

Curriculum Vitae

Personal Data:

Name: Univ.-Prof. Josef EBERHARDSTEINER
 Academic Degrees: Dipl.-Ing. Dr. techn. Dr. h.c. mult.
 Venia Docendi: Strength of Materials
 Date of Birth: Linz, August 16, 1957
 Citizenship: Austria
 Marital Status: married, 2 children



Academic Qualifications:

1983: Dipl.-Ing., Civil Engineering, Vienna University of Technology
 1989: Dr. techn., Vienna University of Technology, (PhD thesis on triaxial constitutive modeling of concrete)
 2001: Univ.-Doc., Habilitation, Vienna University of Technology, Strength of Materials Using Analytical, Numerical, and Experimental Methods

Professional Qualifications:

1983-1984: University Assistant at the Institute for Structural Analysis and Strength of Materials, Vienna University of Technology
 1985-2001: University Assistant at the Institute for Strength of Materials, Vienna University of Technology
 1992-2011: Head of the Laboratory of the Institute for Strength of Materials
 1999-2004: Vice-Head of the Institute for Strength of Materials
 2001-2003: Associate Professor at the Institute for Strength of Materials
 since 2003: Full Professor for „Simulation of Materials and Structures in Civil Engineering“ (appointment primo et unico loco)
 2004-2007: Vice-Dean for Studying Affairs, Faculty of Civil Engineering, Vienna University of Technology
 2004-2011: Co-Chair of the Laboratory for Micro- and Nanomechanics of Biological and Biomimetic Materials, Vienna University of Technology
 since 2007: Chairman of the General Assembly and Governing Council of the European Virtual Institute on Knowledge-based Multifunctional Materials AISBL (KMM-VIN)
 2004-2007, 2010-2011: Head of the Institute for Mechanics of Materials and Structures (formerly Institute for Strength of Materials), Vienna University of Technology
 2008-2010, 2012-2015: Vice-Head of the Institute for Mechanics of Materials and Structures
 2008–2015: Dean of the Department of Civil Engineering, Vienna University of Technology
 2009/10: President of Danubia-Adria Society for Experimental Mechanics
 2014-2018: Co-Coordinator of the PhD School DokIn' Holz “wood – a value-added material”
 2015-2018: Vice Rector for Infrastructure, Vienna University of Technology
 2019-2023: Vice Rector for Digitalisation and Infrastructure, Vienna University of Technology

Number of scientific publications: 393 (144 in peer-reviewed journals)

Number of scientific presentations: 123

Memberships to Academies:

- 2005: Member of New York Academy of Sciences
- 2009: Corresponding Member of the Austrian Academy of Sciences
- 2013: Full Member of the European Academy of Sciences and Arts
- 2013: Full Member of the Austrian Academy of Sciences
- 2014: Foreign Member of the Russian Academy of Architecture and Construction Sciences
- 2015: Member of acatech – National Academy of Science and Engineering, Germany
- 2020: Corresponding Member of the Croatian Academy of Sciences and Arts

Awards:

- 2005: Golden Decoration for Services to the Republic of Austria
- 2006: Austrian Congress Award
- 2009: Austrian Building Award, 3rd place
- 2010: Robert Hooke Award, European Society for Experimental Mechanics
- 2011: Honorary Doctorate of the Belarussian National Technical University Minsk
- 2011: Honorary Doctorate of the University of Architecture, Civil Engineering and Geodesy Sofia
- 2011: Leonardo da Vinci Medal, Czech Association of Mechanical Engineers
- 2012: IACM Fellow Award, International Association for Computational Mechanics
- 2014: Ziolkowski Medal, Cosmonautic Federation of Russia
- 2016: Honorary Doctorate of the Kalashnikov Izhevsk State Technical University
- 2017: Great Silver Decoration for Services to the Republic of Austria
- 2021: Honorary Doctorate of the National Academy of Sciences Ukraine (NASU)
- 2023: The CEACM Prof. Mang Award, Central European Association for Computational Mechanics

Scientific Activities

Member of Scientific Committees and Professional Societies:

