.D. Humphrey, E. Kuhl).
  www.wccm2018.org
- Track-chair of "Cardiovascular" at the 8th World Conference of Biomechanics (WCB 2018). Dublin, Ireland, July 8-12, 2018.
  www.wcb2018.com
- Co-organizer and co-chairman of the Mini-Symposium on "Computational Soft Tissue Cardiac Mechanics" at the ECCM-ECFD2018. Glasgow, UK, June 11-15, 2018 (with X.Y. Luo, D.A. Nordsletten, B.E. Griffith, R.W. Ogden).
  www.eccm-ecfd2018.org/frontal/default.asp
- Co-organizer and co-chairman of the Mini-Symposium on "Mechanics of Soft Biological Tissues" at the 10th European Solid Mechanics Conference (ESMC2018). Bologna, Italy, July 2-6, 2018 (with R.W. Ogden, University of Glasgow, UK).
  www.esmc2018.org

2017

- Co-organizer and co-chairman of the Mini-Symposium on "Computational Biomechanics" at the 14th International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS XIV), Barcelona, Spain, September 5-7, 2017 (with E. Kuhl, Stanford University, USA and F. Auricchio, University of Pavia, Italy).
  http://congress.cimne.com/complas2017/frontal/default.asp
- Co-organizer and co-chairman of the Section "Biomechanics" at the 88th Annual

Meeting of the International Association of Applied Mathematics and Mechanics (GAMM), Weimar, Germany, March 6-10, 2017 (with U. Nackenhorst, Germany).
http://jahrestagung.gamm-ev.de/index.php/2017/programme/sections

2016

- Co-organizer and co-chairman of the Mini-Symposium on "Coupled Mechanics and Biomaterials" at the European Mechanics of Materials Conference (EMMC15), Brussels, Belgium, September 7-9, 2016 (with C. Hellmich, Austria).
  http://sites.uclouvain.be/emmc15/index.php
- Co-organizer and co-chairman of the Mini-Symposium on "Computational Simulation of Biomechanical Systems: Reliable Mathematical Modeling and Treatment of Uncertainties" at the 12th World Congress on Computational Mechanics (WCCM XII) and the 6th Asia-Pacific Congress on Computational Mechanics (APCOM VI), Seoul, Korea, July 24-29, 2016 (with D. Balzani and U. Nackenhorst, Germany).
  http://wccm2016.org/
- Co-organizer and co-chairman of the Mini-Symposium on "Modeling of Arteries in Health and Disease" at the 12th World Congress on Computational Mechanics (WCCM XII) and the 6th Asia-Pacific Congress on Computational Mechanics (APCOM VI), Seoul, Korea, July 24-29, 2016 (with A.C. Murtada, S. Avril, B.E. Griffith and S. Wada).
  http://wccm2016.org/
- Coordinator of the 7th Summer School on "Biomechanics of Soft Tissues: Multiscale Modeling, Simulation and Applications", Graz, Austria, July 4-8, 2016 (with RW Ogden, Glasgow, UK) – Lecturer: GA Ateshian, F Auricchio, GA Holzapfel, P Hunter, RW Ogden, LA Taber.
  www.summerschool.tugraz.at/home/past-events/ss-2016
- Co-organizer and co-chairman of the Mini-Symposium on "Mechanics of Biological Tissues" at the 7th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2016), Crete Island, Greece, June 5-10, 2016 (with M. Böl, Braunschweig, University of Technology, Germany).
  http://www.eccomas2016.org/
- Co-organizer and co-chairman of the Mini-Symposium on "Aneurysms: Solid Mechanics, Fluid Mechanics, and Mechanobiology" at the 7th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2016), Crete Island, Greece, June 5-10, 2016 (with C.J. Cyron, R.C. Aydin, S. Hirsch and A.M. Robertson).
  http://www.eccomas2016.org/

2015

- Co-organizer and co-chairman of the Mini-Symposium on "Biomechanics and Computational Modeling of Living Tissue" at the 13th International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS XIII), Barcelona, Spain, September 1-3, 2015 (with D. Balzani, Dresden University of Technology, Germany).
  http://congress.cimne.com/complas2015/frontal/default.asp
- Co-organizer and co-chairman of the Mini-Symposium on "Computational Modeling and Simulation of the Cardiovascular System" at the 13th U.S. National Congress on Computational Mechanics (USNCCM13), San Diego, USA, July 26-30, 2015 (with D. Balzani, B. Klug, B.E. Griffith and A. Marsden).
  http://13.usnccm.org/
- Co-organizer and co-chairman of the Mini-Symposium on "Mechanics of Soft Biological Tissues" at the 9th European Solid Mechanics Conference (ESMC2015). Leganés, Madrid, Spain, July 6-10, 2015 (with R.W. Ogden, University of Glasgow, UK).
  www.esmc2015.org

2014

Coordinator of the 6th Summer School on "Biomechanics: Trends in Modeling and Simulation", Graz, Austria, September 8-12, 2014 (with RW Ogden, Glasgow, UK) – Lecturer: V Barocas, JW Holmes, GA Holzapfel, P McHugh, R McMeeking, RW Ogden.
www.summerschool.tugraz.at/home/past-events/ss-2014

2013
- Co-organizer and co-chairman of the Focus Session on "Cardiovascular Mechanics" at BMT-2013 – 3-Länder-Tagung der Deutschen, Schweizerischen und Österreichischen Gesellschaft für Biomedizinische Technik, Graz, Austria, September 19-21, 2013 (with S. Ferguson, ETH Zürich, Switzerland).
  http://www.bmt2013.at/
- Organizer and Chairman of the Mini-Symposium on "Computational Modeling in Biomechanics: from Micro-Structure to Macroscopic Response" at the 12th International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS XII), Barcelona, Spain, September 3-5, 2013.
  http://congress.cimne.com/complas2013/frontal/Invited.asp
- Co-organizer and co-chairman of the Mini-Symposium on "Soft Tissue Growth and Remodeling" at the 4th Canadian Conference on Nonlinear Solid Mechanics, Montréal, Québec, Canada, July 23-26, 2013 (with L. Taber, Washington University in St. Louis, USA, and J.D. Humphrey, Yale University, USA).
  http://cancnsm2013.mcgill.ca/index.html

2012
- Coordinator of the 5th Summer School on "Modeling and Simulation in Soft Tissue Biomechanics: From Structure to Macroscopic Response", Graz, Austria, September 3-7, 2012 (with RW Ogden, Glasgow, UK) – Lecturer: FPT Baaijins, A Goriely, GA Holzapfel, E Kuhl, CT Lim, RW Ogden, KK Parker.
  www.summerschool.tugraz.at/home/past-events/ss-2012
- Co-organizer and co-chairman of the Mini-Symposium on "Fluid-structure interactions in biological systems" at the 23rd International Congress of Theoretical and Applied Mechanics (ICTAM2012), Beijing, China, August 19-24, 2012 (with E. Lauga, University of California, San Diego, USA).
  http://www.ictam2012.org/?page_id=247
- Organizer and Chairman of the 8th European Solid Mechanics Conference (ESMC2012), Graz, Austria, July 9-12, 2012 (1200+ participants from 61 nations).
  www.esmc2012.tugraz.at

2011
- Organizer and Chairman of the Mini-Symposium on "Novel Computational Approaches in Biomechanics at Different Length Scales" at the 11th International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS XI), Barcelona, Spain, September 7-9, 2011.
  http://congress.cimne.com/complas2011
- Co-organizer and co-chairman of the IUTAM-Symposium (International Union of Theoretical and Applied Mechanics) on "Computer Models in Biomechanics: from Nano to Macro", Stanford University, USA, August 29 – September 2, 2011 (with E. Kuhl, Stanford University, USA).
  http://iutam.stanford.edu/
- Co-organizer of the Joint Workshop on "New Technologies for Computer/Robot Assisted Surgery", Graz, Austria, July 11-13, 2011 (with D. Pierce, TU Graz; J. Vander Sloten and M. Sette, Katholieke Universiteit Leuven, Belgium).
  www.scath.net/ws_2011
- Co-organizer and co-chairman of the 82nd Annual Meeting of the International Association of Applied Mathematics and Mechanics (GAMM), Graz University of Technology, Austria, April 18-22, 2011 (with G. Brenn, M. Schanz, O. Steinbach, Graz University of Technology, Austria).
  www.gamm2011.tugraz.at
- Co-organizer of Short Communications on "Biomechanics" at the 82nd Annual Meeting of the International Association of Applied Mathematics and Mechanics (GAMM), Graz, Austria, April 18-22, 2011 (with W. Ehlers, Technische Universität Stuttgart, Germany).
  http://www.gamm2011.tugraz.at/scientific-program/sections.html

