

# Alessandro Reali – Seminars and lectures

[Last update: May 5<sup>th</sup>, 2023]

- **Presenting author of 95 invited seminars or lectures** at internationally renowned institutions; **31 plenary or keynote**, and other **36 invited lectures** at international conferences.
- **Co-author of 19 invited seminars or lectures** at internationally renowned institutions; **29 plenary or keynote**, and other **159 invited lectures** at international conferences.
- **Author/co-author of a total of 485 contributions (386 invited)** at conferences, workshops, seminars.

## Seminars and lectures (presenting author)

### Invited seminars or lectures at internationally renowned institutions:

1. T.J.R. Hughes, A. Reali, *An Isogeometric Analysis Approach for the Study of Structural Vibrations*, Fifth International ROSE School Seminar (Pavia, May 26-27, 2005).
2. A. Reali, *Isogeometric Analysis: an Introduction*, within the seminar series “Seminari di Matematica Applicata” organized by CNR-IMATI and the Mathematics Department of the University of Pavia (Pavia, December 19, 2006).
3. A. Reali, G. Sangalli, *Isogeometric discretizations in structural dynamics and wave propagation problems (Part II)*, within the Short Course on Advanced Computational Methods in Earthquake Engineering and Engineering Seismology organized by the ROSE School (Pavia, March 14, 2008).
4. A. Reali, *Isogeometric modelling and analysis; particle methods, SPH, meshless schemes*, within the advanced course Nonlinear Computational Solid & Structural Mechanics. Theoretical formulation, technology and computations, at IMATI (Pavia, April 12-16, 2010).
5. A. Reali, J. Arghavani, R. Naghdabadi, F. Auricchio, *On the robustness and efficiency of integration algorithms for a 3D finite strain phenomenological SMA constitutive model*, BIRS Workshop on Rate-independent systems: Modeling, Analysis, and Computations (Banff, August 29-September 3, 2010).
6. A. Reali, *La meccanica computazionale e l'uso della simulazione al computer come supporto al chirurgo* (Computational Mechanics and the use of computer simulation as a support for surgeons), inaugural seminar of the series “Ricerca a Pavia: Successi Recenti” (“Research in Pavia: Recent Successes”), organized by the Deputy Rector for Research and by the Research Division of the University of Pavia (Pavia, December 16, 2010).
7. A. Reali, *Isogeometric Analysis at the University of Pavia*, within the seminars organized by the Chair for Computation in Engineering at the International Graduate School of Science and Engineering of the Technical University of Munich (Munich, April 5, 2011).
8. A. Reali, *Isogeometric collocation techniques for static and dynamic elasticity problems*, International Workshop on Advances in Isogeometric Optimal Design, at the NCRI Center for Isogeometric Optimal Design of the Seoul National University (Seoul, September 30, 2011).
9. A. Reali, *Some recent advances in Isogeometric Analysis*, Advances in the Science of Solids and Engineering Mechanics, a Workshop of the Italian Branch of the Society for Natural Philosophy, organized at SISSA – International School for Advanced Studies (Trieste, October 12, 2011).
10. A. Reali, F. Auricchio, L. Beirão da Veiga, T.J.R. Hughes, G. Sangalli, *Isogeometric collocation methods for elasticity, High-Order Numerical Approximation of Partial Differential Equations*, a workshop organized at the Hausdorff Center for Mathematics, University of Bonn (Bonn, February 6-10, 2012).
11. A. Reali, *Isogeometric modelling and analysis; particle methods, SPH, meshless schemes*, within the advanced course Nonlinear Computational Solid & Structural Mechanics. Theoretical formulation, technology and computations, at IMATI (Pavia, April 16-20, 2012).
12. A. Reali, *Isogeometric collocation techniques*, IsoGeometric Analysis: a New Paradigm in the Numerical Approximation of PDEs, a workshop organized at the Centro Internazionale Matematico Estivo “Roberto Conti” (Fondazione CIME) (Cetraro, June 18-22, 2012).
13. A. Reali, *Isogeometric Analysis: Basic concepts of isogeometric Galerkin formulations with some applications to structural vibrations and an extension to collocation methods*, within the advanced course Isogeometric Analysis: Fundamentals and Applications, promoted by the ECCOMAS Committee on Computational and Applied Mathematics (Vienna, September 7-9, 2012).

14. A. Reali, H. Gomez, G. Sangalli, *An isogeometric collocation method for Cahn-Hillard phase separation*, PDEs for multiphase advanced materials - ADMAT 2012, a workshop promoted by INdAM – Istituto Nazionale di Alta Matematica “F. Sever” (Cortona, September 17-21, 2012).
15. A. Reali, *Collocation Isogeometric Methods*, seminar at the Chair for Computation in Engineering of the Technical University of Munich (Munich, October 8, 2012).
16. A. Reali, A. Buffa, M. Martinelli, G. Sangalli, I. Wander, *Development of an isogeometric analysis framework for the simulation of industrial mechanical problems*, MATHIAS 2012 – 12th TOTAL Symposium on Mathematics, organized by Total (Paris, October 25-26, 2012).
17. A. Reali, *From CAD-CAE integration to Isogeometric Analysis*, within the PhD School in Production Systems & Industrial Design of the Politecnico di Torino (Torino, November 30, 2012).
18. A. Reali, *Collocation Isogeometric Methods*, Seminar at the Department of Civil Engineering and Engineering Mechanics of the Columbia University (New York, April 16, 2013).
19. A. Reali, *Isogeometric Analysis: Basic concepts of isogeometric Galerkin formulations with some applications to structural vibrations and an extension to collocation methods*, within the advanced course Iso-geometric methods for numerical simulation, organized by CISM – International Centre for Mechanical Sciences (Udine, May 20-24, 2013).
20. A. Reali, *Collocation Isogeometric Methods*, seminar at SISSA – International School for Advanced Studies (Trieste, May 29, 2013).
21. A. Reali, *Isogeometric Collocation Methods*, seminar at the University of A Coruña (A Coruña, June 19, 2013).
22. A. Reali, *An Introduction to Finite Element Methods for Nonlinear Solid Mechanics*, within the *Short Course on Nonlinear Mechanics of Structures: Methods, Models, and Applications*, organized by EUCENTRE (Pavia, September 27, 2013).
23. A. Reali, *Isogeometric Analysis*, within the *COMMAS Summer School 2013*, organised within the Master Programme in “Computational Mechanics of Materials and Structures (COMMAS)” of the University of Stuttgart (Stuttgart, October 11, 2013).
24. A. Reali, *An Introduction to Isogeometric Analysis*, within the PhD School in Engineering of the Università degli Studi di Perugia (Perugia, October 30-31, 2013).
25. A. Reali, *Basic ideas about Isogeometric Analysis and its potential, with a focus on isogeometric collocation methods and their applications*, seminar at the Politecnico di Milano (Milano, November 4, 2013).
26. A. Reali, *An introduction to isogeometric collocation methods with some applications*, seminar at the Institute for Applied Mechanics of the Technical University of Braunschweig (Braunschweig, November 18, 2013).
27. A. Reali, *Isogeometric collocation methods with a focus on elastostatics and explicit dynamics*, seminar at the Politecnico di Milano (Milano, December 3, 2013).
28. A. Reali, *Isogeometric collocation methods: An introduction with some applications*, seminar at the Eindhoven University of Technology (Eindhoven, February 27, 2014).
29. A. Reali, *An Introduction to Isogeometric Analysis*, seminar at the Budapest University of Technology and Economics (Budapest, March 28, 2014).
30. A. Reali, *Isogeometric modelling and analysis; nonlinear dynamics problems; particle, meshless, and collocation schemes*, within the advanced course Nonlinear Computational Solid & Structural Mechanics. Theoretical formulation, technology and computations, at IMATI (Pavia, May 5-9, 2014).
31. A. Reali, *An introduction to Isogeometric Analysis Basic concepts of isogeometric Galerkin formulations with some applications to structural vibrations & dynamics*, seminar at the Politecnico di Milano (Milano, May 22, 2014).
32. A. Reali, *An introduction to Isogeometric Analysis Basic concepts of isogeometric Galerkin formulations with some applications to structural vibrations & dynamics, and an extension to collocation methods*, within the advanced course Isogeometric Analysis: Fundamentals and Applications, promoted by the ECCOMAS Committee on Computational and Applied Mathematics (Barcelona, July 25-27, 2014).
33. A. Reali, *Isogeometric Analysis: Structural Vibrations and Dynamics*, seminar within the PhD Program in Structural Engineering and Geotechnics at Sapienza – Università di Roma (Roma, October 2, 2014).
34. A. Reali, *Isogeometric Analysis: An Innovative Paradigm for Computational Mechanics*, seminar at the Department of Mechanical and Process Engineering of the Swiss Federal Institute of Technology – ETH Zurich (Zurich, October 28, 2014).
35. A. Reali, *Isogeometric Analysis: An Innovative Paradigm for Computational Mechanics*, seminar at the Department of Industrial Engineering of the Università degli Studi di Parma (Parma, November 26, 2014).

36. A. Reali, *Isogeometric Analysis: A basic introduction with applications in solid and structural mechanics involving complex geometries, structural vibrations, explicit dynamics, large deformations, inelasticity, contact, and buckling*, seminar at the Department of Civil, Environmental and Mechanical Engineering of the Università degli Studi di Trento (Trento, December 9, 2014).
37. A. Reali, *An introduction to Isogeometric Analysis Basic concepts of isogeometric Galerkin formulations with some applications to structural vibrations & dynamics, and an extension to collocation methods*, within the MuMoLaDe Winter School organized at the Università degli Studi di Padova (Padova, January 19-27, 2015).
38. A. Reali, *Isogeometric Analysis: An innovative paradigm for Computational Mechanics*, seminar at the Numerical Porous Media Center of the King Abdullah University of Science and Technology – KAUST (Thuwal, February 3, 2015).
39. A. Reali, *Isogeometric Analysis: An innovative paradigm for Computational Mechanics*, seminar at the School of Architecture, Civil & Environmental Engineering of the Ecole Polytechnique Fédérale de Lausanne – EPFL (Lausanne, April 2, 2015).
40. A. Reali, *Isogeometric analysis: A basic introduction with some applications*, seminar at the Politecnico di Milano (Milan, April 14, 2015).
41. A. Reali, *Isogeometric Analysis: An innovative paradigm for Computational Mechanics*, seminar within the workshop “Trends in Non-Linear Analysis 2015” organized at SISSA – International School for Advanced Studies (Trieste, July 1-3, 2015).
42. A. Reali, *ISOBIO: Isogeometric Methods for Biomechanics*, seminar within “TED4ERC”, a special session focused on ERC projects within “MEETmeTONIGHT” 2015 (Pavia, 25 Settembre 2015).
43. A. Reali, *An overview on Isogeometric Collocation, a novel, fast and accurate Computational Mechanics paradigm*, seminar at the Department of Civil, Environmental and Mechanical Engineering of the Università degli Studi di Trento (Trento, October 2, 2015).
44. A. Reali, *Isogeometric Analysis: An innovative paradigm for advanced simulation*, inaugural lecture of the TUM-IAS “Hans Fischer” Fellowship (Munich, October 29, 2015).
45. A. Reali, *Isogeometric Analysis: Some recent advances and applications*, seminar at the Numerical Methods in Plasma Physics Division of the Max Planck Institute for Plasma Physics (Munich, November 5, 2015).
46. A. Reali, *An introduction to Isogeometric Analysis with some applications*, within the Autumn School on Data Driven Computations in the Life Sciences, promoted by the UT Austin/Portugal CoLab - Advanced Computing (Lisbon, November 9-13, 2015).
47. A. Reali, *Isogeometric Analysis: An innovative paradigm for advanced simulation*, seminar at the Chair of Computational Mechanics of the Bauhaus University Weimar (Weimar, November 30, 2015).
48. A. Reali, *Some Advances and Applications of Isogeometric Analysis*, seminar at the “DREAMS” Workshop organized at the Università degli Studi di Roma Tor Vergata (Roma, January 25, 2016).
49. A. Reali, *Isogeometric Analysis: Some recent advances and applications*, “I<sup>3</sup>MS” series seminar at the AICES Graduate School of the RWTH Aachen University (Aachen, February 1, 2016).
50. A. Reali, *IGA collocation, aka “the ultimate reduced quadrature IGA method”: Some results, applications, and open problems*, MFO Mini-Workshop: Mathematical Foundations of Isogeometric Analysis (Oberwolfach, February 7-13, 2016).
51. A. Reali, *An introduction to Isogeometric Analysis*, within the Workshop on Isogeometric Finite Element Data Structures based on Bézier Extraction, promoted by the DFG at the Technical University of Munich (Munich, March 14-19, 2016).
52. A. Reali, *Isogeometric Analysis: An introduction and some recent advances*, seminar at the Dipartimento di Ingegneria Civile e Meccanica of the Università degli Studi di Cassino e del Lazio Meridionale (Cassino, March 22, 2016).
53. A. Reali, *Isogeometric modeling and analysis; nonlinear dynamics problems; particle, meshless, and collocation schemes*, within the advanced course Nonlinear Computational Solid & Structural Mechanics. Theoretical formulation, technology and computations, at the University of Pavia (Pavia, May 16-20, 2016).
54. A. Reali, *An introduction to Isogeometric Analysis: Basic concepts of isogeometric Galerkin formulations with some applications to structural vibrations & dynamics, and an extension to collocation methods*, within the advanced course Isogeometric Analysis: Fundamentals and Applications, promoted by the ECCOMAS Committee on Computational and Applied Mathematics (Crete, June 10-12, 2016).