- since 1994: Gesellschaft für Angewandte Mathematik und Mechanik (GAMM)
- since 1994: Member of the Scientific Committee of the Danubia Adria Society (DAS)
- 1994-2002: Verein Deutscher Ingenieure (VDI); Gesellschaft für Experimentelle Spannungsanalyse (GESA)
- 1993-1995: Management Committee von COST 508: Wood Mechanics
- 1995-2000: Management Committee von COST E8: Mechanical Performance of Wood and Wood Products
- 2000-2005: Management Committee von COST E24: Reliability Analysis of Timber Structures
- 2002-2006: RILEM-Technical Committee RILEM TC-MCW: Modelling and of Crack Initiation and Propagation in Wood under Varying Ambient Conditions
- 2003-2007: Scientific Advisory Board of Competence Center „holz.bau forschungs GmbH“, Graz, Austria
- since 2003: Austrian National Committee for Theoretical and Applied Mechanics
- 2004-2009: Executive Board of KMM-NoE (Network of Excellence for „Knowledge-based Multicomponent Materials for Durable and Safe Performance“)
- since 2004: British Society for Strain Measurement (BSSM)
- since 2004: Austrian Society of Engineers and Architects (ÖIAV)

- since 2005: Society for Experimental Mechanics (SEM)
- since 2007: Member of Central European Association for Computational Mechanics (CEACM)
- since 2007: Member of Scientific Council of the European Society for Experimental Mechanics (EURASEM)
- since 2007: Chairman of the Research Fellowship Programme of the European Virtual Institute on Knowledge-based Multifunctional Materials AISBL (KMM-VIN)
- since 2009: Member of the Advisory and Scientific Board of the research initiative "Advanced Materials and Structures" of the Czech Ministry of Education, Youth and Sports
- 2009-2022: Member of the Managing Board of the European Community of Computational Methods and Applied Sciences (ECCOMAS)
- 2010-2011: Member of the Programme Committee "Gesellschaft für Angewandte Mathematik und Mechanik (GAMM)"
- 2010-2013: Member of Strategic Committee of the European Community of Computational Methods and Applied Sciences (ECCOMAS)
- 2010: Member of PhD Awards Committee of the European Community of Computational Methods and Applied Sciences (ECCOMAS)
- since 2012: Member of Scientific Council "Fracture mechanics of concrete, reinforced concrete and other building materials" of the Russian Academy of Architecture and Construction Sciences (RAASN)
- 2013-2017: Secretary of the European Community of Computational Methods and Applied Sciences (ECCOMAS)
- 2013-2022: Member of Executive Council of the European Community of Computational Methods and Applied Sciences (ECCOMAS)
- 2014-2019: Managing Board of „Gesellschaft für Angewandte Mathematik und Mechanik (GAMM)"
- since 2017: Member of Advisory Board of K-Project "Wood for Automotive Applications (WoodCAR)"
- 2017-2022: Vice-President of the European Community of Computational Methods and Applied Sciences (ECCOMAS)
- since 2020: Member of the Senate of the Christian Doppler Research Association (CDG)
- since 2021: Member of Advisory Scientific Committee des International Centre for Numerical Methods in Engineering (CIMNE), Barcelona, Spain

Editorship or Membership of Editorial Boards of Scientific Journals:

- 2003-2013: Editorial Board of Journal "Strain"
- 2004: Guest-Editor of the International Journal for Numerical Methods in Engineering
- 2004-2012: Advisory Council of the Journal of the Austrian Convention Bureau
- 2006: Guest-Editor of a special issue of the Journal "Holzforschung"
- 2006-2010: Editorial Council of Journal "Strain"
- 2007: Guest-Editor of a special issue of the Journal "Acta Geotechnica"
- 2007: Guest-Editor of a special issue of the Journal "Geomechanik und Tunnelbau"
- 2008: Guest-Editor of the Journal "Strain"
- since 2009: Editorial Board of Journal "Archive of Applied Mechanics"
- since 2009: Editorial Board of Journal "Engineering Structures and Technologies"
- since 2010: Editorial Board of Journal "Bulletin of Applied Mechanics"
- since 2011: Editorial Board of Journal "Computer Assisted Methods in Engineering and Science"
- 2011/2012: Guest-Editor of the Journal "Engineering Structures"
- since 2012: Editorial Board of Journal "International Science & Technique Journal"
- since 2012: Editorial Board of Journal "Advanced Modelling and Simulation in Engineering Sciences"