2010
Coordinator of the 4th Summer School on "Modeling in Biomechanics and Mechanobiology at different length scales", Graz, Austria, July 5-9, 2010 (with RW Ogden, University of Glasgow, UK) – Lecturer: CR Ethier, GA Holzapfel, JD Humphrey, FC MacIntosh, K Miller, RW Ogden, D Vorp.
www.summerschool.tugraz.at/home/past-events/ss-2010

2009
- Co-organizer and co-chairman of the Mini-Symposium on "Material Modeling in Soft Tissue Biomechanics" at the 1st International Conference on Material Modeling, Dortmund, Germany, September 15-17, 2009 (with W. Ehlers, Stuttgart, Germany).
  www.icmm1.de
- Co-organizer and co-chairman of the Mini-Symposium on "Modeling of Biological Materials" at the 7th European Solid Mechanics Conference (ESMC2009), Lisbon, Portugal, September 7-11, 2009 (with M. Böl, TU Braunschweig, Germany and S.P.A. Bordas, University of Glasgow, UK).
  www.dem.ist.utl.pt/esmc2009
- Organizer and Chairman of the Mini-Symposium on "Computational Methods in Biomechanics and Mechanobiology" at the 10th International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS X), Barcelona, Spain, September 2-4, 2009.
  http://congress.cimne.upc.es/complas09
- Co-organizer and co-chairman of the Workshop on "Biomedical and Pharmaceutical Engineering – Key Technologies of the 21st Century" at the European Forum Alpbach – Technology Forum, Alpbach, Austria, August 27-29, 2009 (with J.G. Khinast, TU Graz, Austria).
  www.alpbach.org/index.php?id=737
- Co-organizer and co-chairman of the Mini-Symposium on "Biomechanics" at the 8th European Conference on Numerical Mathematics and Advanced Applications (ENUMATH 2009), Uppsala, Sweden, June 29-July 3, 2009 (with A. Klawonn, University Duisburg-Essen, Germany).
  www-conference.slu.se/enumath2009/minisymposia.html
- Co-organizer and co-chairman of the Mini-Symposium on "Arterial Wall Mechanics and Hemodynamics" at the 1st International Conference on Computational & Mathematical Biomedical Engineering (CMBE), Swansea, UK, June 29-July 1, 2009 (with J.D. Humphrey, Texas A&M and C.A. Taylor, Stanford University, USA).
  www.compbiomed.net/

2008
- Coordinator of the 3rd Summer School on "Modeling and Computation in Biomechanics", Graz, Austria, September 15-19, 2008 (with RW Ogden, Glasgow, UK); 87 participants from 24 Nations – Lecturer: GA Ateshian, M Boyce, GA Holzapfel, MRK Mofrad, RW Ogden.
  www.summerschool.tugraz.at/home/past-events/ss-2008
- Co-organizer and co-chairman of the Mini-Symposium on "Computational Modeling in Cardiovascular Mechanics" at the 2008 World Congress on Computational Mechanics (WCCM), Venice, Italy, June 30-July 4, 2008 (with J.D. Humphrey, Texas A&M, C.A. Taylor, Stanford University and D.A. Vorp, University of Pittsburgh, USA).
  www.iacm-eccomascongress2008.org/frontal/
- Co-Organizer of Short Communications on "Biomechanics" at the 79th Annual Meeting of the International Association of Applied Mathematics and Mechanics (GAMM), Bremen, Germany, March 31-April 4, 2008 (with S. Reese, Technische Universität Braunschweig, Germany).
  www.zarm.uni-bremen.de/gamm2008
- Co-organizer of the Conference on "Reproductive Bioengineering 2008", Wenns im Pitztal, Austria, April 1-5, 2008 (with Ch. Brezinka, H. Fritsch, G.M. Pinggera, I. Virgolini and L. Wildt, University of Innsbruck, Austria).
  www.congressinfo.net/bioeng/

2007
- Co-organizer and co-chairman of a set of lectures on "Tissue Mechanics – Fluid-Structure Interaction", December 14, 2007, at the Workshop on "Biomechanics and Chemotaxis", Linz, Austria, December 10-14, 2007 (with U. Langer, Johannes Kepler University, Linz, Austria).
  www.ricam.oeaw.ac.at/specsem/ssqbm/schedule/
- Organizer and Chairman of the Mini-Symposium on "Computational Methods in

Biomechanics and Mechanobiology" at the 9th International Conference on Computational Plasticity IX. Fundamentals and Applications (COMPLAS 2007), Barcelona, Spain, September 5-7, 2007.
http://congress.cimne.upc.es/complas07

- Co-organizer and co-chairman of the Mini-Symposium on "Computational Biomechanics: From Molecules to Organs" at the 9th US National Congress on Computational Mechanics (USNCCM9), San Francisco, July 22-26, 2007 (with M.R.K. Mofrad, Department of Bioengineering, University of California Berkeley, USA and E. Tajkhorshid, Theoretical Biophysics Group, University of Illinois at Urbana-Champaign, USA).
www.me.berkeley.edu/compmat/USACM/main.htmlb
- Co-organizer and co-chairman of the Mini-Symposium on "Modeling the mechanics of the cardiovascular system" at the 6th International Congress on Industrial and Applied Mathematics (ICIAM), Zürich, Switzerland, July 16-20, 2007 (with J. Sundnes, Simula Research Laboratory, Oslo, Norway).
www.iciam07.ch/index
- Organizer and Chairman of the Mini-Symposium on "Evolving discontinuites in composite (bio)materials" at the "International Conference on Computational Fracture and Failure of Materials and Structures (ECCOMAS Thematic Conference), Ecole Centrale of Nantes, France, June 11-13, 2007.
www.ec-nantes.fr/cfrac

2006

- Coordinator of the 14th CISM-IUTAM Summer School on "Biomechanical Modelling at the Molecular, Cellular and Tissue Levels" at the International Centre for Mechanical Sciences (CISM) in Udine, Italy, September 11-15, 2006 (with RW Ogden, Glasgow, UK) – Lecturer: G Bao, M Dao, GA Holzapfel, JD Humphrey, P Hunter, RW Ogden.
www.cism.it/cism/preliminary06.htm
- Coordinator of Thread-1 on "Computational Methods in Biomechanics and Mechanobiology" at the "5th World Congress of Biomechanics", Munich, Germany, July 29th – August 4th 2006.
www.wcb2006.org
- Co-organizer and co-chairman of the Mini-Symposium on "Computational Modelling and Mechanobiology of Cells" at the "5th World Congress of Biomechanics", Munich, Germany, July 29th – August 4th 2006 (with D. Stamenović, Boston University, USA).
www.wcb2006.org
- Co-organizer and co-chairman of the Mini-Symposium on "Vascular Wall Mechanics" at the "5th World Congress of Biomechanics", Munich, Germany, July 29th – August 4th 2006 (with T. Matsumoto, Nagoya Institute of Technology, Japan).
www.wcb2006.org

2005

Co-organizer and co-chairman of the Workshop on "Biomechanics. An innovative area for present and future experimental and clinical applications", KTH together with the Medical University (Karolinska Institute), Stockholm, Sweden, March 17, 2005 (with H. von Holst and P. Gudmundson, Stockholm, Sweden).

2004

- Co-organizer and co-chairman of the Conference on "Advanced Numerical Analyses of Solids and Structures, and Beyond", Graz, Austria, August 12-13, 2004 (with W. Moser and G. Reichard, Graz, Austria).
- Co-organizer and co-chairman of the IUTAM Symposium (International Union of Theoretical and Applied Mechanics) on the "Mechanics of Biological Tissue", Graz, Austria, June 27 – July 2, 2004 (with R.W. Ogden, Glasgow, UK).
www.cis.tugraz.at/biomech/IUTAM-2004.htm
- Co-organizer and co-chairman of a set of lectures on "Biophysics, Biomechanics and Mechanobiology" at the workshop on "Physical Aspects of Multi-scale Modeling", Bled, Slovenia, September 13-15, 2004 (with H. von Holst, Royal Institute of Technology (KTH), Sweden).
- Organizer and Chairman of the Mini-Symposium on "Arterial Wall Mechanics"

within the scientific topic: Cardiovascular and Biofluid Mechanics at the 14th European Society Biomechanics (ESB) conference, 's-Hertogenbosch, The Netherlands, July 4-7, 2004.
www.esb2004.tue.nl/