55. A. Reali, *Advanced numerical simulation via Isogeometric Analysis: Towards new frontiers for Computational Mechanics*, seminar within the TUM-IAS Fellows' Lunch (Munich, October 6, 2016).
56. A. Reali, *Verso nuovi strumenti di simulazione super veloci ed accurati basati sull'analisi isogeometrica* (Towards new super fast and accurate simulation tools based on isogeometric analysis), seminar within the presentation of "INROAD – INstitutional hoRizOn 2020 Committee At UNIPV" (Pavia, January 25, 2017).
57. A. Reali, *Isogeometric Analysis: An introduction with some advanced applications*, seminar within the Arenberg Doctoral School of the Katholieke Universiteit Leuven (Leuven, May 2, 2017).
58. A. Reali, *Isogeometric Analysis: An introduction and some recent advances*, seminar within the Dottorato in Ingegneria Strutturale e Geotecnica of Sapienza – Università di Roma (Roma, May 22, 2017).
59. A. Reali, *Immersed Isogeometric Methods: Some Applications*, within the workshop (by invitation only) "Embedded and Unfitted Methods" at CIMNE - International Centre for Numerical Methods in Engineering (Barcelona, November 23-24, 2017).
60. A. Reali, *Advanced modeling and applications of isogeometric shells: from composites to fluid-structure interaction*, seminar at the "DREAMS" Workshop organized at the Istituto Nazionale di Alta Matematica "F. Severi" (Roma, January 24, 2018).
61. A. Reali, *Advanced modeling and applications of isogeometric shells: from composites to fluid-structure interaction*, seminar at the Chair of Numerical Structural Analysis with Application in Ship Technology della Technical University of Hamburg (Hamburg, March 6, 2018).
62. A. Reali, *Advanced modeling and applications of isogeometric shells: from composites to fluid-structure interaction*, seminar within the by-invitation-only workshop Advances in Computational FSI and Flow Simulation (AFSI 2018) (Banff, May 2-4, 2018).
63. A. Reali, *Isogeometric modeling and analysis; structural dynamics problems; particle, meshless, and collocation schemes*, within the advanced course Nonlinear Computational Solid & Structural Mechanics. Theoretical formulation, technology and computations, at the University of Pavia (Pavia, May 21-25, 2018).
64. A. Reali, *La meccanica computazionale al servizio del patrimonio: dal modello digitale all'analisi strutturale* (Computational Mechanics for Heritage: From digital models to structural analysis), within the Giornata di Studi 2018 "Documentazione & Digitale - Banche dati e modelli per la valorizzazione del patrimonio", organized by the Università degli Studi di Pavia (Pavia, June 26, 2018).
65. A. Reali, *Advanced modeling and applications of isogeometric shells*, at the International Research Center on Mathematics and Mechanics of Complex Systems (M&MOCS) of the Università degli Studi dell'Aquila (Giuliano di Roma, September 11, 2018).
66. A. Reali, *Isogeometric Analysis: An introduction with some applications*, within the advance course Advanced Numerical Methods, at the University of Pavia (Pavia, September 19-21, 2018).
67. A. Reali, *Advanced modeling and applications of Isogeometric Analysis with a focus on shells and laminates*, seminar at the Dipartimento di Strutture per l'Ingegneria e l'Architettura of the Università degli Studi di Napoli "Federico II" (Napoli, January 24, 2019).
68. A. Reali, *Isogeometric Analysis: An introduction and some recent advances*, within the AICES EU Regional School of the RWTH Aachen University (Aachen, February 11, 2019).
69. A. Reali, *Isogeometric Analysis: Advanced numerical modeling and applications*, seminar within the workshop "KAUST VSRP", at the University of Pavia (Pavia, March 28, 2019).
70. A. Reali, *Advanced modeling and applications of Isogeometric Analysis with a focus on shells and laminates*, within the symposium (by invitation only) RAMMS 2019 – Recent Advances in Mechanics of Solids and Structures (A symposium in honor of Prof. Davide Bigoni's 60th birthday), at the Università degli Studi di Trento (Trento, June 6-7, 2019).
71. A. Reali, A. Patton, J.-E. Dufour, P. Antolin, J. Kiendl, *Advanced Isogeometric Modeling and Applications with a Focus on Shells and Laminates*, MFO Workshop: Mathematical Foundations of Isogeometric Analysis (Oberwolfach, July 14-20, 2019).
72. A. Reali, *Some Recent Advances in Isogeometric Structural Analysis with a Focus on Composites*, within the workshop "XFAST-SIMS: Extra fast and accurate simulation of complex structural systems. Kick-off meeting" organized at Politecnico di Milano (Milano, October 8-9, 2019).
73. A. Reali, *Isogeometric Analysis: Advanced modeling and applications with a special focus on shells and laminates*, "Mechanics, Uncertainty and Simulation in ENGINEERING - MUSEN Seminar" organized at the Technical University of Braunschweig (Braunschweig, October 24, 2019).

74. A. Reali, *Introduction to Isogeometric Analysis; Spline basics and IGA implementation aspects; IGA advanced applications; IGA collocation*, within the advanced course Isogeometric Analysis (IGA): Basic and Advanced Applications, organized within the Global Initiative of Academic Networks (GIAN) at the National Institute of Technology Warangal (Warangal, November 11-15, 2019).
75. A. Reali, *Virtual Experiments and the Fascinating World of Computational Mechanics*, within the seminar series “Energizing Breakfast” organized by ENI (online, March 9, 2021).
76. A. Reali, *STEM in clinica: il valore aggiunto del virtuale in medicina* (STEM in clinic: the added-value of virtual experiments medicine), within the Executive Master in Management strategico e Leadership delle Organizzazioni Sanitarie - EMMLOS (Pavia, March 27, 2021).
77. A. Reali, *Some Recent Advances in Isogeometric Analysis*, within the Interdisciplinary Research Webinars organized by the Dipartimento di Meccanica, Matematica, Management of Politecnico di Bari (online, June 23, 2021).
78. A. Reali, *Recent Advances in Isogeometric Analysis*, within the workshop “XFAST-SIMS: Extra fast and accurate simulation of complex structural systems” organized at Sapienza Università di Roma (Roma, September 2-3, 2021).
79. A. Reali, *Advanced isogeometric simulations with a special focus on biomedical applications*, nell’ambito della 1st MEDITATE Summer School “CAE and medical applications” (Roma, September 30, 2021).
80. A. Reali, *Some advances in isogeometric analysis of coupled and complex problems*, MFO Workshop: Multiscale Coupled Models for Complex Media: From Analysis to Simulation in Geophysics and Medicine (Oberwolfach, January 23-29, 2022).
81. A. Reali, F. Pasqualini, *Nuovi valori aggiunti dell’ingegneria in clinica – parte I* (New added-values of engineering in clinic – part I), within the Executive Master in Management strategico e Leadership delle Organizzazioni Sanitarie - EMMLOS (Pavia, March 6, 2022).
82. A. Reali, *Introduction to Isogeometric Analysis: Spline basics and IGA implementation aspects; IGA advanced applications; IGA collocation*, within the advanced course An introduction to Isogeometric Analysis and its applications with a focus on nonlinear beams, organized within the International Doctorate Civil and Environmental Engineering of the Università degli Studi di Firenze (Firenze, March 15-22, 2022).
83. M. Alvaro, A. Reali, *ERC: Not a kind of magic – part II*, within the PhD program in Scienze e Tecnologie per Ambiente e Territorio of the Università degli Studi di Genova (Genova, March 25, 2022).
84. A. Reali, *Some advances in isogeometric analysis for coupled and complex problems*, seminar at the Department of Civil, Environmental and Mechanical Engineering of the Università degli Studi di Trento (Trento, May 2, 2022).
85. A. Reali, *Matematica, modellistica e meccanica: la “cassetta degli attrezzi” per capire, predire e progettare*, invited talk within the event celebrating the 30 years of Fondazione Cariplo “Looking 4: Pane e Ricerca” (Pavia, June 28, 2022).
86. A. Reali, *The opportunities offered by advanced numerical simulation*, within the advanced school Advances in Sustainable Bio- and Nano- Materials and Technologies, organized within the Lake Como School of Advanced Studies (Como, June 29, 2022).
87. A. Reali, *Introduction to Isogeometric Analysis; Spline basics and IGA implementation aspects; IGA advanced applications; IGA collocation*, nell’ambito del corso avanzato A basic introduction to Isogeometric Analysis with applications, organized within the European Master in Advanced Solid Mechanics STRAINS at the l’Università della Calabria (Rende, July 18-22, 2022).
88. A. Reali, *Some advances and applications in isogeometric analysis of coupled and complex problems*, TU Delft Seminar Series in Numerical Analysis at the Delft University of Technology (Delft, November 25, 2022).
89. A. Reali, *Some advances and applications in isogeometric analysis of coupled and complex problems*, seminar at the Department of Mathematics and Informatics “U. Dini” of the Università degli Studi di Firenze (Firenze, December 6, 2022).
90. A. Reali, *IGA methods for structural dynamics and wave propagation*, Winterseminar of the Chair of Computational Modeling and Simulation (Blaiachach, March 13, 2023).
91. A. Reali, *Introduction to Isogeometric Analysis: IGA basics and implementation aspects; IGA advanced applications; IGA collocation*, within the advanced course An introduction to splines and Isogeometric Analysis, with a focus on nonlinear beams, organized within the International Doctorate Civil and Environmental Engineering of the Università degli Studi di Firenze (Firenze, March 22-29, 2023).
92. A. Reali, *Some advances in isogeometric analysis of coupled and complex problems*, Scientific Colloquium at the Scuola Superiore Meridionale (Napoli, April 13, 2023).

93. A. Reali, *Some advances in isogeometric analysis of coupled and complex problems*, Forschungskolloquium Computational Science and Engineering (CSE) at the University of Bundeswehr Munich (Munich, May 4, 2023).
94. A. Reali, *Some advances in isogeometric analysis of coupled and complex problems*, seminar at the Department of Civil Engineering of the Università degli Studi di Brescia (Brescia, May 12, 2023).
95. A. Reali, *Some advances in isogeometric analysis of coupled and complex problems*, Colloquium on Recent Works in the Areas of Mechanics and Fluid Dynamics of the Vienna University of Technology (Vienna, May 23, 2023).

### Plenary or keynote lectures:

96. A. Reali, *Isogeometric Analysis in Pavia*, Workshop on Non-Standard Numerical Methods for PDE's, **Keynote Lecture** (Pavia, June 29-July 2, 2010).
97. F. Auricchio, L. Beirão da Veiga, F. Calabrò, T.J.R. Hughes, A. Reali, G. Sangalli, *Studies on quadrature and collocation techniques for NURBS-based Isogeometric Analysis*, 9th World Congress on Computational Mechanics and 4th Asian Pacific Congress on Computational Mechanics, **Keynote Lecture** (Sydney, July 19-23, 2010).
98. A. Reali, F. Auricchio, F. Calabrò, T.J.R. Hughes, G. Sangalli, *Efficient Quadrature Strategies for NURBS-based Isogeometric Analysis*, HOFEIM 2011 – High-Order Finite Element and Isogeometric Methods, **Keynote Lecture** (Krakow, June 27-29, 2011).
99. A. Reali, *Isogeometric Collocation Methods*, YIC2012 – ECCOMAS Young Investigators Conference, **Plenary Keynote Lecture** (Aveiro, April 24-27, 2012).
100. F. Auricchio, L. Beirão da Veiga, T.J.R. Hughes, A. Reali, G. Sangalli, *Isogeometric collocation methods for elasticity*, 6th European Congress on Computational Methods in Applied Sciences and Engineering, **Keynote Lecture** (Vienna, September 10-14, 2012).
101. A. Reali, F. Auricchio, L. Beirão da Veiga, H. Gomez, T.J.R. Hughes, G. Sangalli, *Isogeometric collocation methods: Applications to elasto-statics/-dynamics and to phase field modeling*, Advances in Computational Mechanics – A Conference Celebrating the 70th Birthday of Thomas J.R. Hughes, **Keynote Lecture** (San Diego, February 24-27, 2013).
102. F. Auricchio, L. Beirão da Veiga, T.J.R. Hughes, A. Reali, G. Sangalli, *Isogeometric collocation methods for elasto-statics and explicit dynamics*, SEECCM III – South-East Conference on Computational Mechanics & COMPDYN 2013 – Computational Methods in Structural Dynamics and Earthquake Engineering, **Keynote Lecture** (Kos, June 12-14, 2013).
103. A. Reali, *Isogeometric Analysis: Structural vibrations and dynamics*, XXI Congresso AIMETA, **Plenary Lecture** within the AIMETA Prize Special Session (Torino, 17-20 Settembre, 2013).
104. A. Reali, F. Auricchio, L. Beirão da Veiga, H. Gomez, T.J.R. Hughes, G. Sangalli, *Isogeometric Collocation Methods: An introduction with some applications*, APCOM2013 – 5th Asia Pacific Congress on Computational Mechanics & ISCM 2013 – 4th International Symposium on Computational Mechanics, **Keynote Lecture** (Singapore, December 11-14, 2013).
105. A. Reali, *Isogeometric collocation methods*, IGAA 2014 – Isogeometric Analysis and Applications, **Invited Keynote Lecture** (Annweiler am Trifels, April 7-10, 2014).
106. A. Reali, J.A. Evans, T.J.R. Hughes, *Isogeometric Analysis: Structural vibrations and dynamics*, WCCM-ECCM-ECFD2014 – 11th World Congress on Computational Mechanics, 5th European Conference on Computational Methods, and 6th European Conference on Computational Fluid Dynamics, **Semi-Plenary Lecture** (Barcelona, July 20-25, 2014).
107. A. Reali, T.J.R. Hughes, *Isogeometric Methods for Structural Vibrations and Dynamics*, III International Conference on Isogeometric Analysis – IGA 2015, **Opening Plenary Session Lecture** (Trondheim, June 1-3, 2015).
108. A. Reali, S. Perotto, P. Rusconi, A. Veneziani, *Hi2Mod: HIgh order Isogeometric HIerarchical MODEL Reduction of elliptic problems in curved domains*, 13th U.S. National Congress on Computational Mechanics, **Keynote Lecture** (San Diego, July 27-30, 2015).
109. A. Reali, R. Hiemstra, T.J.R. Hughes, *High order explicit structural dynamics with isogeometric collocation*, 7th European Congress on Computational Methods in Applied Sciences and Engineering, **Keynote Lecture** (Crete, June 5-10, 2016).
110. A. Reali, T.J.R. Hughes, *IGA collocation, aka “the ultimate reduced quadrature IGA method”: Some results, applications, and open problems*, WCCM XII & APCOM VI – 12th World Congress on Computational Mechanics and 6th Asian Pacific Congress on Computational Mechanics, **Keynote Lecture** (Seoul, July 24-29, 2016).
111. A. Reali, *Advanced isogeometric methods for flow and fluid-structure interaction problems*, FEF2017 – The 19th International Conference on Finite Elements in Flow Problems, **Semi-Plenary Lecture** (Roma, April 5-7, 2017).

