CURRICULUM VITAE of ALFIO QUARTERONI



- Professor Emeritus, Ecole Polytechnique Fédérale de Lausanne, EPFL [2017 – present]
- Professor Emeritus, Politecnico di Milano [2022 – present]
- Senior Research Fellow, Oden Institute, University of Texas at Austin [2025 – present]
- President, Fondazione Comunitaria Provincia di Lodi [2024 – present]

Previous Positions

- Professor of Numerical Analysis at Politecnico di Milano [1989 –2022]
- Founder and Director of MOX (Laboratory of Modeling and Scientific Computing) Politecnico di Milano https://mox.polimi.it/ [2002 –2022]
- Professor of Mathematics and Director of the Chair of *Modelling and Scientific Computing* at the Ecole Polytechnique Fédérale de Lausanne, EPFL [July 1998 – December 2017] http://cmcs.epfl.ch/
- Full Professor of Mathematics, University of Minnesota at Minneapolis [1990 - 1992]
- Full Professor of Numerical Analysis, Catholic University of Brescia, and Chairman of the Department of Mathematics [November 1986 – October 1989]
- Researcher at the Istituto di Analisi Numerica of the C.N.R. (Italian Research Council) of Pavia [April 1977 – October 1986]
- Research Fellow in Numerical Analysis at Université P&M Curie, Paris [1979 –1980]
- Military Service (Artillery Officer) [January 1976 – April 1977]
- Researcher at Montedison – Donegani Research Institute, Novara (Italy) [July 1975 – January 1976]
- Italian Laurea in Mathematics, University of Pavia (Italy) [November 1971 – June 1975]

Member of the Following Academies

- Accademia Peloritana dei Pericolanti (since 2023)
- Italian Academy of Engineering and Technology (founding member, 2022)
- Academia das Ciencias de Lisboa (Lisbon Academy of Sciences) (foreign member since 2018)
- Academia Europaea Academy of Europe) (since 2014)
- European Academy of Sciences (since 2010) - Head of Computation and Information Sciences Division (2014-2017)
- SATW (the Swiss Academy of Engineering Sciences) (expert since 2012)
- European Society of Computational Methods in Sciences and Engineering (honorary fellow since 2010)

- Accademia Nazionale dei Lincei, Roma (Italian National Academy of Sciences) (corresponding member since 2004 – full member since 2019)
- Istituto Lombardo di Scienze e Lettere (Lombard Academy of Science) (since 1995)

Awards (in Italy)

- Recipient of the Galileian Chair, Scuola Normale Superiore, Pisa, Italy, 2001
- Premio Agrumello, 2003
- Dr. h.c. in Naval Engineering, University of Trieste, 2003
- Fanfullino d'oro della Riconoscenza 2006, Città di Lodi
- Premio Scientifico Capo D'Orlando, 2006, Museo Mineralogico Campano
- Premio Ghislieri alla carriera 2013 (Lifelong Ghislieri Prize 2013)
- Premio Rotary 2024 Adda Lodigiano
- Premio 2017 per l'Arte, Pro-Loco Lodi, 22 September 2017
- Premio Pianeta Galileo, Tuscany Regional Council, 2019
- Second Prize, Science Book of the Year, Trieste Next Festival, *L'Intelligenza Creata*, Hoepli, 2025.

Awards (international)

- NASA Group Achievement Award for the pioneering work in Computational Fluid Dynamics, 1992
- Galileo Galilei International Prize for Science 2015
- Feng Kang Prize 2013 of the Chinese Academy of Sciences
- Euler Medal 2021-2022 by ECCOMAS
- Lagrange Prize 2020-2023 by ICIAM
- Blaise Pascal Medal 2024 by the European Academy of Sciences
- Ritz-Galerkin Medal 2024 by ECCOMAS
- Ralph E. Kleinman Prize 2024-2025 by SIAM
- Olof Widlund Prize 2026
- Gauss-Newton Medal 2025-2026 by IACM

Best Paper Awards

- SIAM Outstanding Paper Prize, 2004
- First Oden-Hughes Award for the best paper published in CMAME in 2022-2023
- Best deal.II-based paper award 2024.

ERC Grants

- Recipient of the ERC Advanced Grant « MATHCARD », 2008-2013
- Recipient of the ERC PoC (Proof of Concept) Award "From Math to Ward", August 2012
- Recipient of the ERC PoC (Proof of Concept) Award "Math4AAARisk", June 2015
- Recipient of the ERC Advanced Grant « i-HEART », 2017-2022

Honors

- Commander of the Order of Merit of the Republic of Italy (2024) (*Commendatore*)
- Member of the Fields Medal Committee for ICM 2020
- Member of the Scientific Committee of Human Technopole (since 2022)
- EAMBES Fellow (European Alliance for Medical and Biological Eng. & Science) (since 2020)
- Author of the entry "Matematica" of Enciclopedia Treccani: http://www.treccani.it/magazine/atlante/cultura/Matematica.html
- Member of the IMU Circle (International Mathematical Union) (since 2014)

- Honorary member of ECMI (since 2014)
- Founder member of UMI (Unione Matematica Italiana), since 2023
- Fellow of SIAM (since 2009 – first row)
- Member of SIAM Board of Trustees (2009-2013)
- Paul Harris Fellow, 2008
- Plenary Speaker at the International Congress of Mathematicians, Madrid 2006
- IACM (International Association of Computational Mechanics) Fellow Award, 2004
- Laurea Honoris Causa in Naval Engineering, Università di Trieste, 10 October 2003
- Research consultant of the ICASE, NASA Langley Research Center, Hampton, VA (1984-88)
- Fellow of the Minnesota Supercomputer Institute, Minneapolis, Minnesota (1990-92)
- Former student of Collegio Ghislieri, Pavia (Italy) (1971 – 1975)