2003
- Co-organizer and co-chairman of the Mini-Symposium on "Modelling and Simulation" within Track 10: Cardiovascular Science and Engineering at the "World Congress on Medical Physics and Biomedical Engineering (WC2003)", Sydney Convention & Exhibition Centre, Sydney, Australia, August 24-29, 2003 (with P. Verdonck, Ghent University, Belgium).
- Co-organizer and co-chairman of the Mini-Symposium on "Physical and Computational Modeling of Biological Tissues" at the 7th U.S. National Congress on Computational Mechanics, Albuquerque Convention Center, Albuquerque, New Mexico, July 27-31, 2003 (with J.D. Humphrey – Texas A&M University College Station, USA).
www.esc.sandia.gov/usnccm.html
- Co-organizer and co-chairman of the Mini-Symposium on "Computational Modeling in Cardiovascular Mechanics" at the 7th U.S. National Congress on Computational Mechanics, Albuquerque Convention Center, Albuquerque, New Mexico, July 27-31, 2003 (with M. Oshima, University of Tokyo, Institute of Industrial Science, Japan; J.D. Humphrey, Texas A&M Univ, College Station, USA).
www.esc.sandia.gov/usnccm.html

2002
- Co-organizer and co-chairman of the Mini-Symposium on "Computational Biomechanics of Hard and Soft Tissues" at the 5th World Congress on Computational Mechanics, Vienna, Austria, July 7-12, 2002 (with R. Huiskes, Eindhoven, The Netherlands).
wccm.tuwien.ac.at/
- *Co-organizer and co-chairman of the Mini-Symposium on "Angioplasty and Stents: Experiments, Computational and Clinical Aspects", at the 4th International Congress of Pathophysiology, Budapest, Hungary, June 29-July 5, 2002 (with V. Bérczi, Budapest, Hungary).*
isp2002.sote.hu/

2001
- Coordinator of the Advanced School on "Biomechanics of Soft Tissue" at the International Centre for Mechanical Sciences (CISM) in Udine, Italy, September 10-14, 2001 (with RW Ogden, Glasgow, UK) – Lecturer: K Hayashi, GA Holzapfel, JD Humphrey, AD McCulloch, RW Ogden, A Rachev.
www.cism.it/c2001/c05/index.htm
- Co-organizer and co-chairman of the Mini-Symposium on "Computational Biomechanics" at the 2nd European Conference on Computational Mechanics, Cracow, Poland, June 26-29, 2001 (with R. Bedzinski, Wrocław, Poland). Topics: "Cardiovascular System", "Soft Tissue Mechanics", "Hard Tissue Mechanics".
jinx.twins.pk.edu.pl/eccm/minisy.html

1999
- Organizer and chairman of the Mini-Symposium on "Computational Biomechanics" at the 5th National Congress on Computational Mechanics, University of Colorado at Boulder, USA, August 4-6, 1999.
www.usacm.org/Congress5
- Co-organizer of the EUROMECH Colloquium 389, Physiological Flows and Flow-Structure Interactions, Graz, Austria, April 20-24, 1999 (with K. Perktold, Th. Kenner, H. Florian, H.W. Weizsäcker, A. Leuprecht and E. Zierler, Graz, Austria).

1997
- Organizer and chairman of the Mini-Symposium on "Finite Element Analysis of Vascular Wall Structures" at the 1st Int. Interdisciplinary Conference on Cardiovascular Medicine, Surgery, Science, and Mechanics, Washington, DC, USA, June 6-9, 1997.
- Co-organizer and co-chairman of the Mini-Symposium on "New Trends in the Thermomechanics of Elastomeric Media" at the Annual Meeting of the International Association of Applied Mathematics and Mechanics (GAMM), Regensburg, Germany, March 24-27, 1997 (with P. Haupt, Kassel, Germany).

1996 Co-Organizer and co-chairman of the Symposium on "Continuum Mechanics in Cardiovascular Research", Graz, Austria, October 18, 1996 (with H.W. Weizsäcker, Graz, Austria).

Lecturer of Advanced Schools

1. Five lectures within the 11th Summer School on *"Physics-Informed Modeling, Simulation and Experiments with Emphasis on the Cardiovascular System",* Graz, Austria, September 15-19, 2025 (organized with Professor R.W. Ogden, Glasgow, UK).
   https://www.summerschool.tugraz.at/
2. Five lectures within the 10th Summer School on *"Biomechanics of Soft Tissues: From the Heart to the Cardiovascular System to the Brain",* Graz, Austria, September 11-15, 2023 (organized with Professor R.W. Ogden, Glasgow, UK).
   https://www.summerschool.tugraz.at/
3. Five lectures within the 9th Summer School on *"Biomechanical Modeling, Simulation and Experimental Methods: From Cells to Organs",* Graz, Austria, August 30 – September 3, 2021 (organized with Professor R.W. Ogden, Glasgow, UK).
   https://www.summerschool.tugraz.at/
4. Four lectures on *"Models for Fiber-reinforced Elastic Solids with a Focus on Soft Biological Tissues"* within the graduate school of Aachen Institute for Advanced Study in Computational Engineering Science (AICES) of RWTH Aachen University, Germany; EU-Regional School 2018/2 (Sep-Dec 2018), December 10, 2018.
   https://www.aices.rwth-aachen.de/en/media-and-seminars/scientific-seminars/eu-regional-school
5. Five lectures within the 8th Summer School on *"Biomechanics, from Protein to Tissue to Organ: Modeling and Computation",* Graz, Austria, September 3-7, 2018 (organized with Professor R.W. Ogden, Glasgow, UK).
   http://www.summerschool.tugraz.at/index.php
6. Five lectures within the 7th Summer School on *"Biomechanics of Soft Tissues: Multiscale Modeling, Simulation and Applications",* Graz, Austria, July 4-8, 2016 (organized with Professor R.W. Ogden, Glasgow, UK).
   http://www.summerschool.tugraz.at/home/past-events/ss-2016
7. Five lectures within the 6th Summer School on *"Biomechanics: Trends in Modeling and Simulation",* Graz, Austria, September, 8-12, 2014 (organized with Professor R.W. Ogden, Glasgow, UK).
   http://www.summerschool.tugraz.at/home/past-events/ss-2014
8. Four lectures within the 5th Summer School on *"Modeling and Simulation in Soft Tissue Biomechanics: From Structure to Macroscopic Response",* Graz, Austria, September, 3-7, 2012 (organized with Professor R.W. Ogden, Glasgow, UK).
   http://www.summerschool.tugraz.at/index.php/home/past-events/ss-2012
9. Four lectures on *"Fundamental structure and constitutive modeling of arterial walls"* within the 4th Summer School on *"Modeling in Biomechanics and Mechanobiology at different length scales",* Graz, Austria, July 5-9, 2010 (organized with Professor R.W. Ogden, Glasgow, UK).
   http://www.summerschool.tugraz.at/ss10/
10. Seven lectures on *"Arterial Wall Mechanics: Experiments, Modeling and Computation"* within the 3rd Summer School on *"Modeling and Computation in Biomechanics",* Graz, Austria, September 15-19, 2008 (organized with Professor R.W. Ogden, Glasgow, UK).
    http://www.summerschool.tugraz.at/ss08/
11. Three lectures on *"Mathematical Modeling and Computational Analysis in Biosolid Mechanics"* within the Summer School "EPSRC Maths for Engineers" on *"Mathematical*

Modelling & Computational Methods in Solid Mechanics" at the University of Glasgow, UK, August 26-September 1, 2007 (organized by the Department of Civil Engineering).

12. Six lectures on *"Arterial Tissue in Health and Disease. Experimental Data, Collagen-Based Modeling and Simulation, Including Aortic Dissection"* within the IUTAM School on *"Biomechanical Modeling at the Molecular, Cellular and Tissue Levels"* at the International Centre for Mechanical Sciences (CISM) in Udine, Italy, September 11-15, 2006 (organized with Professor R.W. Ogden, Glasgow, UK).
    www.cism.it/courses/c0609/

13. Two days of lectures on *"Human Arterial Walls: Experiments, Modeling and Interaction with Stents"* within an Advanced School at *Boston Scientific Corporation,* One Scimed Place, Maple Grove, Minnesota, USA, April 4-5, 2005 (organized by Nilabh Narayan – Stent R&D, Cardiology Division).

14. Sixteen lectures on *"Composite Structures"* within an Advanced School at the *Industrial Materials Institute, NRC/CNRC*, Boucherville, Québec, Canada October 16-18, 2002 (organized by Dr. R. DiRaddo).

15. Two lectures on *"Continuum and Computational Biomechanics"* within the COMMAS Summer School 2002 on *"Computational Mechanics of Materials and Structures",* Stuttgart University of Technology, September 30-October 11, 2002 (invited by Professor Ch. Miehe).

16. Four lectures on *"Finite Element Simulation of Diseased Arteries: State-of-the-Art and Perspectives"* within the Advanced School and Workshop on *"Mathematical and Computational Modeling of Biological Systems"* at the Inst Superior Técnico, Lisbon, Portugal, June 17-21, 2002 (organized by Professors J. Martines and E.B. Pires).

