Curriculum Vitæ - Josef Kiendl

(March 2022)

Personal data and contact information

Born: December 16, 1980 in Deggendorf, Germany

Address: University of the Bundeswehr Munich,

Department of Civil Engineering and Environmental Sciences Institute of Engineering Mechanics and Structural Analysis Werner-Heisenberg-Weg 39, 85577 Neubiberg, Germany

Phone: +49 (0)89 6004 3281E-mail: josef.kiendl@unibw.de

Web address https://www.unibw.de/mechanik-und-statik/baustatik/team-baustatik/univ-

(German): prof-dr-ing-josef-kiendl

Web of Science: https://www.webofscience.com/wos/author/record/1637031

Education and Academic Positions

since 2020	Full professor at the Institute of Engineering Mechanics Structural Analysis, Department of Civil Engineering and Environmental Sciences, Bundeswehr University Munich
since 2020	Adjunct Associate Professor at the Department of Marine Technology, NTNU Trondheim
2016-2019	Associate Professor (Onsager fellowship) at the Department of Marine Technology, NTNU Trondheim
2015-2016	Assistant Professor (Juniorprofessor) at the Institute for Applied Mechanics, Department of Civil Engineering, TU Braunschweig
2012-2015	Postdoctoral Researcher at the Department of Civil Engineering and Architecture, Computational Mechanics and Advanced Materials Group, University of Pavia, Italy
2011	PhD with highest distinction (summa cum laude). Thesis: Isogeometric Analysis and Shape Optimization of Shell Structures, TU Munich, Germany
2007-2011	PhD student of the International Graduate School of Science and Engineering (IGS-SE), at the Chair of Structural Analysis, TU Munich, Germany
2005	Master's Degree
2000-2005	Student of civil engineering at TU Munich, Germany

Non-academic professional experience

2011	Project manager at DrillTec GmbH for the Poland Shale Gas drilling project, Malbork, Poland
2005-2007	Project engineer at Max Streicher GmbH for the Adriatic LNG pipeline project in Porto Viro, Italy

Research stays abroad

2014	Visiting scholar (2 weeks) at Prof. Hughes, ICES, University of Texas at Austin
2013	Visiting scholar (1 month) at Prof. Hughes, ICES, University of Texas at Austin
2010	Visiting scholar (1 month) at Prof. Bazilevs, Department of Structural Engineering, University of California, San Diego (UCSD)
2009	Visiting scholar (2 months) at Prof. Bazilevs, Department of Structural Engineering, University of California, San Diego (UCSD)

Awards

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	2019	ERC Consolidator grant
	2017	Highly Cited Researcher according to Clarivate Web of Science
	2016-2019	${\it Onsager Fellowship} \ {\it of} \ {\it NTNU}, awarded \ to \ young, internationally \ recognized \ researchers \ to \ strengthen \ the \ university's \ academic \ community.$
	2016	$Richard$ - von - $Mises\ Prize$, awarded by the International Association of Applied Mathematics and Mechanics (GAMM) in acknowledgment of scientific achievement in the area of applied mathematics and mechanics.
	2013	$GAMM\ Award\ 2013$ for organizing a Young Researcher Minisymposium at the 84th Annual Meeting of the International Association of Applied Mathematics and Mechanics (GAMM)
	2011	$PhD\ Dissertation\ Award$ of the Association of Friends of the Technical University of Munich to the six best PhD dissertations at TU Munich in 2011
	2007-2011	$PhD\ stipend$ of the International Graduate School of Science and Engineering (IGSSE) at TU Munich

Publications and citations

52 papers in peer-reviewed international journals, a detailed list is found attached 4710 citations, h-index 30 according to *Google Scholar* 3348 citations, h-index 26 according to *Scopus* 2954 citations, h-index 25 according to *Web of Science*

Research projects and third-party funding

2020-2025	ERC Consolidator Grant of the European Research Council: Structural multiscale modelling of extrusion-based 3D and 4D printed materials. Funding: $\in 2,000,000$. Role: Project manager
2020-2024	DTEC-FLAB3D: Research laboratory for additive manufacturing. Funding: €10,000,000. Role: Leader of one work package
2018-2019	NTNU-internal call for funding research projects: 3D printing of bio-inspired architectured materials. Funding: NOK 2,330,000 (\leq 240,000) Role: Project manager

- 2017-2020 Knowledge-Building Project for Industry of the Norwegian Research Council (NRC): Flexible propulsors for marine applications. Partners: Sintef Ocean, Rolls Royce Marine. Funding: NOK 16,550,000 (€1,700,000) Role: Leader of one work package, supervisor for one PhD student
 2019-2020 Mobility grant of the German Academic Exchange Service (DAAD) and Norwegian
- Mobility grant of the German Academic Exchange Service (DAAD) and Norwegian Reseach Council (NRC): Spline-based Methods for Fluid-Structure Interaction in liquid storage tanks under seismic loading. Sum: €20.700 Euro. Role: Project manager Norwegian side
- 2018-2019 Mobility grant of the German Academic Exchange Service (DAAD) and Norwegian Reseach Council (NRC): Isogeometric phase-field modeling of fatigue in slender structures. Sum: €18.500 Euro. Role: Project manager Norwegian side
- Funding by the Norwegian Shipowners Association for financing a FDM 3D-printer. Sum: NOK 30,000 (\leq 3,100). Role: Project manager