112. A. Reali, J.-E. Dufour, P. Antolin, A. Patton, G. Sangalli, F. Auricchio, *A Stress Recovery Procedure for Cost-Effective Isogeometric Analysis of Composite Plates*, 14th U.S. National Congress on Computational Mechanics, **Keynote Lecture** (Montreal, July 17-20, 2017).
113. A. Reali, *Advanced modeling and applications of isogeometric shells*, 9th GRACM International Congress on Computational Mechanics, **Plenary Lecture** (Crete, June 4-6, 2018).
114. A. Reali, J.-E. Dufour, P. Antolin, A. Patton, G. Sangalli, J. Kiendl, F. Auricchio, *A stress-recovery approach for cost-effective isogeometric analysis of composite structures*, ECCM6-ECFD7 – 6th European Conference on Computational Mechanics and 7th European Conference on Computational Fluid Dynamics, **Keynote Lecture** (Glasgow, June 11-15, 2018).
115. A. Reali, *Esperimenti virtuali. La Meccanica Computazionale e l'evoluzione delle strutture complesse* (Virtual experiments. Computational Mechanics and the evolution of complex structures), **Lectio Magistralis of inauguration of the 2018/2019 academic year** of the University of Pavia (Pavia, November 5, 2018).
116. A. Reali, *Isogeometric Analysis: Advanced modeling and applications*, JSUT International Research and Education Forum – IREF 2019, **Plenary Lecture** (Changzhou, April 11-17, 2019).
117. A. Reali, *Some recent advances in isogeometric structural analysis with a focus on composites*, VII International Conference on Isogeometric Analysis – IGA 2019, **Plenary Lecture** (Munich, September 18-20, 2019).
118. A. Reali, *Isogeometric Analysis: Advanced modeling and applications with a special focus on shells and laminates*, ISCM 47 – 47th Israel Symposium on Computational Mechanics, **Plenary Lecture** (Beer-Sheva, November 7, 2019).
119. A. Reali, *Isogeometric Analysis: Advanced modeling and applications with a special focus on shells and laminates*, **Lectio Magistralis** organized within the International doctorate Civil and Environmental Engineering of the Università degli Studi di Firenze (online, March 19, 2021).
120. A. Reali, *Advanced isogeometric simulations of coupled problems*, IX Conference on Computational Methods for Coupled Problems in Science and Engineering – COUPLED 2021, **Plenary Lecture** (online, June 13-16, 2021).
121. A. Reali, *Some recent advances in Isogeometric Analysis with a special focus on structural and coupled simulations*, ICCM2021 – 12th International Conference on Computational Methods, **Semi-Plenary Lecture** (online, July 4-8, 2021).
122. A. Reali, *Some recent advances in Isogeometric Analysis*, 16th U.S. National Congress on Computational Mechanics, **Semi-Plenary Lecture** (online, July 25-29, 2021).
123. A. Reali, *Some recent advances and applications in isogeometric analysis*, 8th European Congress on Computational Methods in Applied Sciences and Engineering, **Keynote Lecture** (Oslo, June 5-9, 2022).
124. A. Reali, *Isogeometric Analysis: Some recent advances and applications*, WCCM XV-APCOM VIII – 15th World Congress on Computational Mechanics and 8th Asian Pacific Congress on Computational Mechanics, **Semi-Plenary Lecture** (online, July 31- August 5, 2022).
125. A. Reali, *Isogeometric simulations of coupled biomedical problems: from fluid-structure interaction in heart valves to electrophysiology and tumor growth problems*, Symposium Metals and beyond... the next 50 years, **Keynote Lecture** (Burghausen, March17, 2023).
126. A. Reali, *Isogeometric Analysis: Advances and applications with a special focus on dynamic problems*, 9th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering (COMPDYN 2023) and 5th International Conference on Uncertainty Quantification in Computational Sciences and Engineering (UNCECOMP 2023), **Semi-Plenary Lecture** (Athens, June 12-14, 2023).

### Lectures at international conferences (\* = invited):

127. \*A. Reali, T.J.R. Hughes, J.A. Cottrell, Y. Bazilevs, *Isogeometric Analysis for the Study of Structural Vibrations*, 7th World Congress on Computational Mechanics (Los Angeles, July 16-22, 2006).
128. \*F. Auricchio, L. Beirão da Veiga, C. Lovadina, A. Reali, *Theoretical and Numerical Investigations on the Stability of Finite Element Schemes for Finite Deformation Incompressible Elasticity*, 7th World Congress on Computational Mechanics (Los Angeles, July 16-22, 2006).
129. \*F. Auricchio, A. Reali, U. Stefanelli, *A Phenomenological 3D Model Describing Stress-induced Solid Phase Transformations with Permanent Inelasticity*, European Conference on Smart Systems (Roma, October 26-28, 2006).
130. \*T.J.R Hughes, A. Reali, G. Sangalli, *Discrete Approximations in Structural Dynamics and Wave Propagation: p-FEM vs. k-NURBS - Part II*, 9th U.S. National Congress on Computational Mechanics (San Francisco, July 23-26, 2007).

131. \*F. Auricchio, L. Beirão da Veiga, C. Lovadina, A. Reali, *On the stability of finite element schemes for finite strain incompressible elasticity*, Colloquium Lagrangianum (Paris, December 6-8, 2007).
132. A. Reali, *A phenomenological model for SMAs including asymmetric behaviors and transformation-dependent elastic properties*, Modelling of SMAs and SMA actuated structures (Prague, May 5-7, 2008).
133. F. Auricchio, L. Beirão da Veiga, A. Buffa, C. Lovadina, A. Reali, G. Sangalli, *An isogeometric stream function formulation for incompressible plane elastic problems*, 8th World Congress on Computational Mechanics and 5th European Congress on Computational Methods in Applied Sciences and Engineering (Venezia, June 30-July 4, 2008).
134. \*T.J.R. Hughes, A. Reali, G. Sangalli, *NURBS-based isogeometric analysis versus p-finite elements in structural dynamics and wave propagation*, XIII Conference on the Mathematics of Finite Elements and Applications (London, June 9-12, 2009).
135. \*A. Reali, *Advanced Computational Tools for Structural Mechanics and Earthquake Engineering*, Earthquake Engineering by the Beach (Capri, July 2-4, 2009).
136. \*F. Auricchio, S. Morganti, A. Reali, *SMA numerical modeling versus experimental results*, ESOMAT2009, 8th European Symposium on Martensitic Transformation (Prague, September 7-11, 2009).
137. \*A. Reali, T.J.R. Hughes, G. Sangalli, *NURBS-based isogeometric analysis for structural dynamics and wave propagation*, Multimat 2009 – Numerical Methods for Multi-material Fluids and Structures (Pavia, September 21-25, 2009).
138. \*T.J.R. Hughes, A. Reali, G. Sangalli, *NURBS-based Isogeometric Analysis: Studies on Efficient Quadrature and Collocation Techniques*, ASME International Mechanical Engineering Congress & Exposition (Lake Buena Vista, November 13-19, 2009).
139. \*F. Auricchio, L. Beirão da Veiga, T.J.R. Hughes, A. Reali, G. Sangalli, *Efficient quadrature and collocation techniques for Isogeometric Analysis*, 13th International Conference on Approximation Theory (San Antonio, March 7-10, 2010).
140. \*F. Auricchio, L. Beirão da Veiga, T.J.R. Hughes, A. Reali, G. Sangalli, *NURBS-based isogeometric analysis: efficient quadrature and collocation techniques*, IV European Conference on Computational Mechanics (Paris, May 16-21, 2010).
141. \*F. Auricchio, L. Beirão da Veiga, F. Calabrò T.J.R. Hughes, A. Reali, G. Sangalli, *NURBS-based isogeometric analysis: studies on efficient quadrature and collocation techniques*, Isogeometric Analysis 2011: Integrating Design and Analysis (Austin, January 13-15, 2011).
142. \*F. Auricchio, L. Beirão da Veiga, T.J.R. Hughes, A. Reali, G. Sangalli, *Isogeometric Collocation Techniques for Static and Dynamic Elasticity Problems*, 11th U.S. National Congress on Computational Mechanics (Minneapolis, July 25-29, 2011).
143. F. Auricchio, L. Beirão da Veiga, T.J.R. Hughes, A. Reali, G. Sangalli, *NURBS-based Isogeometric Analysis: Collocation Techniques for Static and Dynamic Elasticity Problems*, ECCOMAS Special Interest Conference on Trends & Challenges in Computational Mechanics (Padova, September 12-14, 2011).
144. \*L. Beirão da Veiga, C. Lovadina A. Reali, *Isogeometric collocation methods for the Timoshenko beam*, 10th World Congress on Computational Mechanics (São Paulo, July 8-13, 2012).
145. \*C. Lovadina, T. Dokken, N. Cavallini, A. Reali, G. Sangalli, L. Morrone, G. Mirra, A. Buffa, *Injecting the Isogeometric paradigm into industrial applications: The TERRIFIC project*, 12th U.S. National Congress on Computational Mechanics (Raleigh, July 22-25, 2013).
146. \*A. Reali, H. Gomez, G. Sangalli, *Accurate, Efficient, and (Iso)geometrically Flexible Collocation Methods for Phase-Field Models*, 12th U.S. National Congress on Computational Mechanics (Raleigh, July 22-25, 2013).
147. \*A. Reali, F. Auricchio, L. Beirão da Veiga, H. Gomez, T.J.R. Hughes, G. Sangalli, *An Introduction to Isogeometric Collocation Methods with Some Applications*, Isogeometric Analysis 2014: Integrating Design and Analysis (Austin, January 8-10, 2014).
148. \*F. Auricchio, F. Brezzi, A. Lefieux, A. Reali, *Numerical Studies on the Stability of Mixed Finite Elements over Anisotropic Meshes Arising from Immersed-Interface Stokes Problems*, Advances in Computational Fluid-Structure Interaction and Flow Simulation (AFSI 2014) – A Conference Celebrating the 60th Birthday of Tayfun E. Tezduyar (Tokyo, March 19-21, 2014).
149. \*A. Reali, F. Auricchio, L. Beirão da Veiga, T.J.R. Hughes, G. Sangalli, *An introduction to isogeometric collocation methods*, SMART2014 – First International Conference on Subdivision, Geometric and Algebraic Methods, Isogeometric Analysis and Refinability in Tuscany (Pontignano, September 28-October 1, 2014).



150. \*A. Reali, L. Antiga, F. Auricchio, M.Conti, A. Lefieux, S. Morganti, R. Romarowski, F. Secchi, C. Trentin, S. Trimarchi, A. Veneziani, *Patient-specific CFD of aortic haemodynamics: Bringing cardiovascular virtual reality to clinical bedside practice*, The 18th International Conference on Finite Elements in Flow Problems – FEF2015 (Taipei, March 16-18, 2015).
151. \*A. Reali, T.J.R. Hughes, *Isogeometric Analysis: Structural Vibrations and Dynamics*, ESMC 2015 – 9th European Solid Mechanics Conference (Madrid, July 6-10, 2015).
152. \*A. Reali, F. Auricchio, M. Conti, M. Ferraro, T.J.R. Hughes, S. Morganti, R.L. Taylor, *Isogeometric Analysis applications in structural biomechanics involving complex geometries, explicit dynamics, large deformations, inelasticity, contact, and buckling*, COMPLAS XIII – XIII International Conference on Computational Plasticity. Fundamentals and Applications (Barcelona, September 1-3, 2015).
153. \*A. Reali, T.J.R. Hughes, *IGA collocation, aka “the ultimate reduced quadrature IGA method”: Some results, applications, and open problems*, HOFEIM 2016 – High-Order Finite Element and Isogeometric Methods, (Jerusalem, May 30-June 2, 2016).
154. \*F. Xu, M. C.-H. Wu, M.-C. Hsu, S. Morganti, A. Reali, F. Auricchio, J. Kiendl, D. Kamensky, *Fluid-Structure Interaction Analysis of patient-specific heart valves*, 7th European Congress on Computational Methods in Applied Sciences and Engineering (Crete, June 5-10, 2016).
155. \*A. Reali, T.J.R. Hughes, *IGA collocation: Results, applications, and open problems*, USACM Conference on Isogeometric and Meshfree Methods, (La Jolla, CA, October 10-12, 2016).
156. \*A. Reali, J.E. Dufour, P. Antolin, A. Patton, G. Sangalli, F. Auricchio, *A cost-effective isogeometric approach for composite plates based on a stress recovery procedure*, COMPLAS XIV – XIV International Conference on Computational Plasticity. Fundamentals and Applications (Barcelona, September 5-7, 2017).
157. \*A. Reali, J.E. Dufour, P. Antolin, A. Patton, G. Sangalli, J. Kiendl, F. Auricchio, *A cost-effective isogeometric approach for composite structures based on a stress recovery procedure*, ESMC 2018 – 10th European Solids Mechanics Conference (Bologna, July 2-6, 2018).
158. \*A. Reali, *Advanced isogeometric modeling of fluid-structure interaction problems*, ICOSAHOM 2018 – International Conference on Spectral and High Order Methods (London, July 9-13, 2018).
159. \*A. Reali, *Isogeometric simulation of structures: Recent advances with a focus on composites*, WCCM XIII-PANACM II – 13th World Congress on Computational Mechanics and 2nd Pan American Congress on Computational Mechanics (New York, July 23-27, 2018).
160. \*M. Coda, R.L. Taylor, A. Kamesnky, F. Auricchio, A. Reali, *Patient-Specific Vascular Modeling of Ageing Aortic Artery Using T-Splines*, Isogeometric Analysis 2018: Integrating Design and Analysis (Austin, October 10-12, 2018).
161. \*A. Reali, J.E. Dufour, P. Antolin, A. Patton, G. Sangalli, J. Kiendl, F. Auricchio, *Cost-Effective Isogeometric Analysis of Composite Structures by an Equilibrium Based Stress-Recovery Approach*, Isogeometric Analysis 2018: Integrating Design and Analysis (Austin, October 10-12, 2018).
162. \*A. Reali, *Advanced modeling and applications of Isogeometric Analysis with a focus on shells and laminates*, COMPLAS XV – XV International Conference on Computational Plasticity. Fundamentals and Applications (Barcelona, September 3-5, 2019).
163. \*A. Reali, A. Patton, P. Antolin, J. Kiendl, *Advanced isogeometric modeling of shells with a special focus on laminates*, COMPLAS XVI – XVI International Conference on Computational Plasticity. Fundamentals and Applications (Barcelona, September 7-9, 2021).
164. \*A. Reali, *Some recent advances in Isogeometric Analysis with a focus on structural applications*, ESMC 2022 – 11th European Solid Mechanics Conference (Galway, July 4-8, 2022).
165. \*A. Reali, *Advanced isogeometric simulations for biomedical problems*, IGA 2022: Isogeometric Methods – Integrating Design and Analysis (Banff, November 6-9, 2022).