17. Six lectures on *"Structural and numerical models for the (visco)elastic response of arterial walls with residual stresses"* within the Advanced School on *"Biomechanics of Soft Tissue"* at the International Centre for Mechanical Sciences (CISM) in Udine, Italy, September 10-14, 2001 (organized with Professor R.W. Ogden, Glasgow, UK). *www.cism.it/courses/c0106/*

18. Five lectures on *"An Introduction to the Finite Element Method"* in an Advanced School at the 1st International Interdisciplinary Conference on Cardiovascular Medicine, Surgery, Science, and Mechanics, Washington, DC, USA, June 6-9, 1997.

Referee (over the last years)

Books (reviewed for):

Academic Publishers, Cambridge University Press, CRC Press, Elsevier, Kluwer (now Springer), Springer Verlag, Wiley & Sons

Archival Journals (96 Journals in alphabetical order):

A: ACS Biomaterials Science & Engineering; Acta Biomaterialia, Acta Mechanica, Advanced Theory and Simulations, Advances in Engineering Software, American Journal of Physiology: Heart and Circulatory Physiology, Annals of Biomedical Engineering, Annals of the New York Academy of Sciences, Applied Mechanics Reviews, **B:** Bioengineering, Biomaterials, Biomechanics and Modeling in Mechanobiology, Biomedical Materials, Biorheology, Biopolymers **C:** Cardiovascular Engineering and Technology, CardioVascular and Interventional Radiology, Cells, Cellular and Molecular Bioengineering, Circulation, Clinical Biomechanics, Communications Biology, Communications in Numerical Methods in Engineering, Composite Science and Technology, Computational Mechanics, Computer Methods in Applied Mechanics and Engineering, Computer Methods in Biomechanics and Biomedical Engineering, Computers & Structures, Computer & Fluids, Connective Tissue Research, Continuum Mechanics and Thermodynamics, Coronary Artery Disease; **E:** Engineering Computations, Engineering Structures, Engineering with Computers, European Journal of Mechanics A/Solids, European

Journal of Obstetrics & Gynecology and Reproductive Biology, European Journal of Vascular and Endovascular Surgery, European Spine Journal; **F:** Finite Elements in Analysis and Design, Frontiers in Surgery; **H:** Health Care, Heart and Vessels, **I:** Interface Focus, International Journal for Computational Vision and Biomechanics, International Journal for Numerical Methods in Biomedical Engineering, International Journal of Cardiology, International Journal of Computational Materials Science, International Journal of Computer Assisted Radiology and Surgery, International Journal of Engineering Science, International Journal of Non-Linear Mechanics, International Journal of Numerical Methods in Engineering, International Journal of Solids and Structures, **J:** Journal of Applied Mechanics, Journal of Biomechanical Engineering, Journal of Biomechanics, Journal of Elasticity, Journal of Engineering in Medicine, Journal of Engineering Mathematics, Journal of Mathematical Biology, Journal of Nonlinear Dynamics, Journal of Plasticity, Journal of the Mechanical Behavior of Biomedical Materials, Journal of the Mechanics and Physics of Solids, Journal of the Royal Society Interface, Journal of Strain Analysis for Engineering Design, Journal of Structural Biology, Journal of Theoretical Biology, Journal of Vascular Research; **M:** Materials; Materials Science & Engineering C, Meccanica, Mechanics of Soft Materials, Mechanics Research Communications, Medical & Biological Engineering & Computing, Medical Engineering and Physics; **N:** Nature Communications, Numerical Heat Transfer; **P:** Pflügers-Archiv, Physical Review X, Physical and Engineering Sciences in Medicine, PLoS ONE, Proceedings of the Royal Society of London A – Math Phys and Eng Sciences, Progress in Materials Science; **R:** Reviews in Biomedical Engineering; **S:** Strain, Stroke, Surgical and Radiologic Anatomy; **T:** Technische Mechanik, The Biophysical Journal, The Journal of Physiology, Tissue Engineering, Transactions of the Canadian Society for Mechanical Engineering, Transactions on Medical Imaging (IEEE); **Z:** Zeitschrift für Angewandte Mathematik und Mechanik, Zeitschrift für angewandte Mathematik und Physik

Grant Reviewer (countries in alphabetical order, 37 different grant organizations):

Austria: Austrian Academy of Science, Austrian Agency for International Cooperation in Education and Research (OeAD), National Bank of Austria (OeNB) – Anniversary Fund; *Czech Republic:* Czech Science Foundation; *Chile:* National Fund for Scientific & Technological Development (Fondecyt); *Croatia:* Croatian Science Foundation (HRZZ); *Cyprus:* Cyprus Research and Innovation Foundation (RIF); *Czech Republic:* Academy of Sciences of the Czech Republic (Grant Agency); *European Union:* European Research Council (ERC) – Starting, Consolidator and Advanced Grants, European Science Foundation (ESF), European Young Investigator (EURYI) Awards Program, Human Frontier Science Program (HFSP); *Finland:* Academy of Finland; *Flanders:* Fonds Wetenschappelijk Onderzoek (FWO); *Germany:* Deutsche Forschungsgemeinschaft (DFG), Schering Stiftung, Exploratory Research Space (ERS) Boost Fund Project; *Hong Kong:* City University of Hong Kong, Kowloon; *Ireland:* Science Foundation Ireland (SFI); *Israel:* Israel Science Foundation (ISF); *Italy:* Italian Ministry for Education, University and Research (MIUR), Program of Visiting Professors; *Luxembourg:* Fonds National de la Recherche Luxembourg (FNR); *Netherland:* BioMedical Materials Program (BMM), Health Science & Technology (HST), NWO Council for Physical Sciences, Technology Foundation STW; *New Zealand:* Marsden Fund by the Royal Society of NZ; *Poland:* National Science Center; *Portugal:* Fundação para a Ciência e a Tecnologia (FCT); *Sweden:* Swedish Research Council; *Switzerland:* Swiss National Science Foundation (SNSF); *UK:* The Royal Society, Engineering and Physical Sciences research Council (EPSRC), Wellcome Trust; *United Arab Emirates:* Qatar National Research Fund (QNRF), Khalifa University of Science and Technology; USA*:* California State Funding.

Supervisor – Consulted Expert

Consultant for Professorships and Habilitations

Several Assignments as outside expert (external adviser) in Europe and the USA

Habilitation Thesis

1. *David M. Pierce:* (defended July 2013)
2. *Gerhard Sommer:* (defended September 2021)

Post-Doctoral Fellows

1. *Christian Gasser* (Ph.D. Graz University of Technology, Austria), 11/01 – 11/06
2. *Fernando Cacho* (Ph.D. University of Zaragoza, Spain), 5/06 – 2/07
3. *Martin Kroon* (Ph.D. Royal Institute of Technology, Stockholm, Sweden), 8/06 – 6/08
4. *David M. Pierce (*Ph.D. Stanford University, USA), 10/07 – 8/13
5. *Arturo Valentín* (Ph.D. Texas A&M University, USA), 3/09 – 5/12
6. *Andreas Schriefl:* (Ph.D. TU Graz, Austria), 1/13 – 11/14
7. *Igor Karšaj:* (Ph.D. University of Zagreb, Croatia), 4/13 – 3/14
8. *Jianhua Tong:* (Ph.D. TU Graz, Austria), 4/13 – 8/13
9. *Sae-Il Murtada:* (Ph.D. KTH, Stockholm, Sweden), 9/15 – 5/16
10. *Anju R. Babu:* (Ph.D. Indian Institute of Science, Bangalore, India), 5/15 – 4/17
11. *Justyna Niestrawska:* (Ph.D. TU Graz, Austria), 4/18 – 7/18
12. *Gerhard Sommer* (Ph.D. TU Graz, Austria), 10/08 – 9/09, 11/10 – 10/18
13. *Kewei Li:* (Ph.D. University of Connecticut, USA), 2/14 – 1/20
14. *Markus Geith:* (Ph.D. TU Graz, Austria), 11/20 – 12/20
15. *Stephan Teichtmeister:* (Ph.D. University of Stuttgart, Germany), 9/20 – 10/22
16. *Daniel Haspinger:* (Ph.D. TU Graz, Austria), 12/20 – 12/22
17. *Emmanouil Agrafiotis:* (Ph.D. TU Graz, Austria), 5/23 – 9/23
18. *Selda Sherifova:* (Ph.D. TU Graz, Austria), 1/20 – 2/24
19. *Anna Pukaluk* (Ph.D. TU Graz, Austria), 7/23 – 11/24
20. *Michele Terzano:* (Ph.D. University of Parma, Italy), 5/21 – pres
21. *Malte Rolf-Pissarczyk* (Ph.D. TU Graz, Austria), 3/24 – pres

Doctoral Students

Supervisor (Graz University of Technology):