2013-2019: Associate Editor of the Journal "Strain"
 since 2014: Editorial Board of Journal "Bulletin of Civil Engineering"
 since 2015: Editorial Board of Journal "Biomechanica Hungarica"
 since 2015: Editorial Board of "Asian Journal of Civil Engineering"
 since 2016: Editorial Board of Journal "Architecture and Engineering"
 since 2019: Editorial Board of Journal "Bulletin of Kalashnikov ISTU"

Reviews for International Scientific Journals:

Acta Biomaterialia	eXPRESS Polymer Letters
Acta Geotechnica	Felsbau
Acta Mechanica	Holz als Roh- und Werkstoff
Advances in Engineering Structures	Holzforschung
Archive of Applied Mechanics	Intelligent Sensing Technologies and Applications
Archives of Mechanics	Journal of Computational Methods in Sciences and Engineering
BioResources	Journal of Materials Science
Cement and Concrete Composites	Journal of the Royal Society Interface
Civil Engineering	Journal of Solids and Structures
Collegium Antropologicum	Journal of Theoretical and Applied Mechanics
Composites, Part A: Applied Science and Manufacturing	Materials and Structures
Composites, Part B: Engineering	Materials Today: Proceedings
Computational Particle Mechanics	Measurement
Computer-Aided Civil and Infrastructure Engineering	Proceedings in Applied Mathematics and Mechanics
Computer Assisted Methods in Engineering and Science	Scientific Reports by Springer Nature
Computers and Concrete	Strain
Computers & Structures	Technical Transactions (CUT)
Construction and Building Materials	Tire Science and Technology
Engineering Computations	Transactions of FAMENA
Engineering Structures	Wood and Fiber Science
European Journal of Mechanics – A/Solids	Wood Material Science and Engineering
European Journal of Wood and Wood Products	Wood Science and Technology

Reviews for Research Funds Organizations:

Austrian Academy of Sciences
 Austrian Federal Ministry of Science and Research
 Austrian Science Funds
 Croatian Ministry of Science, Education and Sports
 Cyprus University of Technology
 Czech Science Foundation
 Deutsche Forschungsgemeinschaft (DFG)

European Research Council (ERC)
Hungarian National Research, Development and Innovation Office (NRDI)
Ministry of Education of the Slovak Republic and of the Slovak Academy of Sciences (VEGA)
Polish National Science Center (NCN)
Swiss National Science Foundation
Swiss State Secretariat for Education and Research (SER)

Evaluations of Research Facilities:

2011: Member of an international evaluation panel for the research assessment of the Departments of Mechanical Engineering and of Mechatronics at Romanian Universities
2012: Member of an international evaluation panel of the Slovak Academy of Sciences
2014-2018: Member of the Evaluation Committee for Physical, Space, Earth and Engineering Sciences of the Mobility Programme "SASPRO" of the Slovak Academy of Sciences
2017: Member of Evaluation Committee of the research strategy of Linnaeus University, Sweden
since 2019: Member of the Evaluation Committee for Physical, Space, Earth and Engineering Sciences of the Mobility and Reintegration Programme "MoRePro" of the Slovak Academy of Sciences

Memberships in other Committees:

since 2012: Member of Defense Technological and Scientific Advisory Council of the Commission of Science of the Austrian Ministry of Defense
since 2012: Member of the working group Research & Standardization of the collaboration platform Forestry Wood Paper (FHP)
since 2013: Member of Austrian Academy of Sciences-Commission for scientific cooperation with agencies of Austrian Ministry of Defense
since 2017: Chairman of the Commission of Science of the Austrian Ministry of Defense
since 2018: Alternate member of the Standardization Advisory Board of the Austrian Federal Ministry of Digital and Economic Affairs
since 2019: Member of the Advisory Board of PrintStones
since 2020: Member of General Assembly of the European Open Science Cloud (EOSC) Association
since 2021: Member of Steering Committee of the EOSC Support Office Austria