### Lectures at national conferences (\* = invited):

166. F. Auricchio, A. Reali, *Modellazione 3D del Comportamento Macroscopico di Leghe a Memoria di Forma Soggette a Carichi Ciclici*, GMA07: I Riunione del Gruppo Materiali AIMETA (Trento, February 23-24, 2007).
167. A. Reali, F. Auricchio, L. Beirão da Veiga, A. Buffa, C. Lovadina, G. Sangalli, *Un'introduzione alla Isogeometric Analysis*, XVII Convegno Nazionale di Meccanica Computazionale (Alghero, September 10-12, 2008).
168. \*T.J.R. Hughes, A. Reali, G. Sangalli, *Duality and Unified Analysis of Discrete Approximations in Structural Dynamics and Wave Propagation: Comparison of p-method Finite Elements with k-method NURBS*, IX Congresso della Società Italiana di Matematica Applicata (Roma, September 15-19, 2008).

169. F. Auricchio, M. Conti, S. Morganti, A. Reali, U. Stefanelli, *A Phenomenological Model for Shape Memory Alloys: Parameter Identification, Experimental Validation and Simulation of Devices*, GMA09: III Riunione del Gruppo Materiali AIMETA (Milano, January 23-24, 2009).
170. \*A. Reali, F. Auricchio, L. Beirão da Veiga, T.J.R. Hughes, G. Sangalli, *Isogeometric collocation methods: applications to elastostatics and explicit elastodynamics*, XXI Congresso AIMETA (Torino, September 17-20, 2013).
171. A. Reali, F. Auricchio, L. Beirão da Veiga, H. Gomez, T.J.R. Hughes, G. Sangalli, *A basic introduction to isogeometric collocation methods with some applications*, GIMC-GMA 2014 – XX Italian National Conference of Computational Mechanics and VII Italian Meeting on Advances in Mechanics of Materials (Cassino, June 11-13, 2014).
172. \*A. Reali, F. Auricchio, M. Conti, M. Ferraro, T.J.R. Hughes, S. Morganti, R.L. Taylor, *Isogeometric analysis: Advanced structural biomechanics applications*, XXII Congresso AIMETA (Genova, September 14-15, 2015).
173. A. Reali, T.J.R. Hughes, *Isogeometric collocation: Results, applications, and open problems*, GIMC-GMA 2016 – XXI Convegno Nazionale di Meccanica Computazionale and VIII Riunione del Gruppo Materiali AIMETA (Lucca, June 27-29, 2016).
174. A. Reali, *Advanced modeling and applications of isogeometric shells*, GIMC-GMA 2018 – XXII Convegno Nazionale di Meccanica Computazionale and IX Riunione del Gruppo Materiali AIMETA (Ferrara, 13-14 Settembre, 2018).
175. \*A. Reali, *Some recent advances and applications in Isogeometric Analysis*, XXV Congresso AIMETA (Palermo, September 5-8, 2022).

## Seminars and lectures (coauthor)

### Invited seminars or lectures at internationally renowned institutions:

176. T.J.R. Hughes, Y. Bazilevs, V.M. Calo, J.A. Cottrell, A. Reali, *Isogeometric Analysis: Applications to Structures and Fluids*, Office of Naval Research Joint Review (Arlington, April 18-22, 2005).
177. J.A. Cottrell, T.J.R. Hughes, A. Reali, G. Sangalli, *Isogeometric Discretizations in Structural Dynamics and Wave Propagation*, within the series of the ROSE School Individual Talks, organized by the ROSE School and EUCENTRE (Pavia, September 26, 2007).
178. A. Reali, G. Sangalli, *Isogeometric discretizations in structural dynamics and wave propagation problems (Part I)*, within the Short Course on Advanced Computational Methods in Earthquake Engineering and Engineering Seismology organized by the ROSE School (Pavia, March 14, 2008).
179. R. Vázquez, A. Reali, C. de Falco, *GeoPDEs: an Octave/Matlab software for research on IGA*, IsoGeometric Analysis: a New Paradigm in the Numerical Approximation of PDEs, a workshop organized at the Centro Internazionale Matematico Estivo “Roberto Conti” (Fondazione CIME) (Cetraro, June 18-22, 2012).
180. F. Auricchio, M. Conti, M. Ferraro, S. Morganti, A. Reali, *Constitutive modeling of advanced materials and computational mechanics*, EASN meeting (Ancona, April 2, 2012).
181. A. Buffa, G. Sangalli, A. Reali, F.X. Roux, I. Wander, D. Benoualid, *Research perspectives in isogeometric analysis*, MATHIAS 2013 – 13th TOTAL Symposium on Mathematics, organized by Total (Paris, October 23-25, 2013).
182. M.-C. Hsu, D. Kamensky, C. Wang, D. Schillinger, J.A. Evans, J. Kiendl, A. Reali, Y. Bazilevs, M.S. Sacks, T.J.R. Hughes, *Isogeometric fluid-structure interaction analysis of bioprosthetic heart valves*, seminar at the University of Pavia (Pavia, July 10, 2014).
183. R. Hiemstra, A. Reali, T.J.R. Hughes, *High Order Explicit Structural Dynamics with IsoGeometric Collocation (Part I)*, seminar at the University of Pavia (Pavia, June 16, 2015).
184. P. Antolin, A. Buffa, G. Sangalli, A. Reali, J. Kiendl, M. Martinelli, M. Pingaro, I. Wander, D. Benoualid, *An isogeometric solid shell element for large strain problems*, MATHIAS 2015 – 15th TOTAL Symposium on Mathematics, organized by Total (Paris, October 28-30, 2015).
185. P. Antolin, J. E. Dufour, A. Buffa, G. Sangalli, A. Reali, F. Auricchio, D. Benoualid, I. Wander, M. Pallud, *Composites and fibered materials: the isogeometric approach*, MATHIAS 2016 – 16th TOTAL Symposium on Mathematics, organized by Total (Paris, October 26-28, 2016).
186. G. Lorenzo, T.J.R. Hughes, A. Reali, H. Gomez, *Organ-scale, patient-specific computational modeling of prostate cancer*, workshop on Advanced Computational Modeling for Tumor Growth Prediction, Institute for Advanced Study of the Technical University of Munich (Munich, September 24-25, 2018).
187. S. Manenti, N. Salis, A. Reali, *Ocean wave generation in a flume and impact with scale offshore structure*, within the workshop “XFAST-SIMS: Extra fast and accurate simulation of complex structural systems” organized at Sapienza Università di Roma (Roma, September 2-3, 2021).

188. M. Torre, S. Morganti, A. Nitti, M.D. De Tullio, F. Pasqualini, A. Reali, *Isogeometric approach for electromechanical simulations of the cardiac tissue*, within the workshop “XFAST-SIMS: Extra fast and accurate simulation of complex structural systems” organized at Sapienza Università di Roma (Roma, September 2-3, 2021).
189. A. Nitti, A. Tirri, J. Kiendl, A. Reali, M.D. de Tullio, *An immersed-boundary/isogeometric method for fluid-structure interaction involving thin shells*, within the workshop “XFAST-SIMS: Extra fast and accurate simulation of complex structural systems” organized at Sapienza Università di Roma (Roma, September 2-3, 2021).
190. A. Nitti, J. Kiendl, A. Gizzi, A. Reali, M.D. de Tullio, *An isogeometric method for modeling the excitation-contraction of a thin cardiac tissue*, within the workshop “XFAST-SIMS: Extra fast and accurate simulation of complex structural systems” organized at Sapienza Università di Roma (Roma, September 2-3, 2021).
191. F. Pasqualini, A. Reali, *Nuovi valori aggiunti dell'ingegneria in clinica – parte II* (New added-values of engineering in clinic – part II), within the Executive Master in Management strategico e Leadership delle Organizzazioni Sanitarie - EMMLOS (Pavia, March 6, 2022).
192. M. Alvaro, A. Reali, *ERC: Not a kind of magic – part I*, nell’ambito del Dottorato in Scienze e Tecnologie per Ambiente e Territorio dell’Università degli Studi di Genova (Genova, March 25, 2022).
193. G. Lorenzo, C. Wu, J.P. Yung, J.F. Ward, H. Gomez, A. Reali, T.E. Yankeelov, A.M. Venkatesan, T.J.R. Hughes, *Patient-specific computational models to forecast prostate cancer growth*, 3rd Annual Research Retreat in Oncological Data and Computational Sciences (Austin, TX, November 9, 2022).
194. T. Burchner, P. Kopp, S. Kollmannsberger, E. Rank, L. Radtke, W. Garhuom, A. Düster, M. Torre, G. Sangalli, A. Reali, P. Marter, F. Duvigneau, D. Juhre, *Immersed explicit dynamics: largest eigenvalues, lumping schemes, applications*, Winterseminar of the Chair of Computational Modeling and Simulation (Blaiachach, March 13, 2023).

### Plenary or keynote lectures:

195. F. Auricchio, A. Reali, *A One-Dimensional Model Describing Stress-Induced Solid Phase Transformation with Residual Plasticity*, II ECCOMAS Thematic Conference on Smart Structures and Materials, **Plenary Lecture** (Lisbon, July 18-21, 2005).
196. J.A. Cottrell, A. Reali, Y. Bazilevs, T.J.R. Hughes, *Computational Geometry and the Analysis of Solids and Structures*, III European Conference on Computational Mechanics, **Plenary Lecture** (Lisbon, June 5-6, 2006).
197. T.J.R. Hughes, J.A. Cottrell, Y. Bazilevs, A. Reali, *Computational Geometry as a Basis for Computational Structures Technology: a Look into the Future*, Eight International Conference on Computational Structures Technology, **Plenary Lecture** (Las Palmas de Gran Canaria, September 12-15, 2006).
198. F. Auricchio, A. Reali, U. Stefanelli, *Modeling and numerical solutions for shape-memory materials*, MFO Workshop, Analysis and Numerics for Rate-Independent Processes, **Keynote Lecture** (Oberwolfach, February 25-March 3, 2007).
199. J.A. Cottrell, T.J.R. Hughes, A. Reali, G. Sangalli, *Isogeometric Discretizations in Structural Dynamics and Wave Propagation*, COMPDYN 2007 – Computational Methods in Structural Dynamics and Earthquake Engineering, **Plenary Lecture** (Crete, June 13-16, 2007).
200. F. Auricchio, A. Reali, U. Stefanelli, *A phenomenological 1D model describing stress-induced and magnetic solid phase transformations*, 9th U.S. National Congress on Computational Mechanics, **Keynote Lecture** (San Francisco, July 23-26, 2007).
201. F. Auricchio, A. Reali, *Shape-memory alloys: effective 3D modeling, computational aspects and micro-device design*. CIMTEC 2008 3<sup>rd</sup> International Conference on Smart Materials, Structures, Systems, **Keynote Lecture** (Acireale, June 8-13, 2008).
202. F. Auricchio, L. Beirão da Veiga, C. Lovadina, A. Reali, A. Buffa, G. Sangalli, *On the stability of finite element schemes for finite strain incompressible elasticity*, 8th World Congress on Computational Mechanics and 5th European Congress on Computational Methods in Applied Sciences and Engineering, **Semi-Plenary Lecture** (Venezia, June 30-July 4, 2008).
203. Y. Bazilevs, V.M. Calo, J.A. Cottrell, T.J.R. Hughes, A. Reali, G. Scovazzi. *Residual-driven Variational Multiscale Turbulence Modeling for Large Eddy Simulation of Incompressible Flow*, 1st Workshop on Computational Engineering: Fluid Dynamics, **Semi-Plenary Lecture** (Lisbon, July 10-11, 2008).
204. Y. Bazilevs, V.M. Calo, J.A. Cottrell, T.J.R. Hughes, A. Reali, G. Scovazzi. *Variational Multiscale Residual-Drive Turbulence Modeling for Large Eddy Simulation of Incompressible Flows*, ERCOFTAC Workshop, Direct and Large-Eddy Simulation 7, **Keynote Plenary Lecture** (Trieste, September 8-10, 2008).
205. Y. Bazilevs, V.M. Calo, J.A. Cottrell, T.J.R. Hughes, A. Reali, G. Scovazzi. *Variational Multiscale Residual-based Turbulence Modeling for Large Eddy Simulation of Incompressible Flows*, 15th International Conference on Finite Elements in Flow Problems - FEF09, **Keynote Plenary Lecture** (Tokyo, April 1-3, 2009).