1. *Christian Gasser:* defended October 2001
2. *Michael Stadler:* defended April 13, 2004
   Awarded as the **best PhD-Thesis with respect to social relevance**; selected by the "Forum for Technology and Society", Graz University of Technology, Austria, November 25, 2004.
   Each year the "Forum Technology and Society and Alumni Relations" selects the best PhD-Thesis with distinct relevance to society. The jury consists of members from the industry and the media.
3. *Nikolaus Böck:* defended June 9, 2004
4. *Pierre Elbischger:* co-supervised with the Institute for Computer Graphics and Vision, Graz University of Technology, Austria; defended April 8, 2005
5. *Giulia Francescini:* co-supervised with the University of Trento; defended February 13, 2006
6. *Fernando Cacho:* co-supervised with the University of Zaragoza; defended May 5, 2006
7. *Martin Auer:* defended January 31, 2007
8. *Ilia Hariton:* co-supervised with the Ben-Gurion University of the Negev, Beer-Sheva, Israel; defended January, 2008
9. *Dimitrios E. Kiousis:* defended September 16, 2008
   Title: “Biomechanical and computational modeling of atherosclerotic arteries. Insights into plaque vulnerability and vascular stenting”
   Second place of the Stefan-Schuy-Prize 2008, awarded by the Austrian Society of Biomedical Engineering for the best annual scientific work in Biomedical Engineering.
10. *Gerhard Sommer:* defended October 17, 2008
11. *Sae-Il Murtada:* defended February 3, 2012
12. *Thomas J.E. Eriksson:* defended July 16, 2012
13. *Christoph Augustin:* co-supervised with O. Steinbach; defended August 27, 2012
14. *Andreas J. Schriefl:* co-supervised with D. Pierce; defended December 18, 2012
15. *Jianhua Tong:* defended April 2, 2013
16. *Michael J. Unterberger:* defended September 25, 2013

Title: “Microstructurally-motivated constitutive modeling of cross-linked filamentous actin networks”
Sub auspiciis Praesidentis on July 14, 2014: In Austria, the highest possible honor for a PhD. In a ceremony, the Austria President honors the country's best students with a gold ring, engraved with the words "sub auspiciis praesidentis" and the emblem of Austria. In Austria, approximately 20 out of 2500 students graduate as "sub auspiciis" per year.

17. *Hannah Weisbecker:* co-supervised with D. Pierce; defended May 5, 2014
18. *Justyna Niestrawska:* defended March 23, 2018
19. *Osman Gültekin:* defended November 23, 2018
    Title: “Computational inelasticity of fibrous biological tissues with a focus on viscoelasticity, damage and rupture”
    Finalist of the **ECCOMAS award** for the best PhD theses in 2018 selected by the local-regional ECCOMAS Association CEACM (Central European Association for Computational Mechanics) including Austria, Bosnia and Herzegovina, Croatia, Hungary, Poland, Slovakia, Slovenia and The Czech Republic
20. *Selda Sherifova:* defended November 18, 2019
21. *Markus Geith:* co-supervision with G. Sommer; defended October 9, 2020
22. *Daniel Haspinger:* defended November 20, 2020
23. *Emmanouil Agrafiotis* (8/19-4/23): co-supervision with G. Sommer; defended April 28, 2023
24. *Anna Pukaluk* (10/17-6/23): co-supervision with G. Sommer; defended June 30, 2023
25. *Malte Rolf-Pissarczyk* (5/18-2/24): defended February 29, 2024
    Title: “Material and computational modeling of aortic dissection”
    Awarded as the best **PhD-Thesis 2024** in Biomedical Engineering selected by the “Austrian Society for Biomedical Engineering (ÖGBMT)”, at the Annual ÖGBMT Meeting, Graz, Austria October 24-25, 2024.
26. *Misael Dalbosco* (6/20-2/23): defended April 19, 2024 – Cotutelle PhD together with the Federal University of Santa Catarina, Brazil (Prof. Eduardo Alberto Fancello)
27. *Clarissa Holzer* (co-supervision with G. Sommer): 4/21 – pres
28. *Manuel Kainz* (co-supervision with G. Sommer): 5/21 – pres
29. *Maximilian Wollner;* 11/21 – pres
30. *Francesca Bogoni* (co-supervision with G. Sommer): 9/22 – pres
31. *Masoud Yusefi* (co-supervision with G. Sommer): 10/22 – pres
32. *Sanne Kwakman;* 4/23 – pres
33. *Stefan Schrammel:* 6/24 – pres
34. *Mina Khalaj:* 7/25 – pres

Supervisor (NTNU Trondheim):

35. *Hans Martin Aguilera* (1/20-1/23): co-supervision with V. Prot, B. Skallerud and S. Urheim; defended September 8, 2023
36. *Mohammad Javad Sadeghinia* (3/19-8/23): co-supervision with V. Prot, B. Skallerud and S. Urheim; defended December 7, 2023
37. *Omid Ghorbani* (co-supervision with B. Skallerud, V. Prot and S. Urheim): 11/22 – pres

Supervisor (Free University of Bozen-Bolzano):

38. *Seyed Shayan Sajjadinia* (11/19-7/24): co-supervision with B. Carpentieri; defended July 11, 2024

Research Assistant (Graz University of Technology, KTH Stockholm, NTNU Trondheim):

1. *Georg Zeindlinger:* 3/11 – 9/11
2. *Andrii Grytsan:* 5/11 – 12/13
3. *Selda Sherifova:* 3/14 – 11/14
4. *Stephan Teichtmeister:* 7/20 – 9/20
5. *Xuyan Liu:* 5/17 – 2/22
6. *Saeideh Saeidi:* 12/22 – 6/23
7. *Stefan Schrammel:* 12/23 – 5/24
8. *Mina Khalaj:* 2/25 – 6/25

Visiting Doctoral Students:

1. *Carolien J. van Andel*

Delft University of Technology, Department of Design, Engineering and Production, The Netherlands: 2001

2. *Anna Guillou*
   University of Glasgow, School of Mathematics and Statistics, Scotland, UK: June 2004
3. *Philip F. Brune*
   University of Rochester, Department of Mechanical Engineering, USA (granted by the Institute of International Education, Central Europe Summer Research Institute): June-July 2007
4. *Victorien Prot* and *Andreas Meyer Winnem*
   Norwegian University of Science and Technology, Trondheim, Norway: August 2007
5. *Nele Famaey*
   Katholieke Universiteit Leuven, Department of Mechanics, Division of Biomechanics and Engineering Design, Robot Assisted Surgery Group, Heverlee, Belgium: February, June, September 2008, April, August, September 2010
6. *Peter Mortier*
   Institute Biomedical Technology (IBiTech), Campus Heymans, Ghent University, Belgium: May-June 2008
7. *Tomasz Gajewski*
   Poznan University of Technology, Poland: July-September 2012, September 2015, March 2015
8. *Saša Ćukovic*
   University of Kragujevac, Serbia: June 2013
9. *Nikola Nesic*
   Karlsruhe Institute of Technology (KIT), Institute of Engineering Mechanics, Germany: August 2013
10. *Milan Cajić*
    Mathematical Institute of the Serbian Academy of Sciences and Arts, Belgrade, Serbia: August 2013
11. *Hadi Taghizadeh GJ*
    Amirkabir University of Technology, Tehran, Iran: March-August 2014
12. *José Luis Calvo Gallego*
    University of Seville, Spain: September-December 2014
13. *Eduard Marenić*
    University of Zagreb, Croatia: February 2014
14. *Lana Virag*
    University of Zagreb, Croatia: October, November 2014
15. *Vedran Vindiš*
    University of Zagreb, Croatia: February-April 2014, November 2014, March 2015
16. *Behrooz Fereidoonnezhad*
    Sharif University of Technology**,** Tehran, Iran**:** September 2014 – February 2015
17. *Mor Ben Or-Frank*
    Tel Aviv University, Tel Aviv/Ben-Gurion University, Beer-Sheva, Israel: February 2015, June 2017
18. *Silvia Budday*
    University of Erlangen-Nuremberg, Germany: April 2015, March 2016
19. *Gaute Aasen Slinde*
    Norwegian University of Science and Technology (NTNU), Faculty of Engineering Science and Technology, Norway: March 2017