Organization of Scientific Conferences:

1994: Co-Chair of the 11th Danubia-Adria-Symposium on Experimental Methods in Solid Mechanics, September 29 - October 1, Baden, Austria
2001: Co-Chair of the 18th Danubia-Adria-Symposium on Experimental Methods in Solid Mechanics, September 26-29, Steyr, Austria
2002: Secretary General of the Fifth World Congress on Computational Mechanics (WCCM V), July 7-12, Vienna, Austria (~1.500 participants)
2006: Chair of the 13th International Congress on Sound and Vibration (ICSV 13), July 2-6, Vienna, Austria (~950 participants)
2007: Chair of the ECCOMAS Thematic Conference "Computational Methods in Tunnelling (EURO:TUN 2007)", August 27-29, Vienna, Austria
2007: Chair of the KMM-NoE/ExtreMat Integration Conference, October 24-25, 2007, Vienna, Austria

- 2008: Co-Chair of the ECCOMAS Multidisciplinary Jubilee Symposiums - New Computational Challenges in Materials, Structures, and Fluids (EMJS08), February 19-21, 2008, Vienna, Austria
- 2009: Co-Organizer of the Symposium on Computational Structural Engineering (CSE 2009), June 22-24, Shanghai, China
- 2009: Co-Chair of the ECCOMAS Thematic Conference "Computational Methods in Tunnelling (EURO:TUN 2009)", September 9-11, Bochum, Germany
- 2012: Chair of the Sixth European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2012), September 10-14, 2012, Vienna, Austria (~2.200 participants)
- 2013: Co-Chair of the ECCOMAS Thematic Conference "Computational Methods in Tunnelling and Subsurface Engineering (EURO:TUN 2013)", April 17-19, Bochum, Germany
- 2015: Co-Chair of EUROMECH Colloquiums 556 "Theoretical, Numerical, and Experimental Analyses in Wood Mechanics", May 27-29, Dresden, Germany
- 2016: Co-Chair of the 13th World Conference on Timber Engineering (WCTE 2016), August 22-25, 2016, Vienna, Austria (~1.200 participants)
- 2017: Co-Chair of ECCOMAS Thematic Conference "Computational Methods in Tunneling and Subsurface Engineering (EURO:TUN 2017)", 18.-20.04.2017, Innsbruck, Austria
- 2017: Co-Chair of ECCOMAS Thematic Conference "Computational Methods in Wood Mechanics – From Material Properties to Timber Structures (CompWood 2017)", 07.-09.06.2017, Vienna, Austria
- 2019: Co-Chair of the Annual Meeting of the International Association of Applied Mathematics and Mechanics (GAMM), 18.-22.2.2019, Vienna, Austria (~1.200 participants)

Contribution to the Organization of Scientific Conferences:

- since 1993: Member of the Organizing Committee of the Annually Danubia-Adria-Symposia on Experimental Methods in Solid Mechanics
- 2001: Organization of the Minisymposium "Computational Assisted Experimental Mechanics" at the European Conference on Computational Mechanics (ECCM 2001), June 26-29, Cracow, Poland
- 2004: Organizer of the Session "Experimental Methods and Identification" at the GAMM Jahrestagung 2004, March 21-27, Dresden, Germany
- 2005: Co-Organizer of the Minisymposium "Structural Stability" at the 5th International Conference on Computation of Shell & Spatial Structures (IASS-IACM 2005), June 1-4, Salzburg, Austria
- 2005: Organizer of the Minisymposium "Computational Mechanics of Wood and Wood Based Materials" at the 8th US National Congress on Computational Mechanics (USNCCM 2005), July 24-28, Austin, Texas, USA
- 2006: Organizer of the Minisymposium "Mechanical and Physical Properties of Wood and Wood Based Materials" at the 7th World Congress on Computational Mechanics (WCCM VII), July 16-22, Los Angeles, USA
- 2007: Organizer of the Symposium "Experimental Characterization and Multiscale Modeling of Building Materials" at the 13th International Conference on Experimental Mechanics (ICEM 13), July 1-6, Alexandroupolis, Greece
- 2007: Co-Organizer of the Minisymposium "Multiscale Modeling of Building Materials" at the 11th International Conference on Computational Plasticity (COMPLAS 2007), September 5-7, 2007, Barcelona, Spain
- 2008: Organizer of the Minisymposium "Mechanical Modeling of Wood and Wood Based Materials" at the 8th World Congress on Computational Mechanics (WCCM VIII), June 30-July 4, Venice, Italy