206. T.J.R. Hughes, A. Reali, G. Sangalli, *Isogeometric Methods in Structural Dynamics and Wave Propagation*, COMPDYN 2009 – Computational Methods in Structural Dynamics and Earthquake Engineering, **Plenary Lecture** (Rohdes, June 22-24, 2009).
207. F. Auricchio, M. Conti, S. Morganti, A. Reali, U. Stefanelli, *Shape-memory alloys: effective 3D modeling, computational aspects and biomedical device analysis*, 2nd South East Conference on Computational Mechanics, **Semi-Plenary Lecture** (Rohdes, June 22-24, 2009).
208. F. Auricchio, L. Beirão da Veiga, C. Lovadina, A. Reali, A. Buffa, G. Sangalli, *The importance of the exact satisfaction of the incompressibility constraint in nonlinear elasticity: Mixed FEMs versus NURBS-based approximations*, 10th U.S. National Congress on Computational Mechanics, **Keynote Lecture** (Columbus, July 16-19, 2009).
209. J. Arghavani, F. Auricchio, R. Naghdabadi, A. Reali, *On the constitutive modeling and numerical implementation of shape memory alloys under multiaxial loadings - Part I: constitutive model development at small and finite strains*, School and Symposium on Smart Structural Systems Technologies, **Keynote Lecture** (Porto, April 5-9, 2010).
210. F. Auricchio, J. Arghavani, M. Conti, S. Morganti, A. Reali, U. Stefanelli, *Shape-memory alloys: effective 3D modeling, computational aspects and biomedical device analysis*, IV European Conference on Computational Mechanics, **Semi-Plenary Lecture** (Paris, May 16-21, 2010).
211. A. Asprone, F. Auricchio, A. Reali, *Elasticity and elasto-plasticity 2D problems addressed via a novel finite particle formulation*, COMPDYN 2011 – 3rd International Conference on Computational Methods in Structural Dynamics & Earthquake Engineering, **Keynote Lecture** (Corfu, May 25-28, 2011).
212. J. Arghavani, F. Auricchio, R. Naghdabadi, A. Reali, *Toward an efficient integration algorithm: Logarithmic versus exponential mapping*, Complas XI – XI International Conference on Computational Plasticity, **Keynote Lecture** (Barcelona, September 7-9, 2011).
213. F. Auricchio, E. Bonetti, M. Conti, S. Morganti, A. Reali, G. Scalet, M. Aiello, A. Valentini, *Shape-Memory Alloys: 3D Constitutive Modeling and Biomedical Device Investigation*, 8th European Solid Mechanics Conference, **Plenary Lecture** (Graz, July 9-13, 2012).
214. F. Auricchio, L. Beirão da Veiga, C. Lovadina, A. Reali, R.L. Taylor, P. Wriggers, *Approximations of incompressible large deformation elastic problems: some unresolved issues!*, 6th European Congress on Computational Methods in Applied Sciences and Engineering, **Semi-Plenary Lecture** (Vienna, September 10-14, 2012).
215. F. Auricchio, M. Conti, M. Ferraro, S. Morganti, A. Reali, *Patient-Specific Finite Element Analysis of SMA-Based Cardiovascular Implants*, SMST 2013 – Shape Memory and Superelastic Technologies, **Keynote Lecture** (Prague, May 20-24, 2013).
216. S. Kollmannsberger, A. Reali, A. Özcan, M. Ruess, J. Baiges, E. Rank, *Parameter free weak boundary and coupling conditions for IGA*, SEECM III – South-East Conference on Computational Mechanics & COMPDYN 2013 – Computational Methods in Structural Dynamics and Earthquake Engineering, **Keynote Lecture** (Kos, June 12-14, 2013).
217. F. Auricchio, A. Lefieux, A. Reali, *On strong imposition of Dirichlet boundary conditions in unfitted finite element methods with application to fluid dynamics*, V Conference on Computational Methods for Coupled Problems in Science and Engineering – COUPLED 2013, **Keynote Lecture** (Ibiza, June 17-19, 2013).
218. J. Kiendl, F. Auricchio, T.J.R. Hughes, A. Reali, *Isogeometric one-parameter formulations for shear deformable structures*, WCCM-ECCM-ECFD2014 – 11th World Congress on Computational Mechanics, 5th European Conference on Computational Methods, and 6th European Conference on Computational Fluid Dynamics, **Keynote Lecture** (Barcelona, July 20-25, 2014).
219. L. De Lorenzis, J.A. Evans, T.J.R. Hughes, A. Reali, *Recent developments of isogeometric collocation: Neumann boundary conditions, contact and plasticity formulations*, WCCM-ECCM-ECFD2014 – 11th World Congress on Computational Mechanics, 5th European Conference on Computational Methods, and 6th European Conference on Computational Fluid Dynamics, **Keynote Lecture** (Barcelona, July 20-25, 2014).
220. D. Asprone, F. Auricchio, A. Montanino, A. Reali, *The Modified Finite Particle Method for incompressible solids and fluids*, Conference on SPH and Particular Methods for Fluids and Fluid Structure Interaction, **Plenary Keynote Lecture** (Lille, January 21-22, 2015).
221. 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, **Keynote Lecture** (Madrid, July 6-10, 2015).
222. J. Kiendl, L. Heltai, A. Reali, A. DeSimone, *A Natural Framework for Isogeometric Fluid-Structure-Interaction: Coupling BEM and Shell Models*, 13th U.S. National Congress on Computational Mechanics, **Keynote Lecture** (San Diego, July 27-30, 2015).

223. E. Rank, M. Elhaddad, D. D'Angella, S. Kollmannsberger, L. Kudela, A. Özcan, N. Zander, A. Reali *Do imprecise geometries and flawed CAD-models contradict adaptive Finite Elements?*, WCCM XII & APCOM VI – 12th World Congress on Computational Mechanics and 6th Asian Pacific Congress on Computational Mechanics, **Keynote Lecture** (Seoul, July 24-29, 2016).

### Lectures at international conferences (\* = invited):

224. P. Venini, R. Nascimbene, A. Reali, *A Prewavelet Meshless Approach for Plane Inelastic Systems*, Fifth World Congress on Computational Mechanics (Vienna, July 7-12, 2002).
225. F. Auricchio, L. Beirão da Veiga, C. Lovadina, A. Reali, *Enhanced Strain Methods for Elasticity Problems*, Fourth European Congress on Computational Methods in Applied Sciences and Engineering (Jyväskylä, July 24-28, 2004).
226. \*J.A. Cottrell, T.J.R. Hughes, Y. Bazilevs, A. Reali, *Isogeometric Analysis: Exact Geometry and Accurate Analysis of Real Structures*, Eighth U.S. National Congress on Computational Mechanics (Austin, July 25-27, 2005).
227. \*J.A. Cottrell, T.J.R. Hughes, A. Reali, *Isogeometric Analysis: Refinement and Continuity*, Finite Element Rodeo (College Station, March 3-4, 2006).
228. F. Auricchio, L. Petrini, A. Reali, *Toward an Exhaustive Modeling of the Macroscopic Behaviour of Shape Memory Alloys*, III European Conference on Computational Mechanics (Lisbon, June 5-6, 2006).
229. \*T.J.R. Hughes, J.A. Cottrell, Y. Bazilevs, A. Reali, *A Lecture on  $k$ -refinement in Isogeometric Analysis in Honor of Professor Erwin Stein*, 7th World Congress on Computational Mechanics (Los Angeles, July 16-22, 2006).
230. \*F. Auricchio, L. Petrini, A. Reali, *Modeling of SMA Devices under Cyclic Loading*, 7th World Congress on Computational Mechanics (Los Angeles, July 16-22, 2006).
231. \*F. Auricchio, L. Beirão da Veiga, A. Buffa, C. Lovadina, A. Reali, G. Sangalli, *A Fully Locking-free Isogeometric Approach for Plane Linear Elasticity Problems*, Colloquium Lagrangianum (Scilla, December 7-10, 2006).
232. \*T.J.R. Hughes, A. Reali, G. Sangalli, *Discrete Approximations in Structural Dynamics and Wave Propagation:  $p$ -FEM vs.  $k$ -NURBS - Part I*, 9th U.S. National Congress on Computational Mechanics (San Francisco, July 23-26, 2007).
233. \*F. Auricchio, L. Beirão da Veiga, A. Buffa, C. Lovadina, A. Reali, G. Sangalli, *A fully locking-free isogeometric approach for linear elasticity*, 9th U.S. National Congress on Computational Mechanics (San Francisco, July 23-26, 2007).
234. \*F. Auricchio, L. Beirão da Veiga, C. Lovadina, A. Reali, *Stability of some Galerkin schemes for large deformation elastic problems*, 9th U.S. National Congress on Computational Mechanics (San Francisco, July 23-26, 2007).
235. \*F. Auricchio, A. Reali, U. Stefanelli, *A phenomenological 1D model describing main and secondary effects of stress-induced solid phase transformations*, 2007 European Materials Research Society Fall Meeting (Warsaw, September 17-21, 2007).
236. \*Y. Bazilevs, V.M. Calo, J.A. Cottrell, T.J.R. Hughes, A. Reali, G. Scovazzi, *Variational Multiscale Residual-driven Turbulence Modeling for Large Eddy Simulation of Incompressible Flow*, ECCOMAS Thematic Conference on Multiscale Computational Methods for Solids and Fluids (Cachan, November 28-30, 2007).
237. F. Auricchio, A. Coda, A. Reali, M. Urbano, *SMA numerical modeling versus experimental results: parameter identification and model prediction capabilities*, Shape Memory and Superelastic Technologies (SMST) (Stresa, September 21-25, 2008).
238. \*T.J.R. Hughes, A. Reali, G. Sangalli, *Efficient Quadrature for NURBS-based Isogeometric Analysis*, 15th International Conference on Finite Elements in Flow Problems (Tokyo, April 1-3, 2009).
239. \*T.J.R. Hughes, A. Reali, G. Sangalli, *Efficient Quadrature for NURBS-based Isogeometric Analysis*, XIII Conference on the Mathematics of Finite Elements and Applications (London, June 9-12, 2009).
240. \*F. Auricchio, M. Conti, S. Morganti, A. Reali, U. Stefanelli, *Shape-memory alloys: effective 3D modelling, computational aspects and biomedical device analysis*, IUTAM Symposium on Multiscale Modelling of Fatigue, Damage and Fracture in Smart Materials Systems (Freiberg, September 1-4, 2009).
241. \*F. Auricchio, M. Conti, S. Morganti, A. Reali, *A discussion of SMA beams under flexure exploiting the shape-memory effect*, Complas X – X International Conference on Computational Plasticity (Barcelona, September 2-4, 2009).
242. \*J. Arghavani, F. Auricchio, R. Naghdabadi, A. Reali, *On the constitutive modeling and numerical implementation of shape memory alloys under multiaxial loadings - Part II: numerical implementation and simulations*, School and Symposium on Smart Structural Systems Technologies (Porto, April 5-9, 2010).

243. J. Arghavani, F. Auricchio, A. Reali, S. Sohrabpour, *A class of shape memory alloy constitutive models based on a new set of internal variables*, ISME2010 – 18<sup>th</sup> Annual International Conference on Mechanical Engineering (Tehran, May 11-13, 2010).
244. J. Arghavani, F. Auricchio, R. Naghdabadi, A. Reali, *A finite strain SMA constitutive model: comparison of small and finite strain formulations*, ISME2010 – 18<sup>th</sup> Annual International Conference on Mechanical Engineering (Tehran, May 11-13, 2010).
245. \*F. Auricchio, L. Beirão da Veiga, T.J.R. Hughes, A. Reali, G. Sangalli, *Isogeometric Collocation Methods*, IV European Conference on Computational Mechanics (Paris, May 16-21, 2010).
246. R. Naghdabadi, J. Arghavani, F. Auricchio, A. Reali, S. Sohrabpour, *Computational Issues in Finite Strain SMA Modeling: Constitutive Modeling Approach Aspect*, IV European Conference on Computational Mechanics (Paris, May 16-21, 2010).
247. F. Auricchio, J. Arghavani, M. Conti, S. Morganti, A. Reali, U. Stefanelli, *Shape-memory alloys: effective 3D modeling, computational aspects and analysis of actuator and biomedical devices*, ACTUATOR10 - International Conference and Exhibition on New Actuators and Drive Systems (Bremen, June 14-16, 2010).
248. R. Naghdabadi, J. Arghavani, F. Auricchio, A. Reali, S. Sohrabpour, *An efficient, non-regularized solution algorithm for a finite strain shape memory alloy constitutive model*, ESDA 2010 – 10<sup>th</sup> Biennial Conference on Engineering Systems Design and Analysis (Istanbul, July 12-14, 2010). (Paris, 16-21 Maggio, 2010).
249. C. de Falco, A. Reali, R. Vázquez, *GeoPDEs: a research tool for Isogeometric Analysis of PDEs. Part I: Description of the design*, Isogeometric Analysis 2011: Integrating Design and Analysis (Austin, January 13-15, 2010).
250. C. de Falco, A. Reali, R. Vázquez, *GeoPDEs: a research tool for Isogeometric Analysis of PDEs. Part II: Applications and extensions*, Isogeometric Analysis 2011: Integrating Design and Analysis (Austin, January 13-15, 2010).
251. F. Auricchio, T.J.R. Hughes, S. Morganti, A. Reali, *An Application of Isogeometric Analysis in the Biomedical Field of Cardiovascular Mechanics*, Isogeometric Analysis 2011: Integrating Design and Analysis (Austin, January 13-15, 2010).
252. F. Auricchio, M. Conti, A. Ferrara, S. Morganti, A. Reali, *Patient-specific finite element analysis of carotid artery stenting: impact of constitutive vessel modeling on vessel wall stress distribution*, 2nd International Conference on Computational & Mathematical Biomedical Engineering (Washington, March 30-April 1, 2011).
253. \*F. Auricchio, J. Arghavani M. Conti, S. Morganti, A. Reali, U. Stefanelli, *Recent developments on the 3D modeling of SMA*, 11th International Conference on the Mechanical Behavior of Materials (Como, June 5-9, 2011).
254. \*F. Auricchio, F. Calabrò, T.J.R. Hughes, A. Reali, G. Sangalli, *An Efficient Quadrature Strategy for NURBS-based Isogeometric Analysis*, 11th U.S. National Congress on Computational Mechanics (Minneapolis, July 25-29, 2011).
255. F. Auricchio, L. Beirão da Veiga, C. Lovadina, A. Reali, R.L. Taylor, P. Wriggers, *Approximations for incompressible large deformation elastic problems: some unresolved issues!*, ECCOMAS Special Interest Conference on Trends & Challenges in Computational Mechanics (Padova, September 12-14, 2011).
256. \*F. Auricchio, S. Hartmann, T.J.R. Hughes, S. Morganti, A. Reali, *An Application of Isogeometric Analysis in the Biomedical Field of Heart Valve Mechanics*, 2nd International Conference on Computational Engineering (Darmstadt, October 4-6, 2011).
257. M. Conti, F. Auricchio, A. Reali, *Carotid Artery Stenting simulation: from medical images to finite element analysis*, YIC2012 – ECCOMAS Young Investigators Conference (Aveiro, April 24-27, 2012).
258. J. Kiendl, R. Wuechner, K.-U. Bletzinger, A. Reali, *Isogeometric Shell Analysis and Shape Optimization*, YIC2012 – ECCOMAS Young Investigators Conference (Aveiro, April 24-27, 2012).
259. M. Conti, F. Auricchio, R. Dore, A. Odero, S. Pirrelli, P. Quaretti, A. Reali, *Simulation of carotid artery stenting: from patient-specific analysis to medical practice*, ESB2012 – the 18th Congress of the European Society of Biomechanics (Lisbon, July 1-4, 2012).
260. \*J. Kiendl, F. Auricchio, L. Beirão da Veiga, C. Lovadina, A. Reali, *Isogeometric collocation methods for spatial Timoshenko beams*, 6th European Congress on Computational Methods in Applied Sciences and Engineering, (Vienna, September 10-14, 2012).
261. \*F. Auricchio, S. Hartmann, T.J.R. Hughes, S. Morganti, A. Reali, *An isogeometric analysis approach to model the aortic valve behavior*, 6th European Congress on Computational Methods in Applied Sciences and Engineering, (Vienna, September 10-14, 2012).
262. \*F. Auricchio, M. Conti, M. Ferraro, A. Reali, *Evaluation of carotid stent scaffolding through patient-specific finite element analysis*, 6th European Congress on Computational Methods in Applied Sciences and Engineering, (Vienna, September 10-14, 2012).