20. *Anna Pukaluk*
    AGH University of Science and Technology, Poland: July, August 2017
21. *Jasper Yang*
    The Hong Kong Polytechnic University: April-September 2018
22. *Amin Ghazanfari Tehran*
    Khaje Nasir Toosi University of Technology, Iran: July 2018 – January 2019
23. *Moritz Kalhöfer-Köchling*
    Max Planck Institute for Dynamics and Self-Organization, Göttingen, Germany: March 2019
24. *Misael Dalbosco*
    Federal University of Santa Catarina, Brazil: September 2019 – February 2020
25. *Federica Cosentino*
    University of Palermo, Italy: September 2019 – March 2020
26. *Maedeh Aram*
    Furtwangen University, Germany: October and November 2019
27. *David Böhringer*
    Friedrich-Alexander-University Erlangen-Nürnberg (FAU), Germany: November 2019
28. *Saeideh Saeidi*
    Amirkabir University of Technology, Iran: February 2022 – November 2023
29. *Maria Stefania Massaro*
    Charles University, Plzeň, Czech Republic: May and October 2022
30. *José Luís Medeiros Thiesen*
    Federal University of Santa Catarina, Brazil: September 2023 – February 2024
31. *Mina Khalaj*
    Amirkabir University of Technology (Tehran Polytechnic), Iran: January 2024 – January 2025
32. *Simona Lo Franco*
    Università degli studi di Palermo, Italy: February 2024 – July 2024
33. *Jingyu Wang*
    South China University of Technology, China: November 2024 – November 2025
34. *Maïté Pétré*
    KULeuven and CULouvain, Belgium: January 2025 – March 2025
35. *Devrim Tümer*
    Ege University, Izmir, Turkey: August 2025 – October 2025

Assignments as opponent, defense committee member, external examiner

1. *Carolien J. van Andel*
   Title: "Coronary anastomosis arteries in pig and man: Mechanical properties and finite element modeling"
   Delft University of Technology, Department of Design, Engineering and Production, The Netherlands; defense committee member – (defended on May 27, 2003)
2. *Klas Adolfsson*
   Title: "Models and numerical procedures for fractional order viscoelasticity"
   Chalmers University of Technology, Department of Applied Mechanics, Göteborg, Sweden; opponent – (defended on April 21, 2004)
3. *Jonas Stålhand*
   Title: "Arterial mechanics – noninvasive identification of material parameters and residual stress"
   Linköping University, Division of Mechanics, Department of Mechanical Engineering, Linköping, Sweden; opponent – (defended on June 9, 2005)
4. *Bernd Markert*
   Title: "Porous media viscoelasticity with application to polymeric foams"

University of Stuttgart, Institute of Applied Mechanics (Civil Engineering), Germany; external examiner – (defended on July 14, 2005)

5. *Tom Thorvaldsen*
   Title: "An electro-mechanics solver for the heart"
   University of Oslo, Faculty of Mathematics and Natural Sciences, Department of Informatics, Norway; opponent – (defended on April 28, 2006)
6. *Niels Driessen*
   Title: "Modeling and remodeling of the collagen architecture on cardiovascular tissues"
   Eindhoven University of Technology, Biomedical Engineering Materials Technology, The Netherlands; defense committee member – (defended on September 21, 2006)
7. *Anna Guillou*
   Title: "Modelling the mechanical behaviour of arterial soft tissues subject to volumetric growth"
   University of Glasgow, School of Mathematics and Statistics, Scotland, UK; defense committee member – (defended on November 17, 2006)
8. *Peter Mortier*
   Title: "Computer modelling of coronary bifurcation stenting"
   Ghent University, Institute Biomedical Technology, Belgium; defense committee member – (defended on March 11, 2010)
9. *Nele Famaey*
   Title: "Soft tissue damage prevention in surgery: an experimental and computational framework with application to arterial clamping"
   Katholieke Universiteit Leuven, Department of Mechanics, Division of Biomechanics and Engineering Design, Robot Assisted Surgery Group, Belgium; defense committee member – (defended on January 27, 2012)
10. *Daniel G.T. Strange*
    Title: "Mechanics of biomimetic materials for tissue engineering of the intervertebral disc"
    University of Cambridge, Department of Engineering, UK; external examiner – (defended on February 26, 2013)
11. *John J. Mulvihill*
    Title: "Towards the development of guidelines for the surgical treatment of carotid artery disease: a tissue characterization approach"
    University of Limerick, Department of Mechanical, Aeronautical and Biomedical Engineering, Ireland; external examiner – (defended on May 28, 2013)
12. *Thomas Schmidt*
    Title: "Modeling the biomechanics of arterial walls under supra-physiological loading"
    Dresden University of Technology, Faculty of Civil Engineering, Germany; external examiner – (defended on June 15, 2015)
    In June 2016 the PhD Thesis was awarded with the "Dr.-Walter-Seipp-Preis der Commerzbank-Stiftung"
13. *Gabriel Balaban*
    Title: "Adjoint data assimilation methods for cardiac mechanics"
    University of Oslo, Faculty of Mathematics and Natural Sciences, Department of Informatics, Norway; opponent – (defended on January 10, 2017)
14. *Lana Virag*
    Title: "Numerical modeling of abdominal aortic aneurysm expansion"
    University of Zagreb, Faculty of Mechanical Engineering and Naval Architecture, Croatia; defense committee member – (defended on February 10, 2017)
15. *Behrooz Fereidoonnezhad*
    Title: "Constitutive modeling and numerical simulation of coronary arteries mechanical behavior in stenting and succeeding growth"
    Sharif University of Technology, Department of Mechanical Engineering, Iran; defense committee member, advisor – (defended on February 11, 2017)
16. *Silvia Budday* (Bertha-Benz-Laureate 2018: www.youtube.com/watch?v=bPDPiPrupJM and

Acta Student Award 2018 for the paper "Mechanical characterization of human brain tissue")
Title: "The role of mechanics during brain development"
Faculty of Engineering of the Friedrich-Alexander-University Erlangen-Nürnberg, Germany; defense committee member – (defended on December 21, 2017)

17. *Henrik Finsberg*
Title: "Patient-specific computational modeling of cardiac mechanics"
University of Oslo, Faculty of Mathematics and Natural Sciences, Department of Informatics, Norway; opponent – (defended on January 17, 2018)
18. *Pim Jacobus Andreas Oomen*
Title: "Mechanics of growth and remodeling in native and engineered cardiovascular tissues"
Eindhoven University of Technology, Biomedical Engineering Materials Technology, The Netherlands; defense committee member – (defended on October 15, 2018)
19. *João Pedro Sousa Ferreira*
Title: "A cell-based approach to early detect female pelvic organ prolapse"
University of Porto, Engineering Faculty (Faculdade de Engenharia da Universidade do Porto, FEUP), Portugal; defense committee member – (defended on March 30, 2020)
20. *Maria Castro Paupério Vila Pouca*
Title: "A biomechanical analysis of low-cycle fatigue damage during the second stage of labor"
University of Porto, Engineering Faculty (Faculdade de Engenharia da Universidade do Porto, FEUP), Portugal; defense committee member – (defended on March 4, 2022)
21. *Xiaoxin Kan*
Title: "A finite element model for virtual stent-graft deployment in aortic dissection"
Imperial College London, Department of Chemical Engineering, UK; external examiner – (defended on March 25, 2022)
22. *Tian Yuan*
Title: "A mathematical framework for mechanically controlled brain drug delivery"
Imperial College London, Department of Mechanical Engineering, UK; external examiner – (defended on November 20, 2023)
The dissertation recived the 2024 ESB Best Doctoral Thesis Award in Biomechanics at the 2024 ESB Congress at Edinburgh
23. *Marta Bracco*
Title: "In vivo ultrasound imaging for the characterization of abdominal aortic aneurysm mechanics"
École des Mines de Saint-Étienne, France; external examiner – (defended on April 4, 2024)
24. *Riccardo Alberini*
Title: "Mechanical behavior of human skin: testing, modeling and simulations"
Università di Parma, Italy; president of the defense committee – (defended on May 24, 2024)

Licentiate Student

Defended at the Royal Institute of Technology in Stockholm, Sweden:

1. *Dimitrios E. Kiousis:* (defended in January 26, 2006)
2. *Sae-Il Murtada:* (defended in October 23, 2009)

Master Students (partly co-supervised)

Defended at the Universities of Technology in Graz and Vienna:

1. *Christian T. Gasser:* (defended in June 1996)
2. *Michael Fritsch:* (defended in July 1999)
3. *Manuel Pellissetti:* (defended in August 1999)
4. *Christian Schulze-Bauer:* (defended in July 2000)
5. *Gerhard Sommer:* (defended in March 2003)
6. *Fabian Schmid:* (defended in September 2003)

7. *Stephan F. Rubinigg:* (defended in April 2008)
8. *Rafael Höller:* (defended in November 2010)
9. *Georg Zeindlinger:* (defended in April 2011)
10. *Anita Haider:* (defended in March 2012)
11. *Thomas Fastl:* (defended in April 2013)
12. *Emanuel Sandner:* (defended in April 2013)
13. *Andreas Reinisch:* (defended in July 2013)
14. *Christoph Ober:* (defended in October 2013)
15. *Christoph Schwarz:* (defended in November)
16. *Franz Maier:* (defended in May 2014)
17. *Johanna Maria Ticar:* (defended in October 2014)
18. *Lars Bollmann:* (defended in May 2015)
    Title: "*Mechanical characterization of microglia and glioblastoma cells*"
    Awarded as the best Master Thesis in terms of social relevance; selected by the "Forum for Technology and Society", Graz University of Technology, Austria, December 16, 2015.
    Each year the "Forum Technology and Society and Alumni Relations" selects the best Master-Thesis with distinct relevance to society. The jury consists of members from the industry and the media.
19. *Daniel C. Haspinger:* (defended in January 2017)
    Title: "*A numerical analysis of the interrelation between extracellular smooth muscle orientation and the intracellular filament overlap in human abdominal aorta"*
    On November 27, 2017, the Master Thesis was awarded with the "Ing. F. Schmiedl Research Award 2016/2017" from the City of Graz, Austria.
    … and many more …