- 2010: Organization of the Minisymposium “Computational Material Modeling of Wood and Wood Products” at the European Conference on Computational Mechanics (ECCM 2010), May 16-21, Paris, France
- 2010: Organizer of the Minisymposium “Computational Material Modeling of Wood and Wood Products” at the 9th World Congress on Computational Mechanics (WCCM IX), July 19-23, Sydney, Australia
- 2011: Organizer of a Minisymposium in Honor of the 70th Birthday of Prof. Herbert A. Mang at 3rd International Symposium on Computational Mechanics / 2nd Symposium on Computational Structural Engineering, December 5-7, 2011, Taipei, Taiwan
- 2012: Organizer of the Minisymposium “Computational Material Modeling of Wood and Wood Products” at the 6th European Congress on Computational Methods in Applied Sciences and Engineering, September 10-14, 2012, Vienna, Austria
- 2013: Organizer of the Invited Session “Multiscale Analysis of Wood and Wooden Structures” at the 12th International Conference on Computational Plasticity (COMPLAS XII), September 3-5, 2013, Barcelona, Spain
- 2014: Organizer of the Thematic Session “Wood and wood-based products” at the 16th International Conference on Experimental Mechanics (ICEM16), July 7-11, 2014, Cambridge, UK
- 2014: Organizer of the Minisymposium “Computational mechanics of wood materials and timber structures” at the 11th World Congress on Computational Mechanics and 5th European Conference on Computational Mechanics (ECCM V), July 10-25, 2014, Barcelona, Spain

Memberships to Committees at Vienna University of Technology:

- 1994-2003: Member of Faculty Council of Department of Civil Engineering
- 1994-2003: Member of Academic Senate
- since 1993: Member of several habilitation and search committees for professors
- 2005-2015: CEEPUS-Representative of the Department of Civil Engineering
- 2008-2011: Member of the Steering Committee “TUPhone”
- 2009-2010: Mentor in the framework of TU!MentorING for candidates of habilitation
- 2009-2017: Vice-Chairman of the Advisory Board of the Institute for Testing and Research Ltd
- since 2009: Member of the Steering Committee “Organizational Development at the Vienna University of Technology”
- since 2010: Vice-Chairman of the Advisory Board of TU Career Center
- 2010-2011: Member of the Steering Committee “Personnel Management”
- since 2012: Member of the Executive Board of TU alumni club
- 2013-2017: Shareholder’s (TU Vienna) representative in Smart Minerals GmbH
- since 2013: Member of the Executive Committee of the University Professor’s Association of Vienna University of Technology

Research Activities:

Responsible for numerous long-term research projects in the field of material modeling and structural analysis:

- Experimental and numerical analysis and simulation of wood products, timber joints, and timber structures
- Multi-scale modeling of wood using continuum micromechanics (experimental and numerical investigations)
- Characterization of microstructure of building materials

- Experimental investigation of the mechanical behavior of biological tissues, tendons and bio-absorbable fixation techniques
- Numerical simulation of frictional contact behavior of automobile tires
- Experimental investigation of the friction behavior of rubber by means of a “Linear Friction Tester”
- Fixation of spatial states of deformation in polymers by means of γ -radiation
- Experimental investigation of the material behavior of biaxial loaded solid wood
- Hybrid BE-FE-simulations of the excavation of tunnels and tunnel junctions (BE ... boundary element method, FE ... finite element method)
- Finite Element analysis of reinforced concrete structures using different triaxial constitutive models