263. \*F. Auricchio, F. Calabrò, T.J.R. Hughes, A. Reali, G. Sangalli, *Quadrature rules for NURBS-based isogeometric analysis*, 6th European Congress on Computational Methods in Applied Sciences and Engineering, (Vienna, September 10-14, 2012).
264. A. Lefieux, F. Auricchio, D. Boffi, L. Gastaldi, A. Reali, *Some issues in unfitted methods and possible solutions: with applications to fluid dynamics problems*, 6th European Congress on Computational Methods in Applied Sciences and Engineering, (Vienna, September 10-14, 2012).
265. \*J. Kiendl, F. Auricchio, L. Beirão da Veiga, C. Lovadina, A. Reali, *Isogeometric collocation methods for spatial Timoshenko beams*, Advances in Computational Mechanics – A Conference Celebrating the 70th Birthday of Thomas J.R. Hughes (San Diego, February 24-27, 2013).
266. \*D. Schillinger, J.A. Evans, M.A. Scott, A. Reali, T.J.R. Hughes, *An adaptive isogeometric collocation method based on local hierarchical refinement of NURBS*, Advances in Computational Mechanics – A Conference Celebrating the 70th Birthday of Thomas J.R. Hughes (San Diego, February 24-27, 2013).
267. \*F. Auricchio, S. Hartmann, T.J.R. Hughes, S. Morganti, A. Reali, *Isogeometric modeling of the structural behavior of patient-specific aortic valves*, Advances in Computational Mechanics – A Conference Celebrating the 70th Birthday of Thomas J.R. Hughes (San Diego, February 24-27, 2013).
268. \*F. Auricchio, M. Conti, M. Ferraro, A. Reali, *Patient-specific isogeometric analysis for vascular biomechanics using FEAP*, Advances in Computational Mechanics – A Conference Celebrating the 70th Birthday of Thomas J.R. Hughes (San Diego, February 24-27, 2013).
269. \*J.F.M. Caseiro, R.A.F. Valente, A. Reali, R. Vázquez, F. Auricchio, R.J.A. Sousa, *An assessment of locking effects in isogeometric formulations*, Advances in Computational Mechanics – A Conference Celebrating the 70th Birthday of Thomas J.R. Hughes (San Diego, February 24-27, 2013).
270. \*F. Auricchio, L. Beirão da Veiga, J. Kiendl, C. Lovadina, A. Reali, *Locking-free mixed collocation isogeometric methods for 1D thin structures*, Advances in Computational Mechanics – A Conference Celebrating the 70th Birthday of Thomas J.R. Hughes (San Diego, February 24-27, 2013).
271. J. Kiendl, F. Auricchio, L. Beirão da Veiga, C. Lovadina, A. Reali, *Isogeometric Collocation Methods for Thin Structures*, 84th Annual Scientific Conference of the International Association of Applied Mathematics and Mechanics (Novi Sad, March 18-22, 2013).
272. D. Schillinger, J.A. Evans, A. Reali, M.A. Scott, T.J.R. Hughes, *Isogeometric Collocation: Cost Comparison with Galerkin Methods and Extension to Adaptive Hierarchical NURBS Discretizations*, 84th Annual Scientific Conference of the International Association of Applied Mathematics and Mechanics (Novi Sad, March 18-22, 2013).
273. \*J. Kiendl, F. Auricchio, L. Beirão da Veiga, C. Lovadina, A. Reali, *Isogeometric Collocation Methods for Thin Structures*, SEECCM III – South-East Conference on Computational Mechanics & COMPDYN 2013 – Computational Methods in Structural Dynamics and Earthquake Engineering (Kos, June 12-14, 2013).
274. \*F. Auricchio, D.J. Benson, S. Hartmann, T.J.R. Hughes, S. Morganti, A. Reali, *An isogeometric analysis approach to model of the aortic valve behavior*, SEECCM III – South-East Conference on Computational Mechanics & COMPDYN 2013 – Computational Methods in Structural Dynamics and Earthquake Engineering (Kos, June 12-14, 2013).
275. \*F. Auricchio, M. Conti, M. Ferraro, A. Reali, *Isogeometric modelling of carotid artery stenting: A comparison with classic finite element approach*, SEECCM III – South-East Conference on Computational Mechanics & COMPDYN 2013 – Computational Methods in Structural Dynamics and Earthquake Engineering (Kos, June 12-14, 2013).
276. \*F. Auricchio, V.M. Calo, M. Conti, N. Collier, A. Reali, *B-spline surface mapping to describe aorta kinematics during cardiac cycle*, SEECCM III – South-East Conference on Computational Mechanics & COMPDYN 2013 – Computational Methods in Structural Dynamics and Earthquake Engineering (Kos, June 12-14, 2013).
277. \*L. De Lorenzis, J.A. Evans, T.J.R. Hughes, A. Reali, *An isogeometric collocation approach for contact*, ICCCM 2013 – III International Conference on Computational Contact Mechanics (Lecce, July 10-12, 2013).
278. F. Auricchio, M. Conti, S. Marconi, A. Reali, J.L. Tolenaar, S. Trimarchi, *Patient-specific aortic endografting simulation: from diagnosis to prediction*, 19th Congress of the European Society of Biomechanics (Patras, August 25-28, 2013).
279. S. Morganti, F. Auricchio, M. Conti, A. Reali, *Patient-specific finite element analysis of transcatheter aortic valve implantation*, YIC2013 – 2nd ECCOMAS Young Investigators Conference (Bordeaux, September 2-6, 2013).
280. J. Kiendl, F. Auricchio, L. Beirão da Veiga, C. Lovadina, A. Reali, *Innovative isogeometric formulations for shear deformable beams and plates*, YIC2013 – 2nd ECCOMAS Young Investigators Conference (Bordeaux, September 2-6, 2013).

281. F. Auricchio, M. Conti, M. Ferraro, S. Morganti, A. Reali, *Patient-specific isogeometric analysis for vascular biomechanics*, YIC2013 – 2nd ECCOMAS Young Investigators Conference (Bordeaux, September 2-6, 2013).
282. F. Auricchio, M. Pingaro, A. Reali, G. Sciarra, P. Venini, S. Vidoli, *Isogeometric analysis for anti-plane fracture problems*, YIC2013 – 2nd ECCOMAS Young Investigators Conference (Bordeaux, September 2-6, 2013).
283. \*A. Özcan, M. Ruess, D. Schillinger, S. Kollmannsberger, A. Reali, E. Rank, *Weak coupling of trimmed patches in isogeometric analysis and the finite cell method*, 5th GACM Colloquium on Computational Mechanics (Hamburg, September 30-October 2, 2013).
284. \*S. Kollmannsberger, A. Özcan, J. Baiges, M. Ruess, A. Reali, E. Rank, *Parameter-free weak coupling of trimmed patches in Isogeometric Analysis*, APCOM2013 – 5th Asia Pacific Congress on Computational Mechanics & ISCM 2013 – 4th International Symposium on Computational Mechanics (Singapore, December 11-14, 2013).
285. \*L. De Lorenzis, J.A. Evans, T.J.R. Hughes, A. Reali, *Recent Developments of Isogeometric Collocation: Imposition of Neumann Boundary Conditions, Contact and Plasticity Formulations*, Isogeometric Analysis 2014: Integrating Design and Analysis (Austin, January 8-10, 2014).
286. \*S. Morganti, F. Auricchio, L. De Lorenzis, J.A. Evans, T.J.R. Hughes, A. Reali, *Isogeometric Collocation: Incompressible Elasticity, Locking, and Possible Solutions*, Isogeometric Analysis 2014: Integrating Design and Analysis (Austin, January 8-10, 2014).
287. \*J. Kiendl, F. Auricchio, T.J.R. Hughes, A. Reali, *A One-Parameter Isogeometric Formulation for Timoshenko Beams*, Isogeometric Analysis 2014: Integrating Design and Analysis (Austin, January 8-10, 2014).
288. \*J. Caseiro, R. Valente, A. Reali, J. Kiendl, F. Auricchio, R. Alves de Sousa, *Extending the Assumed Natural Strain Method to Isogeometric Analysis: A New NURBS-Based Solid-Shell Element*, Isogeometric Analysis 2014: Integrating Design and Analysis (Austin, January 8-10, 2014).
289. \*M. Conti, F. Auricchio, A. Lefieux, S. Morganti, A. Reali, T. Passerini, A. Veneziani, F. Secchi, S. Sardanelli, S. Trimarchi, *Aortic Hemodynamics Post Thoracic Endovascular Repair (TEVAR): a Focus on Birdbeak Drawback*, Advances in Computational Fluid-Structure Interaction and Flow Simulation (AFSI 2014) – A Conference Celebrating the 60th Birthday of Tayfun E. Tezduyar (Tokyo, March 19-21, 2014).
290. C. Lovadina, F. Auricchio, L. Beirão da Veiga, J. Kiendl, A. Reali, *Locking-Free Mixed Collocation Isogeometric Methods for Thin Structures*, IGAA 2014 – Isogeometric Analysis and Applications (Annweiler am Trifels, April 7-10, 2014).
291. L. De Lorenzis, J.A. Evans, T.J.R. Hughes, A. Reali, *Recent developments of isogeometric collocation: imposition of Neumann boundary conditions, contact and plasticity formulations*, IGAA 2014 – Isogeometric Analysis and Applications (Annweiler am Trifels, April 7-10, 2014).
292. N. Cavallini, P. Antolin, A. Buffa, C. Lovadina, M. Martinelli, S. Pauletti, A. Reali, G. Sangalli, *Igatools: an Object Oriented General Purpose Library for Isogeometric Spaces in Scientific Computing*, IGAA 2014 – Isogeometric Analysis and Applications (Annweiler am Trifels, April 7-10, 2014).
293. \*L. De Lorenzis, M. Ambati, J.A. Evans, T.J.R. Hughes, R. Kruse, N. Nguyen-Thanh, A. Reali, *Recent results on isogeometric collocation for the solution of non-linear problems*, HOFEIM 2014 – High-Order Finite Element and Isogeometric Methods (Munich, July 15-18, 2014).
294. \*J. Kiendl, F. Auricchio, T.J.R. Hughes, C. Lovadina, A. Reali, *One-parameter formulations for shear deformable structures*, HOFEIM 2014 – High-Order Finite Element and Isogeometric Methods (Munich, July 15-18, 2014).
295. \*S. Morganti, F. Auricchio, L. De Lorenzis, J.A. Evans, T.J.R. Hughes, A. Reali, *Isogeometric collocation: incompressible elasticity, locking and possible solutions*, WCCM-ECCM-ECFD2014 – 11th World Congress on Computational Mechanics, 5th European Conference on Computational Methods, and 6th European Conference on Computational Fluid Dynamics (Barcelona, July 20-25, 2014).
296. \*F. Auricchio, M. Conti, M. Ferraro, S. Morganti, A. Reali, *Isogeometric Analysis for the evaluation of Carotid Artery Stent performance*, WCCM-ECCM-ECFD2014 – 11th World Congress on Computational Mechanics, 5th European Conference on Computational Methods, and 6th European Conference on Computational Fluid Dynamics (Barcelona, July 20-25, 2014).
297. \*M. Ruess, A. Reali, S. Kollmannsberger, *Enforcing domain coupling & boundary constraints in isogeometric methods*, WCCM-ECCM-ECFD2014 – 11th World Congress on Computational Mechanics, 5th European Conference on Computational Methods, and 6th European Conference on Computational Fluid Dynamics (Barcelona, July 20-25, 2014).
298. \*A. Özcan, S. Kollmannsberger, J. Baiges, A. Reali, E. Rank, *Weak coupling of trimmed patches in isogeometric analysis and the Finite Cell Method*, WCCM-ECCM-ECFD2014 – 11th World Congress on Computational Mechanics, 5th European Conference on Computational Methods, and 6th European Conference on Computational Fluid Dynamics (Barcelona, July 20-25, 2014).