Defended at the Royal Institute of Technology in Stockholm, Sweden:

20. *Maarten Landuyt:* (defended in June 2006)
21. *Alexander Wulff:* (defended in February 2007)
22. *Göray Görgülü:* (defended in March 2007)
23. *Jianhua Tong:* (defended in March 2007)
24. *Thomas Eriksson:* (defended in February 2008)
25. *Matin Shahzamanian Sichani:* (defended in September 2010)
26. *Selda Sherifova:* (defended in December 2014)

Other Students, high school interns

1. *Lukas Költringer* (Medical University Graz, Austria), 9/06 – 6/08
2. *Katharina Woisetschläger* (High School Student, Trainee program on "Woman towards Engineering", granted by TU Graz), July 2007, July 2008
3. *Alexandra Schussnig* (High School Student), July 2009
4. *Michaela Krainer* (High School Student), July 2010
5. *Saskia Zörweg* (High School Student), August 2010
6. *Viola Moisesbichler* (High School Student), July 2011
7. *Isabel Süss* (High School Student), August 2011
8. *Bernd Schulze-Bauer* (High School Student), July 2012
9. *Nina Mosbacher* (High School Student), July 2012, July 2013
10. *Lea Bogensperger* (High School Student), August 2012
11. *Dinely Colon* (The City College of New York, USA), Marshall Plan Scholar, 6/13 – 8/13
12. *Alexandra Forster* (High School Student), August 2013
13. *Lara Sanz* (High School Student), August 2014
14. *Renate Berghofer* (TU Graz), August-September 2014
15. *Daniel Han* (Penn State University, USA), June-September 2014
16. *Menna Allam* (High School Student), September 2014
17. *Johanna Kleemair, Christina Fior* (High School Students), July, August 2015
18. *Catharina Friedl, Lena Kaltenbeck* (High School Students), July, August 2016
19. *Christina Adam, Hanna Seifried* (High School Students), July, August 2017
20. *Veronica Tchernychouk, Idara Ubong* (Wayne State University, USA), May, June 2018

21. *Maja Bukoschegg, Lena Kerschbaumer, Miriam Müller* (High School Students), August 2018
22. *Annina Brew, Mira Zuser* (High School Students), July 2019
23. *Pamela Diamantopoulou, Nadine Neu* (High School Students), August, 2020
24. *Maria Baliko, Sara-Maria Klug* (High School Students), July, 2021
25. *Neža Vogrinčič, Carina Pregartner* (High School Students), September 2023
26. *Eleni Ahamer, Lukas Eicher* (High School Student), July, August 2024

Consulted expert for professional accomplishments of people for possible appointments at Universities; 100+ written letters of endorsement for people to receive academic and industrial positions, awards and grants, etc.

Models Available in Commercial Software

- Abaqus: Dassault Systèmes Simulia Corp., Providence, RI, USA. www.simulia.com

  Implemented material models taken from:

  G.A. Holzapfel, T.C. Gasser and R.W. Ogden: A new constitutive framework for arterial wall mechanics and a comparative study of material models. *Journal of Elasticity*, **61** (2000) 1-48

  T.C. Gasser, R.W. Ogden and G.A. Holzapfel: Hyperelastic modelling of arterial layers with distributed collagen fibre orientations. *Journal of the Royal Society Interface,* **3** (2006) 15-35

  G.A. Holzapfel and R.W. Ogden: Constitutive modelling of passive myocardium. A structurally-based framework for material characterization. *Philosophical Transactions of the Royal Society A,* **367** (2009) 3445–3475

- ADINA R&D, Inc., Watertown, MA, USA. www.adina.com

  Implemented material models taken from:

  G.A. Holzapfel: On large strain viscoelasticity: Continuum formulation and finite element applications to elastomeric structures. *International Journal for Numerical Methods in Engineering*, **39** (1996) 3903-3926

  G.A. Holzapfel, T.C. Gasser and R.W. Ogden: A new constitutive framework for arterial wall mechanics and a comparative study of material models. *Journal of Elasticity*, **61** (2000) 1-48

- ANSYS, Inc., Canonsburg, PA, USA. www.ansys.com

  Implemented material models taken from:

  G.A. Holzapfel, T.C. Gasser and R.W. Ogden: A new constitutive framework for arterial wall mechanics and a comparative study of material models. *Journal of Elasticity*, **61** (2000) 1-48

  G.A. Holzapfel, G. Sommer, C.T. Gasser and P. Regitnig: Determination of the layer-specific mechanical properties of human coronary arteries with non-atherosclerotic intimal thickening, and related constitutive modeling. *American J. Physiology - Heart Circulation Physiology,* **289** (2005) H2048-2058

  G.A. Holzapfel, M. Stadler and T.C. Gasser: Changes in the mechanical environment of stenotic arteries during interaction with stents: computational assessment of parametric stent designs. *ASME Journal of Biomechanical Engineering,* **127** (2005) 166-180

- LS-DYNA, Livermore Software Technology Corp., USA. www.lstc.com

  Implemented material model taken from:

  G.A. Holzapfel, J.A. Niestrawska, R.W. Ogden, A.J. Reinisch and A.J. Schriefl: Non-symmetric collagen fibre dispersion in arterial walls. *Journal of the Royal Society Interface,* **12** (2015) 2015.0188

- cellML. www.cellml.org

  Implemented material model taken from:

  T.C. Gasser, R.W. Ogden and G.A. Holzapfel: Hyperelastic modelling of arterial layers with distributed collagen fibre orientations. *Journal of the Royal Society Interface,* **3** (2006) 15-35
  https://models.cellml.org/exposure/d5d6bff87af2bc1e94b6e8706227ba1a/view

- COMSOL, Inc., Burlington, MA, USA. www.comsol.com see also comsol.blog/viscoelasticity

  Implemented material models taken from:

  G.A. Holzapfel, T.C. Gasser and R.W. Ogden: A new constitutive framework for arterial wall mechanics and a comparative study of material models. *Journal of Elasticity*, **61** (2000) 1-48

G.A. Holzapfel, T.C. Gasser and M. Stadler: A structural model for the viscoelastic behavior of arterial walls: Continuum formulation and finite element analysis, *European Journal of Mechanics A/Solids,* **21** (2002) 441–463

- FEAP, A Finite Element Analysis Program; University of California, Berkeley, USA. www.ce.berkeley.edu/projects/feap/

  Implemented material model taken from:
  G.A. Holzapfel, T.C. Gasser and R.W. Ogden: A new constitutive framework for arterial wall mechanics and a comparative study of material models. *Journal of Elasticity*, **61** (2000) 1-48

Teaching Experience

▪ Graz University of Technology

2009 – *„Grundlagen der Biomechanik“*
45 lectures (undergraduate level) – 1 lecture = 45 min, held every year

2009 – *„Protein- und Zellmechanik“*
30 lectures (senior undergraduate level), held every year

2007 – *„Mechanik Biologischer Gewebe“*
30 lectures (senior undergraduate level), held every year

2004 *„Biomechanische und strömungsmechanische Messtechnik“*
30 lectures (undergraduate level)

2003, 2004 *„Numerical Methods in Applied Thermodynamics“*
15 lectures (undergraduate level)

2000 – 2003 *„An Introduction to Continuum Mechanics“*
60 lectures (undergraduate level)

1999 – 2002 *„Nonlinear Finite Element Procedures for Continuous Systems“*
45 lectures (postgraduate level)

2001 *„Biomechanics for Soft Biological Tissue“*
15 lectures (undergraduate level)

1999 – 2003 *„Strength of Materials in Mechanical Engineering“*
45 lectures (undergraduate level)

1998 *„Mechanics of Materials at Large Deformations“*
60 lectures (postgraduate level)

1997 *„Nonlinear Continuum Mechanics“*
60 lectures (postgraduate level)

1987-1997 (Practice) *„Strength of Materials“*
30 lectures (undergraduate level)
„2-D Components – Theory of Plates and Shells“
30 lectures (undergraduate level)
„Advanced Strength of Materials and Finite Element Methods“
15 lectures (undergraduate level)
„Theory of Plasticity“
15 lectures (undergraduate level)