Conference contributions

- 1 Plenary lecture, at the ECCOMAS thematic conference IGA 2019
- 2 Semiplenary lectures, one at the ECCOMAS congress 2022
- 4 Keynote lectures
- 35 Contributions as first author, of which 25 invited
- 47 Contributions as coauthor

A detailed list is found in the attached list of conferences

Invited talks at seminars and workshops

2019	Lecture for the EU regional school at Aachen Institute for Advanced Study in Computational Engineering Science (AICES), RWTH Aachen University, Aachen, Germany
2018	Presentation at the first KSCM-GACM Joint Workshop, Seoul, South Korea
2018	Seminar at the Chair of Numerical Modelling and Simulation of EPFL Lausanne, Switzerland
2018	Seminar at the Aachen Institute for Advanced Study in Computational Engineering Science (AICES), RWTH Aachen University, Aachen, Germany
2017	Seminar at the Digital Manufacturing and Design (DManD) Centre, Singapore University of Technology and Design (SUTD), Singapore
2017	Seminar at the Centre for Advanced Structural Analysis (CASA), NTNU Trondheim, Norway
2017	Seminar at the Department of Civil Engineering and Architecture, University of Pavia, Italy

2017 Seminar at the Aachen Institute for Advanced Study in Computational Engineering Science (AICES), RWTH Aachen University, Aachen, Germany (declined due to illness) 2014 Seminar at the Department of Civil Engineering and Architecture of Aalto University, Espoo, Finland 2014 Seminar at the Aerospace Engineering Department of Iowa State University, Ames, USA 2013 Seminar at the International School of Advanced Studies (SISSA), Trieste, Italy 2012 Lecture at the Summer School IsoGeometric Analysis: a New Paradigm in the Numerical Approximation of PDEs of the International Mathematical Summer Center (CIME), Cetraro, Italy 2011 Lecture for the Seminar of the Department of Structural Mechanics, TU Kaiserslautern, Germany 2010 Presentation at *FE im Schnee*, Hirschegg, Austria: 2009 Presentation at the International Workshop on Environment and Alternative Energy (organized by NASA, G3P, and GE), Munich, Germany 2009 Presentation at the First International Workshop on Computational Engineering -Special Topic Fluid-Structure-Interaction, Herrsching, Germany 2009 Presentation at the International Workshop, Technology and Society, Weimar, Germany

Organization of congresses and symposia

2022 Minisymposium IGA for Solids and Structures within the 10th International Conference on Isogeometric Analysis, Banff, Canada 2022 Minisymposium Non-material modelling of axially moving continua: Arbitrary Lagrangian-Eulerian description in structural mechanics, within WCCM-APCOM 2022: the joint 15th World Congress on Computational Mechanics and 8th Asian Pacific Congress on Computational Mechanics, Yokohama, Japan 2022 Minisymposium Nonlinear mechanics of beam, plate, membrane and shell structures: models and methods, within ICoNSoM 2022: International Conference on Nonlinear Solid Mechanics, Sardinia, Italy 2021 Minisymposium Solids and Structures within VIGA2021: Virtual International Conference on Isogeometric Analysis, Lyon, France 2020 Minisymposium IGA for Solids and Structures within the USACM thematic conference on Isogeometric Analysis, Banff, Canada 2020 Minisymposium Computational analysis and methods for solids, structures, and metamaterials within generalized continua, within the joint 14th World Congress in Com-

putational Mechanics and ECCOMAS Congress, Paris, France

2019 Minisymposium Collocation, within the 7th International Conference on Isogeometric Analysis, Munich, Germany 2019 Minisymposium Novel Formulations and Discretization Methods for Thin-walled Structures, within the 8th GACM Colloquium on Computational Mechanics, Kassel, Germany 2019 Minisymposium Complex Structures and Microarchitectures of Metamaterials, within the International Conference on Nonlinear Solid Mechanics, Rome, Italy 2018 Minisymposium Solids and Structures within the USACM thematic conference IGA 2018: Integrating Design and Analysis, Austin TX, USA 2018 Minisymposium Computational analysis and methods for solids and structures within generalized continua, within the 6th European Conference on Computational Mechanics, Glasgow, United Kingdom 2017 Minisymposium Non-standard Formulations and Discretization Methods for Thinwalled Structures, within the 7th GACM Colloquium on Computational Mechanics, Stuttgart, Germany 2017 Thematic Session IGA of solids and structures, within the ECCOMAS Thematic Conference on Isogeometric Analysis, Pavia, Italy 2016 Thematic Session IGA and Meshfree methods for thin structures, within the USACM Thematic Conference on Isogeometric Analysis and Meshfree Methods, La Jolla, USA 2015 Minisymposium Isogeometric Methods for Structural Mechanics, within the joint conference 3rd ECCOMAS Young Investigators Conference (YIC) and 6th GACM Colloquium on Computational Mechanics, Aachen, Germany 2014 Minisymposium Isogeometric Methods, within the conference WCCM 2014 - World Congress on Computational Mechanics, Barcelona, Spain 2013 Minisymposium Advanced Methods for Computational Mechanics: Beyond Classical Finite Elements, within the 21st Congress of the Italian Association of Theoretical and Applied Mechanics (AIMETA), Turin, Italy 2013 Young Researcher Minisymposium Isogeometric Methods, within the 84th Annual Meeting of the International Association of Applied Mathematics and Mechanics (GAMM), Novi Sad, Serbia