299. \*T. Hoang, A. Reali, F. Auricchio, C.V. Verhoosel, E.H. van Brummelen, *An isogeometric finite cell method for nearly incompressible linear elasticity and Stokes flow*, III International Conference on Isogeometric Analysis – IGA 2015 (Trondheim, June 1-3, 2015).
300. \*F. Auricchio, M. Conti, M. Ferraro, S. Morganti, A. Reali, C. Trentin, W. Zeni, *Patient-specific vascular models derived from medical images for IGA*, III International Conference on Isogeometric Analysis – IGA 2015 (Trondheim, June 1-3, 2015).
301. \*M. Ferraro, F. Auricchio, M. Conti, L. De Lorenzis, S. Morganti, A. Reali, R.L. Taylor, *Isogeometric-based Predictive Tools for The Evaluation of Carotid Stent Performance*, III International Conference on Isogeometric Analysis – IGA 2015 (Trondheim, June 1-3, 2015).
302. \*J. Kiendl, M-C. Hsu, A. Reali, *Isogeometric Kirchhoff-Love shell formulations for general hyperelastic materials*, III International Conference on Isogeometric Analysis – IGA 2015 (Trondheim, June 1-3, 2015).
303. \*H. Speleers, C. Garoni, T.J.R. Hughes, C. Manni, A. Reali, S. Serra-Capizzano, *Spectral Analysis and the Symbol of Matrices in IgA*, III International Conference on Isogeometric Analysis – IGA 2015 (Trondheim, June 1-3, 2015).
304. \*S. Morganti, L. De Lorenzis, J.A. Evans, T.J.R. Hughes, A. Reali, *Isogeometric collocation: mixed elasticity for plane strain problems*, III International Conference on Isogeometric Analysis – IGA 2015 (Trondheim, June 1-3, 2015).
305. A. Montanino D. Asprone A.Reali F. Auricchio, *Solution of stationary Stokes and Navier-Stokes problems using a Least Square Residual Method with a Modified Finite Particle Method*, 10th International Smoothed Particle Hydrodynamics European Research Interest Community (SPHERIC) Workshop (Parma, June 16-18, 2015).
306. \*C. Manni, A. Reali, H. Speleers, *Isogeometric Collocation Methods with Generalized B-splines*, ESMC 2015 – 9th European Solid Mechanics Conference (Madrid, July 6-10, 2015).
307. \*F. Auricchio, M. Conti, L. De Lorenzis, M. Ferraro, S. Morganti, A. Reali, R.L. Taylor, *Isogeometric-based Predictive Tools For The Evaluation Of Carotid Stent Performance*, ESMC 2015 – 9th European Solid Mechanics Conference (Madrid, July 6-10, 2015).
308. \*H. Speleers, C. Garoni, T.J.R. Hughes, C. Manni, A. Reali, S. Serra-Capizzano, *Analysis and Application of the Spectral Symbol of Matrices in IgA*, ESMC 2015 – 9th European Solid Mechanics Conference (Madrid, July 6-10, 2015).
309. \*J. Niiranen, S. Khakalo, V. Balobanov, B. Hosseini, A. Niemi, J. Kiendl, A. Reali, *Isogeometric analysis of gradient-elastic rods and membranes – as well as beams and plates*, ESMC 2015 – 9th European Solid Mechanics Conference (Madrid, July 6-10, 2015).
310. \*J.F. Caseiro, R.A.F. Valente, A. Reali, J. Kiendl, F. Auricchio, R.J. Alves de Sousa, *On the ANS method to alleviate locking pathologies in NURBS-based elements for nonlinear structural applications*, YIC GACM 2015 – 3rd ECCOMAS Young Investigators Conference and 6th GACM Colloquium (Aachen, July 20-23, 2015).
311. \*M. Ferraro, F. Auricchio, M. Conti, L. De Lorenzis, S. Morganti, A. Reali, R.L. Taylor, *Isogeometric-based Tools for the Evaluation of Carotid Artery Stent Performance*, YIC GACM 2015 – 3rd ECCOMAS Young Investigators Conference and 6th GACM Colloquium (Aachen, July 20-23, 2015).
312. \*S. Morganti, F. Auricchio, D. Benson, F.I. Gambarin, S. Hartmann, T.J.R. Hughes, A. Reali, *Isogeometric structural analysis of patient-specific aortic valve closure*, YIC GACM 2015 – 3rd ECCOMAS Young Investigators Conference and 6th GACM Colloquium (Aachen, July 20-23, 2015).
313. \*M. Conti, C. Long, A. Reali, Y. Bazilevs, F. Auricchio, *Carotid Artery Stenting Haemodynamics: A Patient-Specific CFD Analysis*, 13th U.S. National Congress on Computational Mechanics (San Diego, July 27-30, 2015).
314. \*L. Heltai, J. Kiendl, A. Reali, A. DeSimone, *A natural framework for isogeometric fluid-structure-interaction: coupling BEM and Shell models*, ICIAM 2015 – 8th International Congress on Industrial and applied Mathematics (Beijing, August 10-14, 2015).
315. F. Auricchio, M. Ferretti, A. Lefieux, M. Musci, A. Reali, S. Trimarchi, A. Veneziani *Assessment of a Black-box Approach for a Parallel Finite Elements Solver in Computational Hemodynamics*, PBio 2015 – Third International Workshop on Parallelism in Bioinformatics, within the 13th IEEE International Symposium on Parallel and Distributed Processing with Applications (IEEE ISPA-15) (Helsinki, August 20-22, 2015).
316. \*J.F. Caseiro, R.A.F. Valente, A. Reali, J. Kiendl, F. Auricchio, R.J. Alves de Sousa *A NURBS-based solid-shell element employing the Assumed Natural Strain Method for structural analysis in the nonlinear regime*, COMPLAS XIII – XIII International Conference on Computational Plasticity. Fundamentals and Applications (Barcelona, September 1-3, 2015).

317. \*D. Asprone, F. Auricchio, A. Montanino, A. Reali *A Solution of the stationary Stokes and Navier-Stokes equations using the modified finite particle method in the framework of a least square residual method*, PARTICLES 2015 – IV International Conference on Particle-Based Methods. Fundamentals and Applications. (Barcelona, September 28-30, 2015).
318. \*A. Lefieux, A. Veneziani, F. Auricchio, A. Reali *A locally anisotropic fluid-structure interaction remeshing strategy for thin solids with application to a hinged rigid leaflet*, The 40th SIAM Southeastern Atlantic Section Conference (SIAM-SEAS) (Athens GA, March 12-13, 2016).
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409. \*A. Patton, M. Carraturo, F. Auricchio, A. Reali, *Interlaminar stress modeling of composite Kirchhoff plates combining immersed Isogeometric Analysis and equilibrium*, 8th European Congress on Computational Methods in Applied Sciences and Engineering (Oslo, June 5-9, 2022).
410. \*G. Lorenzo, J.S. Heiselman, M.A. Liss, M.I. Miga, H. Gomez, T.E. Yankeelov, T.J.R. Hughes, A. Reali, *Personalized computational forecasting of prostate cancer growth during active surveillance*, 8th European Congress on Computational Methods in Applied Sciences and Engineering (Oslo, June 5-9, 2022).
411. \*S. Morganti, M. Torre, F. Fahrenndorf, L. De Lorenzis, J.A. Evans, T.J.R. Hughes, A. Reali, *Isogeometric collocation: A mixed displacement-pressure method for nearly incompressible elasticity in small and large deformations*, 8th European Congress on Computational Methods in Applied Sciences and Engineering (Oslo, June 5-9, 2022).
412. \*A. Patton, A. Marengo, L. Greco, M. Negri, A. Reali, U. Perego, *A rigorous framework to explicitly enforce damage irreversibility in finite element and isogeometric computations of phase-field brittle fracture*, 8th European Congress on Computational Methods in Applied Sciences and Engineering (Oslo, June 5-9, 2022).
413. \*M. Loibl, L. Leonetti, A. Reali, J. Kiendl, *Patch-wise Integration of Trimmed Surfaces*, 8th European Congress on Computational Methods in Applied Sciences and Engineering (Oslo, June 5-9, 2022).
414. \*M. Torre, S. Morganti, F. Pasqualini, A. Reali, *On the knotty effect of a single parameter on cardiac muscle simulations*, 8th European Congress on Computational Methods in Applied Sciences and Engineering (Oslo, June 5-9, 2022).
415. \*M. Carraturo, G. Alaimo, A. Reali, F. Auricchio, *Numerical and experimental characterization of 3D printed lattice structures*, 8th European Congress on Computational Methods in Applied Sciences and Engineering (Oslo, June 5-9, 2022).
416. \*S.C. Divi, C.V. Verhoosel, F. Auricchio, A. Reali, E.H. van Brummelen, *Numerical and experimental characterization of 3D printed lattice structures*, 8th European Congress on Computational Methods in Applied Sciences and Engineering (Oslo, June 5-9, 2022).
417. \*M. Torre, S. Morganti, A. Nitti, M. de Tullio, F.S. Pasqualini, A. Reali, *An efficient collocation method for cardiac muscle simulations*, 8th European Congress on Computational Methods in Applied Sciences and Engineering (Oslo, June 5-9, 2022).
418. \*A. Patton, P. Antolin, J.-E. Dufour, J. Kiendl, A. Reali, *An isogeometric equilibrium-based approach for accurate stress recovery in laminated structures*, ESMC 2022 – 11th European Solid Mechanics Conference (Galway, July 4-8, 2022).
419. \*M. Torre, S. Morganti, A. Nitti, M. de Tullio, F.S. Pasqualini, A. Reali, *Isogeometric collocation approach to cardiac muscle simulations*, ESMC 2022 – 11th European Solid Mechanics Conference (Galway, July 4-8, 2022).
420. H. Jafarzadeh, A. Patton, M. Negri, A. Reali, *J-integral consistent phase-field approach to fracture under compressive stresses*, MS2022 – 1st International Conference on Mechanics of Solids (Porto, 3-4 Novembre, 2022).

421. \*G. Lorenzo, T.J.R. Hughes, H. Gomez, T.E. Yankeelov, A. Reali, *Biomechanical interplay between benign prostatic hyperplasia and prostate cancer*, IGA 2022: Isogeometric Methods – Integrating Design and Analysis (Banff, November 6-9, 2022).

### Poster presentations at international conferences:

422. G. Attanasi, F. Auricchio, M. Conti, S. Morganti, A. Reali, U. Stefanelli, *Computational Methods and Advanced Materials: SMA Modeling and Applications*, Shape Memory and Superelastic Technologies (SMST) (Stresa, September 21-25, 2008).
423. G. Attanasi, F. Auricchio, M. Conti, S. Morganti, A. Reali, U. Stefanelli, *Computational Methods and Advanced Materials: Simulations of Biomedical Devices*, Shape Memory and Superelastic Technologies (SMST) (Stresa, September 21-25, 2008).
424. F. Auricchio, S. Morganti, A. Reali, M. Urbano, *Theoretical and experimental study of the shape memory effect of beams in bending conditions*, Shape Memory and Superelastic Technologies (SMST) (Pacific Grove, May 16-20, 2010).
425. F. Auricchio, L. Beirão da Veiga, T.J.R. Hughes, A. Reali, G. Sangalli, *Isogeometric Collocation Techniques for Static and Dynamic Elasticity Problems*, HOFEIM 2011 – High-Order Finite Element and Isogeometric Methods (Krakow, June 27-29, 2011).
426. F. Auricchio, M. Conti, S. Morganti, A. Reali, *Finite Element Analysis of patient-specific transcatheter aortic valve implantation*, Endocardiovascular Biomechanics Research 2012 Congress (Marseille, May 3-4, 2012).
427. S. Morganti, F. Auricchio, D.J. Benson, F.I. Gambarin, S. Hartmann, T.J.R. Hughes, A. Reali, *Patient-specific isogeometric structural analysis of aortic valve closure*, HOFEIM 2014 – High-Order Finite Element and Isogeometric Methods (Munich, July 15-18, 2014).
428. R.M. Romarowski, S. Morganti, A. Lefieux, M. Conti, C. Trentin, A. Reali, F. Auricchio, *Patient-specific CFD of the aortic haemodynamics: Bringing cardiovascular virtual reality to clinical bedside*, Lions-Magenes Days (Pavia, April 13-14, 2015).
429. M. Ferraro, S. Morganti, M. Conti, T.J.R. Hughes, R.L. Taylor, F. Auricchio, A. Reali, *Innovative isogeometric-based tools for vascular biomechanics*, Lions-Magenes Days (Pavia, April 13-14, 2015).
430. F. Auricchio, F. Brezzi, A. Lefieux, A. Reali, A. Veneziani, *On the use of anisotropic triangles in an “immersed” finite element approach: application to a fluid-structure interaction problem*, Lions-Magenes Days (Pavia, April 13-14, 2015).
431. D. D’Angella, E. Rank, A. Reali, S. Kollmannsberger, Nils Zander, *IsoGeometric Analysis and the Finite Cell Method for Additive Manufacturing*, IAS General Assembly (Munich, April 28-29, 2016).
432. D. D’Angella, N. Zander, S. Kollmannsberger, F. Frischmann, A. Schröder, E. Rank, A. Reali, *Explicit Error Estimation and Multi-Level hp-Adaptivity*, HOFEIM 2016 – High-Order Finite Element and Isogeometric Methods (Jerusalem, May 30-June 2, 2016).
433. T. Hoang, C.V. Verhoosel, F. Auricchio, E.H. van Brummelen, A. Reali *Mixed isogeometric finite cell method for incompressible media*, HOFEIM 2016 – High-Order Finite Element and Isogeometric Methods (Jerusalem, May 30-June 2, 2016).
434. D. D’Angella, S. Kollmannsberger, E. Rank, A. Reali, *Multi-Level Bézier Extraction for Simulating Additive Manufacturing*, IAS General Assembly (Burghausen, May 4-5, 2017).
435. D. D’Angella, M. Carraturo, S. Kollmannsberger, E. Rank, A. Reali, *Multi-Level Isogeometric Analysis for Simulating Additive Manufacturing*, IAS General Assembly (Burghausen, June 5-6, 2018).
436. O. Bas, E. M. De-Juan-Pardo, D. D’Angella, S. Kollmannsberger, A. Reali, E. Rank, D. W. Hutmacher, *Rational design and fabrication of soft network composites for soft tissue engineering applications: a numerical model-based approach*, Tissue Engineering and Regenerative Medicine International Society (TERMIS) 5th World Congress (Kyoto, September 4-7, 2018).
437. D. D’Angella, L. Coradello, M. Carraturo, L. Kudela, S. Kollmannsberger, E. Rank, A. Reali, *Trimming and local refinement for isogeometric shells analysis*, HOFEIM 2019 – High-Order Finite Element and Isogeometric Methods (Pavia, May 28-31, 2019).
438. N. Hosters, A. Patton, A. Reali, S. Elgeti, M. Behr, *Combining NURBS-enhanced finite elements and isogeometric collocation in the context of fluid-structure interaction*, HOFEIM 2019 – High-Order Finite Element and Isogeometric Methods (Pavia, May 28-31, 2019).