▪ Royal Institute of Technology (KTH), Department of Solid Mechanics, Stockholm, Sweden

2006 – 2013 *„Introduction to Biomechanics (4C1121, SE2121)“*; 9 ECTS
48 lectures in addition to laboratory work (senior undergraduate level) – (one lecture is the equivalent of 45 min), held every year

2006 *„Orthopaedic Biomechanics (4C1124)”*; 6 ECTS
32 lectures in addition to laboratory work (senior undergraduate level)

▪ University of Zaragoza, Department of Mechancial Engineering, Spain

2007 *„Continuum Biomechanics with an Emphasize on Arterial Walls in Health and Disease”*
12 lectures (postgraduate level)

- **Barcelona, Escuela Técnica Superior de Ingenieros de Caminos, Canales y Puertos de BCN, Universidad Politécnica de Cataluña, Spain**

2003 *„Nonlinear Solid Mechanics with Application to Biomechanics“*
30 lectures (postgraduate level)

- **Vienna University of Technology**

2002 *„Nonlinear Solid Mechanics“*
45 lectures (postgraduate level)

1998 *„Variational Principles for the Finite Element Method“*
15 lectures (postgraduate level)

1997 *„Finite Elasticity I – Constitutive Modeling“*
30 lectures (postgraduate level)

- **University of Shenyang, P.R. China**

1991 *„Continuum Mechanics and Numerical Methods in Engineering Design“*
15 lectures (postgraduate level)

PR Work (Selected)

1. *“Honorary Degree in Mechanical Engineering conferred on Gerhard Alfred Holzapfel”,* appeared online at the ***“University of Parma”***, May 20, 2025.
https://www.unipr.it/en/node/108635

   UNIPR, Honorary Degree in Mechanical Engineering to the Austrian Holzapfel” (in Italian), broadcast on ***“12 TV Parma”***, May 20, 2025.
https://www.12tvparma.it/puntata/tg-parma-edizione-del-20-05-2025-ore-1245/unipr-laurea-ad-honorem-in-ingegneria-meccanica-allaustriaco-holzapfel/

   “Honorary Degree for Holzapfel, one of the Fathers of Biomechanics” (in Italian), appeared in the Italian Daily Newspaper ***“Gazzetta di Parma”*****,** May 21, 2025, p. 17.

   “Award Ceremony of the Master's Degree in Mechanical Engineering to Gerhard Alfred Holzapfel”, appeared on ***“YouTube”***, May 20, 2025.
https://www.youtube.com/watch?v=fXcjoXCfH8M&list=PLVg7dsf20BR4GXEceurHYLuPQW6G5h7_k&index=1

2. *“Topic of the Week: Biomechanics – A Look into the Future”,* broadcast on Channel 3 (Kanal 3), January 30, 2025.
https://www.kanal3.tv/?cid=15&year=2025&vid=12897

3. *“Biomechanics with Heart”* (in German), appeared under the topic *“*Styrian of the Day” in the Austrian Daily Newspaper ***“Kleine Zeitung”***, p.19, December 20, 2024.

4. *“TU Graz Wins Highly Endowed ERC Synergy Grant for Biomechanical Heart Research”,* appeared at "TU Graz News", November 5, 2024.
https://www.tugraz.at/en/tu-graz/services/news-stories/media-service/singleview/article/tu-graz-holt-hochdotierten-erc-synergy-grant-fuer-biomechanische-herzforschung

5. “*An honorary doctorate awarded to Professor Gerhard A. Holzapfel”* (in French), appeared as an online article at École des Mines de Saint-Étienne as part of ***“Panoramines, news from MINES Saint-Étienne”***, June 20, 2024.
https://www.mines-stetienne.fr/panoramines/2024/06/20/un-doctorat-honoris-causa-decerne-au-professeur-gerhard-a-holzapfel/

6. *“When the Engine of Our Body Becomes Sick”* (in German), appeared as an online article at Graz University of Technology as part of ***“Planet Research”***, February 5, 2024.
https://www.tugraz.at/tu-graz/services/news-stories/planet-research/einzelansicht/article/wenn-der-motor-unseres-koerpers-erkrankt

7. *"When the Pressure in the Chest Increases"* (in German), appeared in the Austrian Daily Newspaper ***"Die Presse"***, March 18, 2023, p. W3.

8. *"Graz Researcher Calculated Properties of the Main Artery Muscle"* (in German), appeared in the online newspaper ***"derStandard.at"*****,** January 12, 2022.
https://www.derstandard.at/story/2000132471697/grazer-forscher-berechnete-hauptschlagadermuskel-eigenschaften?ref=rss

9. Research results on the cover page of the ***"Journal of Cardiovascular Development and Disease"****,* 10(3), 2023.

10. *"Graz University of Technology: Most Cited Researchers in Computer Science"* (in German), appeared under the topic "Bright Minds" in the Austrian Daily Newspaper ***"Kleine Zeitung"***, p.24, March 17, 2022.

11. *"Graz Researcher Calculated Properties of the Main Artery Muscle"* (in German), appeared in the online newspaper ***"derStandard.at"*****,** January 12, 2022.
https://www.derstandard.at/story/2000132471697/grazer-forscher-berechnete-hauptschlagadermuskel-eigenschaften?ref=rss

12. *"Graz Researchers: Muscle Cells in the Main Artery are Puzzlingly Inclined"* (in German)*,* appeared within the rubric "Science" in the ***"Austrian Press Agency"***, November 17, 2021.
https://science.apa.at/power-search/15662679008426556096

13. *"New Insights into Aortic Dissection"*; press release, June 17, 2021.
https://www.tugraz.at/en/tu-graz/services/news-stories/tu-graz-news/singleview/article/neues-verstaendnis-von-aortendissektionen0/

14. *"With Passion for the Heart Wall"* (in German), appeared under the topic "Styrian of the Day" in the Austrian Daily Newspaper ***"Kleine Zeitung"***, p.16, June 9, 2021.

15. Research results on the cover page of the International Journal for ***"Numerical Methods in Biomedical Engineering"****,* 36(7), 2020.

16. *"Biomechanics at Graz University of Technology: A Fusion of Different Disciplines"* (in German)*,* appeared in the journal of ***"ÖIAV – Österreichische Ingenieur- und Architekten-Zeitschrift"***, No. 164, May 2020, pp. 44-45.

17. *"Our Body: a Technical-Biological Machine?"* (in German), appeared in the Austrian Daily Newspaper ***"Die Presse"*** (on the occasion of the 50th anniversary of the ***"Austrian Science Fund, FWF"***), September 7, 2018, pp. XXVIII-XXIX.

18. *"Aorta: Successful Cooperation"* (in German), appeared at ***"medunigraz online"***, February, 2018 (in German).

19. *"German Aortic Award Goes to a Research Group in Graz"*, appeared in ***"Ärzte Steiermark"***, February, 2018 (in German).

20. *"Investigation of Aortic Dissections using Simulation"* (in German), appeared in ***"Der Standard. Forschung"****,* Nr. 3, November, 2017.

21. *"Biomechanics: Measuring the Human Body",* appeared in TU Graz research 2017-2, No. 18, pp. 4-9.

22. *"In Between Aorta and Microelectronics"* (in German), appeared in the Austrian Daily Newspaper ***"Der Standard"*****,** October 31/November 1, 2017, p. F6.

23. *"Top Research: Financial Funding Running into Millions for TU Graz Lead Projects",* appeared at "TU Graz News", October 30, 2017.
www.tugraz.at/en/tu-graz/services/news-stories/tu-graz-news/singleview/article/spitzenforschung-millionenfoerderung-fuer-tu-graz-leadprojekte/

24. *"Biomechanics: Measuring the Human Body",* appeared at ***"TU Austria"****,* June 30, 2017.

http://www.tuaustria.ac.at/en/514/getarticle/detail/biomechanics-measuring-the-human-body/

25. *"Diseased Abdominal Aorta: Scientists Want to Better Assess the risk"* (in German), appeared within the rubric "Medicine & Biotech" in the ***"Austrian Press Agency"***, November 30, 2016.
https://science.apa.at/rubrik/medizin_und_biotech/Kranke_Bauchschlagader_Forscher_wollen_Risiko_besser_abschaetzen/SCI_20161130_SCI39371351233258548

26. *"World Leaders in Biomedical Engineering Deliver Keynote Lectures at NUI Galway Conference",* appeared within the rubric "News" in ***"Engineers Journal, Dublin"***, January 29, 2016.
http://www.engineersjournal.ie/2016/01/29/world-leaders-in-biomedical-engineering-deliver-keynote-lectures-at-nui-galway-conference/

27. *"Future Market Biomedicine"* (in German), appeared within the rubric "Research, Art, Culture" in the ***"Steirische Berichte"***, 3/2015, pp. 28-29.
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