Participation in congress scientific boards

2019 International Conference on Isogeometric Analysis, Munich, Germany 2018 USACM Thematic Conference on Isogeometric Analysis, Austin (TX), USA 2017 ECCOMAS Thematic Conference on Isogeometric Analysis, Pavia, Italy	2022	USACM Thematic Conference on Isogeometric Analysis, Banff, Canada
USACM Thematic Conference on Isogeometric Analysis, Austin (TX), USA ECCOMAS Thematic Conference on Isogeometric Analysis, Pavia, Italy USACM Thematic Conference on Isogeometric Analysis and Meshfree Method	2021	VIGA2021: Virtual International Conference on Isogeometric Analysis, Lyon, France
2017 ECCOMAS Thematic Conference on Isogeometric Analysis, Pavia, Italy 2016 USACM Thematic Conference on Isogeometric Analysis and Meshfree Method	2019	International Conference on Isogeometric Analysis, Munich, Germany
2016 USACM Thematic Conference on Isogeometric Analysis and Meshfree Method	2018	USACM Thematic Conference on Isogeometric Analysis, Austin (TX), USA
· · · · · · · · · · · · · · · · · · ·	2017	ECCOMAS Thematic Conference on Isogeometric Analysis, Pavia, Italy
	2016	USACM Thematic Conference on Isogeometric Analysis and Meshfree Methods, San Diego, USA

Member of Journal Editorial Boards

since 2021 Modelling

since 2018 Material Design & Processing Communications

Reviewer for international journals

- Computer Methods in Applied Mechanics and Engineering
- Proceedings of the National Academy of Sciences of the United States of America
- Proceedings of the Royal Society B
- Computational Mechanics
- International Journal for Numerical Methods in Engineering
- Computer-Aided Design
- Computers and Mathematics with Applications
- Biomechanics and Modeling in Mechanobiology
- Computers and Structures
- Marine Structures
- Fatigue & Fracture of Engineering Materials & Structures
- Engineering Structures
- Applied Mathematical Modelling
- European Journal of Mechanics A/Solids
- Finite Elements in Analysis and Design
- Computer Aided Geometric Design
- Mechanics Research Communications
- Journal of Mechanics of Materials and Structures
- International Journal of Architectural Heritage
- Part C: Journal of Mechanical Engineering Science
- Engineering Computations
- Journal of Manufacturing Science and Engineering
- Journal of Theoretical and Applied Mechanics
- Mechanics Based Design of Structures and Machines
- Acta Mechanica
- Meccanica
- Engineering with Computers
- Biomedical Engineering/Biomedizinische Technik

Reviewer for international research funding agencies

- German Science Foundation (DFG)

- Austrian Science Fund (FWF)
- European Science Foundation (ESF)
- European Energy Research Alliance (EERA)
- Netherlands Organisation for Scientific Research (NWO)
- Swedish Research Council (SRC)
- Italian Ministry of Public Education (MIUR)
- Research Grant Council (RGC) of Hongkong

Reviewer in PhD and Habilitation committees

2020	Habilitation thesis on <i>Multifield Modelling in Computational Mechanics</i> , University of Innsbruck, Austria
2020	PhD thesis on $\it CAD\mbox{-}integrated$ Isogeometric Analysis and Design of Lightweight Structures, TU Munich, Germany
2019	PhD thesis on Isogeometric Modeling for the Optimal Design of Aerostructures, INSA Lyon, France
2017	PhD thesis on <i>Phase-field modeling and computations of brittle and ductile fracture for solids and shells</i> , TU Braunschweig, Germany
2017	PhD thesis on Isogeometric mortar methods with applications in contact mechanics, University of Pavia, Italy
2016	PhD thesis on <i>CAD-Integrated Design and Analysis of Shell Structures</i> , TU Munich, Germany

Chair of PhD committees

2022	PhD thesis on Investigations on the impact of metaphyllosilicates and calcined common clays on the rheology and early hydration of cements admixed with different superplasticizers, UniBw Munich, Germany
2022	PhD thesis on Modeling and experimental-numerical investigations on damage and failure of ductile metals, UniBw Munich, Germany
2020	PhD thesis on Biaxial experiments and numerical simulations with newly developed specimens for the prediction of damage and failure of ductile metals, UniBw Munich, Germany
2020	PhD thesis on Experimental and numerical investigations of the explosion-retardant effect of hedge plants, UniBw Munich, Germany

- 2020 PhD thesis on Bending behavior of fiber reinforced plastic pipes with multi-row bolt connections, UniBw Munich, Germany
- 2019 PhD thesis on Structural Control of Offshore Wind Turbines Increasing the role of control design in offshore wind farm development, NTNU Trondheim, Norway

Teaching experience

since 2021	Lecturer for $Finite\ Element\ Analysis\ in\ Construction\ Engineering,$ UniBw Munich (in German)
since 2020	Lecturer for Structural Analysis, UniBw Munich (in German)
since 2020	Lecturer for Nonlinear Structural Analysis, UniBw Munich (in German)
2017-2019	Lecturer for $\it Finite Element Methods for Structural Analysis, NTNU Trondheim (in English)$
2017-2019	lem:lem:lem:lem:lem:lem:lem:lem:lem:lem:
2016	Lecturer for Isogeometric Methods, TU Braunschweig (in English)
2015-2016	Lecturer for Numerical Methods in Engineering, TU Braunschweig (in German)
2012-2015	Teaching assistant for $Mechanics$ of $Solids$ and $Structures$, University of Pavia (in Italian)
2009-2010	Teaching assistant for Modeling and Simulation, TU Munich (in English)
2008-2010	Teaching assistant for $Advanced\ Finite\ Element\ Methods,\ TU\ Munich\ (in\ English)$
2008-2009	Teaching assistant for Finite Element Methods, TU Munich (in English)
2002-2004	Tutor for Mechanics of Solids and Structures, TU Munich (in German)