439. G. Lorenzo, T.J.R. Hughes, A. Reali, H. Gomez, *An in silico study of mechanical obstruction of prostate cancer growth by benign prostatic hyperplasia with clinical implications*, HOFEIM 2019 – High-Order Finite Element and Isogeometric Methods (Pavia, May 28-31, 2019).
440. A. Patton, J.-E. Dufour, P. Antolin, J. Kiendl, A. Reali, *A stress recovery approach for accurate elastic analysis of laminated composites via isogeometric analysis*, HOFEIM 2019 – High-Order Finite Element and Isogeometric Methods (Pavia, May 28-31, 2019).
441. G. Lorenzo, T.J.R. Hughes, A. Reali, H. Gomez, T.E. Yankeelov, *An image-based computational model for early prediction of organ-confined untreated prostate cancer growth*. AACR Annual Meeting 2020 (online, June 22-24, 2020).
442. G. Lorenzo, A. Viguerie, F. Auricchio, D. Baroli, T.J.R. Hughes, A. Patton, A. Reali, T.E. Yankeelov, A. Veneziani, *Integrating theory and population data to forecast the spatiotemporal spread of COVID-19*. UT COVID-19 Conference (online, November 10-11, 2020).
443. M. Carraturo, J. Jomo, S. Kollmannsberger, E. Rank, A. Reali, F. Auricchio, *Immersed finite element analysis of laser powder bed fusion process: Modeling and experimental validation*. 36th International CAE Conference and Exhibition (online, November 30-December 4, 2020).
444. A. Viguerie, G. Lorenzo, F. Auricchio, D. Baroli, T.J.R. Hughes, A. Patton, A. Reali, T.E. Yankeelov, A. Veneziani, *Integrating theory and population data to forecast the spatiotemporal spread of COVID-19*. 36th International CAE Conference and Exhibition (online, November 30-December 4, 2020).
445. G.F. Barros, M. Grave, A. Viguerie, J.J. Camata, A. Reali, A.L.G.A. Coutinho, *Enhancing Dynamic Mode Decomposition Data Pipeline*, RAMSES – Reduced order models; Approximation theory; Machine learning; Surrogates, Emulators and Simulators (Trieste, December 14-17, 2021).
446. G. Lorenzo, J.S. Heiselman, M.A. Liss, M.I. Miga, H. Gomez, T.E. Yankeelov, T.J.R. Hughes, A. Reali. Patient-specific forecasting of prostate cancer growth during active surveillance using an imaging-informed mechanistic model. American Association for Cancer Research - AACR Annual Meeting 2022, (New Orleans, April 8-13, 2022).
447. N. di Muzio, G. Lorenzo, C.L. Deantoni, C. Cozzarini, A. Fodor, A. Briganti, F. Montorsi, V.M. Perez-Garcia, H. Gomez, A. Reali. PSA dynamics forecasts identify tumor recurrence after external radiotherapy for prostate cancer. Annual Meeting of the European Society for Radiotherapy and Oncology (ESTRO2022), (Copenhagen, May 6-10, 2022).
448. G. Lorenzo, J.S. Heiselman, M.A. Liss, M.I. Miga, H. Gomez, T.E. Yankeelov, T.J.R. Hughes, A. Reali. Patient-specific imaging-based forecasting of prostate cancer growth during active surveillance. 12th European Conference on Mathematical and Theoretical Biology (ECMTB22) (Heidelberg, September 18-24, 2022).

### Lectures at national conferences (\* = invited):

449. F. Auricchio, L. Beirão da Veiga, C. Lovadina, A. Reali, *Studio di Stabilità di Alcuni Elementi Finiti Misti per Problemi Elastici in Grandi Deformazioni*, XV Convegno Nazionale di Meccanica Computazionale (Genova, June 21-23, 2004).
450. F. Auricchio, L. Beirão da Veiga, C. Lovadina, A. Reali, *Elementi Finiti Misti per Problemi di Elasticità Non-lineare*, Convegno Nazionale GNCS (Milano, February 14-16, 2006).
451. F. Auricchio, L. Beirão da Veiga, C. Lovadina, A. Reali, *On the Stability of some Finite Element Schemes for Large Deformation Incompressible Elasticity*, VIII Congresso della Società Italiana di Matematica Applicata (Baia Samuele, May 22-26, 2006).
452. F. Auricchio, L. Beirão da Veiga, C. Lovadina, A. Reali, *On the Stability of some Finite Element Schemes for Incompressible Elastic Materials in the Finite Deformation Regime*, XVI Convegno Nazionale di Meccanica Computazionale (Bologna, June 26-28, 2006).
453. \*F. Auricchio, A. Reali, *Modellazione del Comportamento di Leghe a Memoria di Forma Soggette a Carichi Ciclici*, 31° Convegno Nazionale dell'Associazione Italiana di Metallurgia (Milano, November 22-24, 2006).
454. F. Auricchio, A. Reali, U. Stefanelli, *A Phenomenological Model for Shape Memory Alloys Including Asymmetric Behaviors and Transformation-dependent Elastic Properties*, GMA08: II Riunione del Gruppo Materiali AIMETA (Genova, February 29-March 1, 2008).
455. D. Asprone, A. Prota, G. Manfredi, F. Auricchio, A. Reali, G. Sangalli, *Error evaluation in approximation of derivatives using Smoothed Particle Hydrodynamics method*, XVII Convegno Nazionale di Meccanica Computazionale (Alghero, September 10-12, 2008).
456. F. Auricchio, M. Conti, A. Ferrara, S. Morganti, A. Reali, *Patient-specific Simulation of Carotid Artery Stenting: Implementation of an Anisotropic Hyperelastic Model for Vessel Tissue*, GMA10: IV Riunione del Gruppo Materiali AIMETA (Palermo, February 25-26, 2010).

457. F. Auricchio, M. Conti, A. Ferrara, S. Morganti, A. Reali, *Finite element analysis of carotid artery stenting*, XVIII Convegno Nazionale di Meccanica Computazionale (Siracusa, September 22-24, 2010).
458. J. Arghavani, F. Auricchio, R. Naghdabadi, A. Reali, *Robustness and efficiency of integration algorithms for a 3D finite strain SMA constitutive model*, GMA11: V Riunione del Gruppo Materiali AIMETA (Udine, February 23-25, 2011).
459. F. Auricchio, A. Ferrara, S. Morganti, A. Reali, *Patient-specific FEA of the aortic valve: an approach based on structural constitutive models*, GMA11: V Riunione del Gruppo Materiali AIMETA (Udine, February 23-25, 2011).
460. F. Auricchio, M. Conti, A. Invernizzi, A. Lefieux, S. Morganti, R. Ponzini, A. Reali, *Computational fluid dynamics: from solver evaluation to a patient-specific biomedical application*, AIMETA 2011: XX Congresso dell'Associazione Italiana di Meccanica Teorica e Applicata (Bologna, September 12-15, 2011).
461. F. Auricchio, M. Conti, A. Ferrara, S. Morganti, A. Reali, *A computational tool to support aortic valve surgery: a finite-element approach*, AIMETA 2011: XX Congresso dell'Associazione Italiana di Meccanica Teorica e Applicata (Bologna, September 12-15, 2011).
462. C. Lovadina, F. Auricchio, L. Beirão da Veiga, A. Reali, R.L. Taylor, P. Wriggers, *Stability of Galerkin approximations for large deformation elastic problems*, AIMETA 2011: XX Congresso dell'Associazione Italiana di Meccanica Teorica e Applicata (Bologna, September 12-15, 2011).
463. F. Auricchio, M. Conti, A. Ferrara, S. Morganti, A. Reali, *Patient-specific simulation of a stentless aortic valve implant: the impact of fibers on leaflet performance*, GMA12: VI Riunione del Gruppo Materiali AIMETA (Lucca, April 12-13, 2012).
464. \*F. Auricchio, M. Conti, S. Morganti, A. Reali, *Numerical simulations for percutaneous vascular surgery: from diagnosis to prediction*, XI Congresso della Società Italiana di Matematica Applicata (Torino, June 25-28, 2012).
465. M. Conti, F. Auricchio, A. Ferrara, M. Ferraro, S. Morganti, A. Reali, *Finite Element Analysis of Carotid Artery Stenting: from diagnosis to prediction*, GNB2012 – Terzo Congresso del Gruppo Nazionale di Biomeccanica (Roma, June 26-29, 2012).
466. F. Auricchio, M. Conti, M. Ferraro, S. Morganti, A. Reali, *Realistic simulation of minimally invasive cardiovascular surgery*, 2012 SIMULIA Regional User Meeting (Gazzada (VA), November 13-14, 2012).
467. \*F. Auricchio, M. Conti, S. Morganti, A. Reali, *Patient-specific finite element analysis of transcatheter aortic valve implantation: towards reliable predictions to support procedure planning*, XXI Congresso AIMETA (Torino, September 17-20, 2013).
468. S. Morganti, F. Auricchio, M. Conti, A. Reali, *Patient-specific finite element analysis of transcatheter aortic valve implantation: towards reliable predictions to support procedure planning*, 2013 SIMULIA Regional Users' Meeting (Milano, November 7-8, 2013).
469. L. De Lorenzis, J.A. Evans, T.J.R. Hughes, R. Kruse, N. Nguyen-Thanh, A. Reali, *Isogeometric collocation for large-deformation frictional contact*, GIMC-GMA 2014 – XX Italian National Conference of Computational Mechanics and VII Italian Meeting on Advances in Mechanics of Materials (Cassino, June 11-13, 2014).
470. S. Morganti, M. Conti, M. Aiello, A. Reali, F. Auricchio, *Advanced numerical simulations in biomechanics: patient-specific finite element analysis of transcatheter aortic valve implantation*, GIMC-GMA 2014 – XX Italian National Conference of Computational Mechanics and VII Italian Meeting on Advances in Mechanics of Materials (Cassino, June 11-13, 2014).
471. \*S. Morganti, F. Auricchio, M. Conti, A. Reali, M. Aiello, *Investigation of TAVI outcomes through patient-specific finite element analysis: two clinical cases*, GNB 2014 – IV Conference of the Italian National Bioengineering Group (Pavia, June 25-27, 2014).
472. \*M. Ferraro, F. Auricchio, M. Conti, S. Morganti, A. Reali, *Isogeometric Analysis: a novel computational approach to evaluate the performance of endovascular stents*, GNB 2014 – IV Conference of the Italian National Bioengineering Group (Pavia, June 25-27, 2014).
473. \*L. Antiga, F. Auricchio, M. Conti, A. Lefieux, S. Morganti, A. Reali, R.M. Romanowski, F. Secchi, C. Trentin, S. Trimarchi, A. Veneziani, *Patient-specific CFD of the aortic haemodynamics: Bringing cardiovascular virtual reality to clinical bedside practice*, V Meeting del Capitolo Italiano della European Society of Biomechanics (ESB-ITA) (Milano, June 5, 2015).
474. \*S. Morganti, L. De Lorenzis, J.A. Evans, T.J.R. Hughes, A. Reali, *Isogeometric collocation for plane strain incompressible elasticity*, XXII Congresso AIMETA (Genova, September 14-15, 2015).
475. S. Morganti, C. Callari, F. Auricchio, A. Reali, *Isogeometric collocation methods for poromechanics*, GIMC-GMA 2016 – XXI Convegno Nazionale di Meccanica Computazionale and VIII Riunione del Gruppo Materiali AIMETA (Lucca, June 27-29, 2016).

476. \*S. Morganti, L. De Lorenzis, J.A. Evans, T.J.R. Hughes, A. Reali, *Isogeometric analysis collocation: methodology and applications*, XIII Congresso della Società Italiana di Matematica Applicata (Milano, 13-16 Settembre, 2016).
477. \*L. Heltai, J. Kiendl, A. DeSimone, A. Reali, *A natural framework for isogeometric fluid-structure-interaction: coupling BEM and Shell models*, XIII Congresso della Società Italiana di Matematica Applicata (Milano, 13-16 Settembre, 2016).
478. \*G. Lorenzo, T.J.R. Hughes, A. Reali, H. Gomez, *Un modelo matemático para la predicción personalizada del crecimiento de cáncer de próstata a escala anatómica*, SERAM (Sociedad Española de Radiología Médica) - 34 Congreso Nacional (Pamplona, May 24-27, 2018).
479. P. Fedeli, A. Reali, A. Frangi, F. Auricchio, *Phase-field model for polarization evolution in ferroelectric materials via isogeometric collocation method*, GIMC-GMA 2018 – XXII Convegno Nazionale di Meccanica Computazionale and IX Riunione del Gruppo Materiali AIMETA (Ferrara, September 13-14, 2018).
480. \*M. Conti, R. Romarowski, S. Morganti, A. Reali, F. Auricchio, *Numerical simulations for design, virtual prototyping, procedure planning, and follow-up assessment of endovascular devices*, SIMAI 2020+21 – XV Biannual Congress of SIMAI (Parma, August 30-September 3, 2021).
481. \*D. Ignesti, G. Ferri, F. Auricchio, A. Reali, E. Marino, *An improved isogeometric collocation method for multipatch shear-deformable curved beams based on Bishop frame and exponential map*, XXV Congresso AIMETA (Palermo, September 5-8, 2022).
482. \*G. Lorenzo, C. Wu, J.P. Yung, J.F. Ward, H. Gomez, A. Reali, T.E. Yankeelov, A.M. Venkatesan, T.J.R. Hughes, *Patient-specific forecasting of prostate cancer growth during active surveillance using an imaging-informed biomechanistic model*, XIII Reunion de Jovenes Investigador@s en el Extranjero (IYImeeting 2022) (Vigo, December 27, 2022).

#### Poster presentations at national conferences:

483. F. Auricchio, M. Conti, M. Ferraro, A. Reali, *Evaluation of carotid stent scaffolding through patient-specific finite element analysis*, GNB2012 – Terzo Congresso del Gruppo Nazionale di Biomeccanica (Roma, June 26-9, 2012).
484. M. Ferraro, F. Auricchio, M. Conti, S. Morganti, A. Reali, *Isogeometric Analysis: a novel computational approach to evaluate the performance of endovascular stents*, GNB 2014 – IV Conference of the Italian National Bioengineering Group (Pavia, June 25-27, 2014).
485. M. Coda, E. Faggiano, M. Conti, M. Ferraro, S. Morganti, T. van Bakel, S. Trimarchi, F. Auricchio, A. Reali, *Patient-Specific Isogeometric Analysis of Thoracic Aortic Aneurysms*, ESB-ITA Thematic Conference on Frontier Biomechanical Challenges in Cardiovascular Physiopathology (Palermo, September 8-9, 2016).