Teaching training courses

2018	PEDUP: NTNU's Educational Program for New Academic Staff (seminar spanning
	two semesters, in total 100 hours)
2016	CDIO Workshop The Teaching Trick held at NTNU Trondheim

Supervision of PhD students and Postdocs

currently	Main supervisor of 8 PhD students and 3 Postdocs at UniBw and NTNU
2016-2021	Main supervisor of PhD thesis on Isogeometric methods for modeling fracture and fatigue in plates and shells at NTNU
2015-2017	Co-supervision of PhD thesis on <i>Phase-field models for brittle and ductile fracture in solids and structures</i> at TU Braunschweig
2013-2016	Co-supervision of PhD thesis on Isogeometric methods for structural applications at University of Pavia

Supervision of Master's and Bachelor's theses

2021	Bachelor's thesis Applying concepts of artificial intelligence to structural mechanics
	problems with a focus on neural networks
2021	Bachelor's thesis 3D-printed boat propellers: Fabrication and suitability of different
	materials in practical tests

2021	Bachelor's thesis 3D-printing of beams with inhomogeneous cross sections for control- ling the load-carrying behavior
2021	Bachelor's thesis Experimental investigation on the impact of different printing parameters on the macroscopic material parameters of 3D-printed specimens
2019	Master's thesis An isogeometric digital twin for the research vessel Gunnerus
2019	Master's thesis Isogeometric contact analysis
2018	Master's thesis Isogeometric structural analysis of wind turbine blades
2018	Master's thesis Isogeometric analysis of thin structures with trimmed geometries
2016	$\hbox{ Co-supervision of Master's thesis on } \textit{Numerical stability analysis of thin-walled cylindrical shells}$
2016	Co-supervision of Bachelor's thesis on $\it Engineering\ mechanics$ - $\it Experiment\ and\ simulation$
2010	Master's thesis $\it Isogeometric Analysis with CARAT+++$, awarded with the "Johannes B. Ortner Award"
2010	Bachelor's thesis Analysis of ceiling panels with isogeometric finite elements
2009	Master's thesis Development and Implementation of a Rhino Preprocessor for the Integration of CAD and isogeometric analysis
2009	Bachelor's thesis Geometric description of free-form surfaces
2008-2010	Various student (group) projects with topics from $Computational\ Mechanics,\ Isogeometric\ Analysis$ and $Geometric\ Modeling$

Affiliations

- International Association for Applied Mathematics and Mechanics (GAMM)
- German Association for Computational Mechanics (GACM)

Language skills

- German (native)
- English (excellent)
- Italian (excellent)
- Norwegian (intermediate)
- French (basic)

List of Publications - Josef Kiendl

Papers in peer-reviewed international journals

- 52. D. Proserpio, **J. Kiendl**; Penalty coupling of trimmed isogeometric Kirchhoff-Love shell patches; Journal of Mechanics, accepted (2022)
- 51. N. Ramos, C. Mittermeier, **J. Kiendl**; Experimental and numerical investigations on heat transfer in fused filament fabrication 3D-printed specimens; International Journal of Advanced Manufacturing Technology, 118:1367-1381 (2022)
- 50. A. del Toro Llorens, **J. Kiendl**; An isogeometric finite element-boundary element approach for the vibration analysis of submerged thin-walled structures; Computers and Structures, 256:106636 (2021)
- 49. L. Coradello, **J. Kiendl**, A. Buffa; Coupling of non-conforming trimmed isogeometric Kirchhoff-Love shells via a projected super-penalty approach; Computer Methods in Applied Mechanics and Engineering, 387:114187 (2021)
- 48. D. Proserpio, M. Ambati, L. De Lorenzis, **J. Kiendl**; *Phase-field simulation of ductile fracture in shell structures*; Computer Methods in Applied Mechanics and Engineering, 385:114019 (2021)
- 47. A. Özen, D. Auhl, C. Völlmecke, **J. Kiendl**, B. E. Abali; Optimization of manufacturing parameters and tensile specimen geometry for fused deposition modeling (FDM) 3-D printed PETG; Materials, 14(10):2556 (2021)
- 46. A. Patton, P. Antolin, **J. Kiendl**, A. Reali; Efficient equilibrium-based stress recovery for isogeometric laminated curved structures; Composite Structures, 272:113975 (2021)
- 45. A. Nitti, **J. Kiendl**, A. Gizzi, A. Reali, M. de Tullio; A curvilinear isogeometric framework for the electromechanical activation of thin muscular tissues; Computer Methods in Applied Mechanics and Engineering, 382:113877 (2021)
- 44. A. Patton, P. Antolin, J.-E. Dufour, **J. Kiendl**, A. Reali; Accurate equilibrium-based interlaminar stress recovery for isogeometric laminated composite Kirchhoff plates; Composite Structures, 256:112976 (2021)
- 43. H. Do, Y. Y. Tan, N. Ramos, **J. Kiendl**, O. Weeger; Nonlinear isogeometric multiscale simulation for design and fabrication of functionally graded knitted textiles; Composites Part B: Engineering, 202:108416 (2020)
- 42. L. Leonetti, F. S. Liguori, D. Magisano, **J. Kiendl**, A. Reali, G. Garcea; A robust penalty coupling of non-matching isogeometric Kirchhoff-Love shell patches in large deformations; Computer Methods in Applied Mechanics and Engineering, 371:113289 (2020)
- 41. D. Proserpio, M. Ambati, L. De Lorenzis, **J. Kiendl**; A framework for efficient isogeometric computations of phase-field brittle fracture in multipatch shell structures; Computer Methods in Applied Mechanics and Engineering, 372:113363 (2020)
- 40. L. Coradello, D. D'Angella M. Carraturo, **J. Kiendl**, S. Kollmannsberger, E. Rank, A. Reali; *Hierarchically refined isogeometric analysis of trimmed shells*; Computational Mechanics, 66:431-447 (2020)

- 39. P. Antolin, **J. Kiendl**, M. Pingaro, A. Reali; A simple and effective method based on strain projections to alleviate locking in isogeometric solid shells; Computational Mechanics, 65(6):1621-1631 (2020)
- 38. A. Nitti, **J. Kiendl**, A. Reali, M. de Tullio; An immersed-boundary/isogeometric method for fluid-structure interaction involving thin shells; Computer Methods in Applied Mechanics and Engineering, 364:112977 (2020)
- 37. **J. Kiendl**, C. Gao; Controlling toughness and strength of FDM 3D-printed PLA components through the raster layup; Composites Part B: Engineering, 180:107562 (2020)
- 36. H. Casquero, D. Toshniwal, A. Li, T.J.R. Hughes, **J. Kiendl**, Y. Zhang; Seamless integration of design and Kirchhoff-Love shell analysis using analysis-suitable unstructured T-splines; Computer Methods in Applied Mechanics and Engineering, 360:112765 (2020)
- 35. E. Marino, **J. Kiendl**, L. De Lorenzis; Isogeometric collocation for implicit dynamics of three-dimensional beams undergoing finite motions; Computer Methods in Applied Mechanics and Engineering, 356:548-570 (2019)
- 34. L. Leonetti, D. Magisano, A. Madeo, G. Garcea, **J. Kiendl**, A. Reali; A simplified Kirchhoff-Love large deformation model for elastic shells and its effective isogeometric formulation; Computer Methods in Applied Mechanics and Engineering, 354:369-396 (2019)
- 33. V. Balobanov, **J. Kiendl**, S. Khakalo, J. Niiranen; Kirchhoff-Love shells within strain gradient elasticity: weak and strong formulations and an H³-conforming isogeometric implementation; Computer Methods in Applied Mechanics and Engineering, 344:837-857 (2019)
- 32. E. Marino, **J. Kiendl**, L. De Lorenzis; Explicit isogeometric collocation for the dynamics of three-dimensional beams undergoing finite motions; Computer Methods in Applied Mechanics and Engineering, 343:530-549 (2019)
- 31. C. Gao, **J. Kiendl**; Short review on architectured materials with topological interlocking mechanisms; Material Design & Processing Communications, DOI:10.1002/mdp2.31 (2019)
- 30. A. Herrema, **J. Kiendl**, M.-C. Hsu; A framework for isogeometric-analysis-based optimization of wind turbine blade structures; Wind Energy, 22:153-170 (2019)
- A. Herrema, E. Johnson, D. Proserpio, M.C.H. Wu, J. Kiendl, M.-C. Hsu; Penalty coupling of non-matching isogeometric Kirchhoff-Love shell patches with application to composite wind turbine blades; Computer Methods in Applied Mechanics and Engineering, 346:810-840 (2019)
- 28. J. Niiranen, V. Balobanov, J. Kiendl, S. B. Hosseini; Variational formulations, model comparisons and numerical methods for Euler-Bernoulli micro- and nano-beam models; Mathematics and Mechanics of Solids, 24:312-335 (2019)
- M. Ambati, J. Kiendl, L. De Lorenzis; Isogeometric Kirchhoff-Love shell formulation for elasto-plasticity; Computer Methods in Applied Mechanics and Engineering, 340:320-339 (2018)
- 26. N.A. Nodargi, **J. Kiendl**, P. Bisegna, F. Caselli, L. De Lorenzis; *An isogeometric analysis formulation for red blood cell electro-deformation modeling*; Computer Methods in Applied Mechanics and Engineering, 338:392-411 (2018)

- 25. M.C.H. Wu, R. Zakerzadeh, D. Kamensky, **J. Kiendl**, M. Sacks, M.-C. Hsu; An anisotropic constitutive model for immersogeometric fluid-structure interaction analysis of bioprosthetic heart valves; Journal of Biomechanics, 74:23-31 (2018)
- 24. **J. Kiendl**, F. Auricchio, A. Reali; A displacement-free formulation for the Timoshenko beam problem and a corresponding isogeometric collocation approach; Meccanica, 53(6):1403-1413 (2018)
- 23. **J. Kiendl**, E. Marino, L. De Lorenzis; *Isogeometric collocation for the Reissner-Mindlin shell problem*; Computer Methods in Applied Mechanics and Engineering, 325:645-665 (2017)
- 22. O. Weeger, B. Narayanan, L. De Lorenzis, **J. Kiendl**, M.L. Dunn; An isogeometric collocation method for frictionless contact of Cosserat rods; Computer Methods in Applied Mechanics and Engineering, 321:361-382 (2017)
- 21. L. Heltai, **J. Kiendl**, A. DeSimone, A. Reali; A natural framework for isogeometric fluidstructure interaction based on BEM-shell coupling; Computer Methods in Applied Mechanics and Engineering, 316:522-546 (2017)
- 20. J. Niiranen, J. Kiendl, A. Niemi, A. Reali; Isogeometric analysis for sixth-order boundary value problems of gradient-elastic Kirchhoff plates; Computer Methods in Applied Mechanics and Engineering, 316:328-348 (2017)
- 19. H. Casquero, L. Liu, Y. Zhang, A. Reali, **J. Kiendl**, H. Gomez; *Arbitrary-Degree T-splines for Isogeometric Analysis of Fully Nonlinear Kirchhoff-Love Shells*; Computer-Aided Design, 82:140-153 (2017)
- 18. **J. Kiendl**, M. Ambati, L. De Lorenzis, H. Gomez, A. Reali; *Phase-field description of brittle fracture in plates and shells*; Computer Methods in Applied Mechanics and Engineering, 312:374-394 (2016)
- 17. F. Auricchio, L. Beirão da Veiga, **J. Kiendl**, C. Lovadina, A. Reali; *Isogeometric collocation mixed methods for rods*; Discrete and Continuous Dynamical Systems Series S, 9:33-42 (2016)
- M.-C. Hsu, D. Kamensky, F. Xu, J. Kiendl, C. Wang, M.C.H. Wu, J. Mineroff, A. Reali, Y. Bazilevs, M. Sacks; Dynamic and fluid-structure interaction simulations of bioprosthetic heart valves using parametric design with T-splines and Fung-type material models; Computational Mechanics, 55:1211-1225 (2015)
- 15. **J. Kiendl**, M.-C. Hsu, M.C.H. Wu, A. Reali; *Isogeometric Kirchhoff-Love shell formulations for general hyperelastic materials*; Computer Methods in Applied Mechanics and Engineering, 291:280-303 (2015)
- 14. L. Beirão da Veiga, T.J.R. Hughes, **J. Kiendl**, C. Lovadina, J. Niiranen, A. Reali, H. Speleers; A locking-free model for Reissner-Mindlin plates: Analysis and isogeometric implementation via NURBS and triangular NURPS; Mathematical Models and Methods in Applied Sciences, 25:1519-1551 (2015)
- 13. **J. Kiendl**, F. Auricchio, T.J.R. Hughes, A. Reali; Single-variable formulations and isogeometric discretizations for shear deformable beams; Computer Methods in Applied Mechanics and Engineering, 284:988-1004 (2015)

- 12. J.F. Caseiro, R.A.F. Valente, A. Reali, **J. Kiendl**, F. Auricchio, R.J. Alves de Sousa; Assumed Natural Strain NURBS-based solid-shell element for the analysis of large deformation elasto-plastic thin-shell structures; Computer Methods in Applied Mechanics and Engineering, 284:861-880 (2015)
- 11. **J. Kiendl**, F. Auricchio, L. Beirão da Veiga, C. Lovadina, A. Reali; *Isogeometric collocation methods for the Reissner-Mindlin plate problem*; Computer Methods in Applied Mechanics and Engineering, 284:489-507 (2015)
- 10. J.F. Caseiro, R.A.F. Valente, A. Reali, **J. Kiendl**, F. Auricchio, R.J. Alves de Sousa; On the Assumed Natural Strain method to alleviate locking in solid-shell NURBS-based finite elements; Computational Mechanics, 53:1341-1353 (2014)
- 9. **J. Kiendl**, R. Schmidt, R. Wüchner, K.-U. Bletzinger; *Isogeometric shape optimization of shells using semi-analytical sensitivity analysis and sensitivity weighting*; Computer Methods in Applied Mechanics and Engineering, 274:148-167 (2014)
- 8. F. Auricchio, L. Beirão da Veiga, **J. Kiendl**, C. Lovadina, A. Reali; *Locking-free isogeo-metric collocation methods for spatial Timoshenko rods*; Computer Methods in Applied Mechanics and Engineering, 263:113-126 (2013)
- 7. S. Shojaee, E. Izadpanah, N. Valizadeh, **J. Kiendl** Free vibration analysis of thin plates by using a NURBS-based isogeometric approach; Finite Elements in Analysis and Design; 61:23-34 (2012)
- Y. Bazilevs, M.-C. Hsu, J. Kiendl, D.J. Benson; A Computational Procedure for Pre-Bending of Wind Turbine Blades; International Journal for Numerical Methods in Engineering, 89:323-336 (2012)
- N. Nguyen-Thanh, J. Kiendl, H. Nguyen-Xuan, R. Wüchner, K.-U. Bletzinger, Y. Bazilevs, T. Rabczuk, Rotation free isogeometric thin shell analysis using PHT- splines; Computer Methods in Applied Mechanics and Engineering, 200(47-48):3410-3424 (2011)
- 4. Y. Bazilevs, M.-C. Hsu, **J. Kiendl**, R. Wüchner, K.-U. Bletzinger; 3D simulation of wind turbine rotors at full scale. Part II: Fluid-structure interaction modeling with composite blades; International Journal for Numerical Methods in Fluids; 65:236-253 (2011)
- 3. R. Schmidt, J. Kiendl, K.-U. Bletzinger, R. Wüchner; Realization of an integrated structural design process: analysis-suitable geometric modelling and isogeometric analysis; Computing and Visualization in Science, 13:315-330 (2010)
- 2. **J. Kiendl**, Y. Bazilevs, M.-C. Hsu, R. Wüchner, K.-U. Bletzinger; *The bending strip method for isogeometric analysis of Kirchhoff-Love shell structures comprised of multiple patches*; Computer Methods in Applied Mechanics and Engineering, 199:2403-2416 (2010)
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Book chapters

1. M. A. Ghaziani, **J. Kiendl**, L. De Lorenzis; *Isogeometric Multiscale Modeling with Galerkin and Collocation Methods*; Virtual Design and Validation (2020)

List of conferences - Josef Kiendl

As presenting author (†† plenary lecture, † semiplenary lecture, † keynote lecture, * invited)

- 35. **J. Kiendl**, C. Gao; Impact of the mesostructural layout on strength and toughness of FFF-printed materials; ESMC 2022: 11th European Solid Mechanics Conference, Galway, Ireland, July 2022
- 34. **J. Kiendl**[†]; Isogeometric Methods in Structural Analysis: Recent Advances and Applications; 8th ECCOMAS Congres, Oslo, Norway, June 2022
- 33. **J. Kiendl**[†]; Isogeometric Methods in Structural Analysis; ICCM2021: The 12th International Conference on Computational Methods, Virtual Conference, July 2021
- 32. **J. Kiendl**^{††}; Isogeometric Methods in Structural Analysis; IGA 2019: International Conference on Isogeometric Analysis, Munich, Germany, September 2019
- 31. **J. Kiendl***, C. Gao; Impact of the mesostructural layout on strength and toughness of FDM-printed materials; ESIAM19: First European Conference on Structural Integrity of Additively Manufactured Materials, Trondheim, Norway, September 2019
- 30. **J. Kiendl***, C. Gao; Impact of the mesostructural layout on strength and toughness of FDM-printed materials; ICoNSoM 2019: International Conference on Nonlinear Solid Mechanics, Rome, Italy, June 2019
- 29. **J. Kiendl***, A. Herrema, E. Johnson, D. Proserpio, M. Wu, M.-C. Hsu; *A new penalty formulation for patch coupling in Kirchhoff-Love shell analysis*; HOFEIM2019: High-Order Finite Element and Isogeometric Methods Workshop, Pavia, Italy, May 2019
- 28. **J. Kiendl***, D. Proserpio, M. Ambati, L. De Lorenzis; *Isogeometric Phase-Field Description of Brittle Fracture in Plates and Shells*; WCCMXIII: 13th World Congress in Computational Mechanics, New York, USA, July 2018
- 27. **J. Kiendl***, E. Marino, L. de Lorenzis; *Isogeometric collocation for the Reissner-Mindlin shell problem*; ECCM 6: 6th European Conference on Computational Mechanics, Glasgow, Scotland, June 2018
- 26. **J. Kiendl**[‡]; Isogeometric Methods in Structural Mechanics; IGAA2018: 3rd Conference on Isogeometric Analysis and Applications, Delft, Netherlands, April 2018
- 25. **J. Kiendl**, D. Proserpio, M. Ambati, L. de Lorenzis; *Phase-field description of brittle fracture in plates and shells*; 89th Annual Meeting of GAMM 2018, Munich, Germany, March 2018
- 24. **J. Kiendl***, E. Marino, L. de Lorenzis; *Isogeometric collocation for the Reissner-Mindlin shell problem*; IGA 2017: International Conference on Isogeometric Analysis, Pavia, Italy, September 2017
- 23. J. Kiendl*, M. Ambati, L. de Lorenzis, H. Gomez, A. Reali; Isogeometric phase-field modeling of fracture in thin plates and shells; USACM Thematic Conference on Isogeometric Analysis and Meshfree Methods, La Jolla, USA, October 2016

- 22. **J. Kiendl**, M. Ambati, L. de Lorenzis, A. Reali, H. Gomez; *Isogeometric phase-field mo-deling of brittle fracture in thin shells*; Joint Annual Meeting of DMV and GAMM 2016, Braunschweig, Germany, March 2016
- 21. **J. Kiendl***, M. Ambati, L. de Lorenzis; *Isogeometric phase-field modeling of brittle fracture in shell structures*; 3rd GAMM Workshop on Phase Field Modeling, Braunschweig, Germany, February 2016
- 20. **J. Kiendl**[‡], L. Heltai, A. Reali, A. DeSimone; A natural framework for isogeometric fluidstructure-interaction: coupling BEM and Shell models; USNCCM13: 13th US Congress on Computational Mechanics, San Diego, USA, July 2015
- 19. **J. Kiendl**[‡], M.-C. Hsu, A. Reali; Isogeometric Thin Shell Analysis with Hyperelastic Materials and Application to Aortic Heart Valve Simulations; ESMC 2015: 9th European Solid Mechanics Conference, Madrid, Spain, July 2015
- 18. **J. Kiendl***, M.-C. Hsu, A. Reali; *Isogeometric Kirchhoff-Love shell formulations for general hyperelastic materials*; IGA 2015: 3rd International Conference on Isogeometric Analysis, Trondheim, Norway, June 2015
- 17. **J. Kiendl**[‡], F. Auricchio, T. Hughes, A. Reali; *Isogeometric one-parameter formulations for shear deformable structures*; WCCM XI: 11th World Congress on Computational Mechanics, Barcelona, Spain, July 2014
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- 15. **J. Kiendl**, F. Auricchio, A. Reali; Single-variable formulations for shear-deformable structures; 12th Workshop on theoretical and practical structural engineering, Munich, February 2014
- 14. **J. Kiendl***, F. Auricchio, T. Hughes, A. Reali; A one-parameter isogeometric formulation for Timoshenko beams; IGA 2014: Isogeometric Analysis: Integrating Design and Analysis, Austin, USA, January 2014
- 13. **J. Kiendl***, R. Wüchner, K.-U. Bletzinger, Y. Bazilevs; *Isogeometric shell analysis: applications in structural analysis, shape optimization, CAD-integration, and FSI*; AIMETA 2013: XXI Congress of the Italian Association of Theoretical and Applied Mechanics, Turin, Italy, September 2013
- 12. **J. Kiendl**, F. Auricchio, L. Beirão da Veiga, C. Lovadina, A. Reali; *Innovative isogeometric formulations for shear deformable beams and plates*; YIC 2013: ECCOMAS Young Investigators Conference, Bordeaux, France, September 2013
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- 7. **J. Kiendl**, R. Wüchner, K.-U. Bletzinger, Y. Bazilevs; *Isogeometric Kirchhoff-Love shell:* applications in structural analysis, shape optimization, CAD-integration, FSI; WCCM 2012: 10th World Congress on Computational Mechanics, São Paulo, Brasil, July 2012
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- 5. **J. Kiendl***, K.-U. Bletzinger, R. Wüchner; *Isogeometric shape optimization of thin-walled structures*; Isogeometric Analysis 2011: Integrating Design and Analysis, Austin, USA, January 2011
- 4. **J. Kiendl***, K.-U. Bletzinger, R. Wüchner; *Isogeometric shape optimization of thin-walled structures*; WCCM 2010: 9th World Congress on Computational Mechanics and 4th Asian Pacific Congress on Computational Mechanics, Sydney, Australia, July 2010
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- 44. D. Magisano, F. Liguori, L. Leonetti, A. Madeo, G. Garcea, **J. Kiendl**, A. Reali; Robust and Efficient Large Deformation Analysis of Kirchhoff-love Shells: Locking, Patch Coupling and Iterative Solution, Joint 14th World Congress in Computational Mechanics and ECCOMAS Congres, Paris, France, July 2020
- 43. A. Patton, J.-E. Dufour, P. Antolin, **J. Kiendl**, A. Reali; A stress recovery approach for accurate elastic analysis of laminated composites via isogeometric collocation; IGA2019: International Conference on Isogeometric Analysis, Munich, Germany, September 2019
- 42. E. Marino, **J. Kiendl**, L. De Lorenzis; *Isogeometric collocation for implicit dynamics of three-dimensional geometrically exact beams*; IGA2019: International Conference on Isogeometric Analysis, Munich, Germany, September 2019
- 41. D. Proserpio, J. Kiendl, M. Ambati, L. De Lorenzis, K. A. Johannessen, T. Kvamsdal; Phase-field simulation of brittle fracture using LR-NURBS adaptive mesh refinement for complex shell structures; IGA2019: International Conference on Isogeometric Analysis, Munich, Germany, September 2019
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- 33. H. Casquero, X. Wei, D. Toshniwal, A. Li, T.J.R. Hughes, **J. Kiendl**, Y.J. Zhang; Bridging the gap between the design of smooth surfaces with arbitrary topology and Kirchhoff-Love shell analysis; USNCCM15: 15th US Congress on Computational Mechanics, Austin, USA, July 2019
- 32. C. Gao, J. Kiendl; Design of strong and tough architectured layered materials via initial periodicity and porosity of material; ICoNSoM 2019: International Conference on Nonlinear Solid Mechanics, Rome, Italy, June 2019
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- 24. V. Balobanov, **J. Kiendl**, S. Khakalo, J. Niiranen; *Shells in strain gradient elasticity: theory, isogeometric implementation and applications*; ECCM 6: 6th European Conference on Computational Mechanics, Glasgow, Scotland, June 2018

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- 13. H. Casquero, **J. Kiendl**, A. Reali, Y. Zhang, H. Gomez; Analysis-suitable T-splines of arbitrary degree: From isogeometric collocation to fully nonlinear Kirchhoff-Love shells; ECMI 2016: The 19th European Conference on Mathematics for Industry, Santiago de Compostela, Spain, June 2016

- 12. L. Heltai, **J. Kiendl**, A. Reali, A. DeSimone; A natural framework for isogeometric fluidstructure-interaction: coupling BEM and Shell models; MAFELAP 2016: The Mathematics of Finite Elements and Applications, London, UK, June 2016
- J. Niiranen, S. Khakalo, V. Balobanov, A. H. Niemi, J. Kiendl, B. Hosseini, A. Reali; *Isogeometric Galerkin methods for gradient-elastic bars, beams, membranes and plates*; EC-COMAS 2016: VII European Congress on Computational Methods in Applied Sciences and Engineering, Crete Island, Greece, June 2016
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