Publications : Statistics (July 2026)

- Author of 25 books (19 published by Springer, 1 by Oxford University Press, 1 by Cambridge University Press, 2 by Zanichelli, 1 by Dedalo, 1 by Hoepli – some of them translated into several languages)
- Editor of 13 books (8 published by Springer, 1 by North-Holland Elsevier, 1 by the American Mathematical Society, 3 by De Gruyter)
- Author of 400+ peer reviewed Journal papers and invited Conference papers
- According to Research.com Mathematics 2026, he was ranked n.55 in the World Ranking and n.1 in Italy
- Google Scholar: H=104, Citations: 70700+
  https://scholar.google.ch/citations?user=UiDlKcAAAAJ&hl=it&oi=ao
- Scopus : H=68, Citations : 18700+
  https://www.scopus.com/authid/detail.uri?authorId=35618484900

Leadership in Research

- (First) Director of CADMOS (Center for Advanced Modeling Science), EPFL, Lausanne [2009-2014]; CADMOS is a center involving several tens of research laboratories from the Universities of Geneva (UNIGE) and Lausanne (UNIL) and from the EPFL to develop a long-term expertise in computational science, high performance computing and modeliing of large and complex systems http://www.cadmos.org/
- Founder and First Director [2010-2016] of MATHICSE (Mathematical Institute of Computational Science and Engineering), EPFL, an Institute comprising 5 chaired laboratories with about 100 people http://mathicse.epfl.ch/
- Founder and First Director [2002-2013] of MOX, Politecnico di Milano (currently hosting 20 faculty members and about 50 young scientists) https://mox.polimi.it/
  Co-founder and President of MOXOFF SpA [2010 – present]
- Scientific Director at C.R.S.4 (Center for Advanced Research and Development in Sardinia) [1992 - 1998], an international research center headed by Carlo Rubbia, accounting about 80 researchers http://www.crs4.it/

Leadership in Industrial Innovation

- Co-founder and president of MOXOFF SpA, a spinoff company of Politecnico di Milano for applied mathematics and numerical simulation [2010 -] http://www.moxoff.com/en/
- Co-founder and member of the BoD of MATHESIA SrL [2015-], a crowdsourcing company helping entrepreneurs and mathematicians to meet and find mathematical solutions to industrial and societal problems
- Co-founder and president of MATH&SPORT SrL [2016-], a company for analytical innovation and data analysis in sports for teams and athletes
- President of the Scientific Committee of Zucchetti Group [2023 – 2024]

Temporary Visiting Positions

- Brin Mathematics Research Center, University of Maryland, College Park, visiting professor, March-May 2024
- Visiting professor at Dept. of Mechanical and Aerospace Engineering, Stanford University, April 2013
- Visiting professor at LJLL (Laboratoire Jacques-Louis Lions), Université de Paris 6, France, March 2013
- Visiting professor at Texas A&M University, College Station, February 2010
- Visiting scientist at the Institute of Mathematics and Applications of the University of Minnesota, 1986
- Associate Researcher of the French C.N.R.S. at the Laboratoire d'Analyse Numérique of the University of Paris VI, 1985
- Visiting Associate Professor at the School of Mathematics of the University of Minnesota, 1984
- Visiting Scientist at the Institute for Computer Applications in Science and Engineering (ICASE), NASA Langley Research Center, Hampton (Virginia), 1982
- Visiting Member at the Laboratoire d'Analyse Numérique of the University of Paris VI, 1979 - 1980
- Visiting Member at the Institute für Angewandte Mathematik, University of Bonn, Germany, 1978

Selected Service Activities in Italy

- Member of the "Committee for the Applications of Mathematics" of the Italian Research Council (C.N.R.) (1986-90)
- Member of the Scientific Board of SIMAI (Italian Society of Industrial and Applied Mathematics) (1996-98) and vice-president (1996-98)
- Member of the Scientific Committee of IMATI (former IAN), CNR, Pavia, Italy
- Chairman of the Evaluation Panel of Mathematics and Computer Science of CIVR, the Committee for Research Evaluation of the Italian Ministry of Research and University
- Member of the Scientific Committee of SCOPE, University of Naples (2009-2014)
- Member of the Advisory Board of the Doctoral School in Mathematics, University of Padova (2009-2012)
- Chairman of the Evaluation Panel of Mathematics and Computer Science of VQR 2004-2010 (Valutazione della Qualità della Ricerca) ANVUR, the National Agency for Research Evaluation of the Italian Ministry of Research and University, 2011-2013
- Member of the Scientific Committee of CEN (European Centre of Nanomedicine), Milan (2009-2015)
- Scientific Coordinator of SISSA MathLab, Trieste (Italy) (2010-2015)
- Member of the International Advisory Board of IUSS Institute of Advanced Studies, Pavia (2017-)
- Member of the International Advisory Board of IMT School for Advanced Studies, Lucca (2018-)
- Member of the “Commissione Europa” of the Accademia Nazionale dei Lincei (2020-)
- Member of the Advisory Board of CRS4 (2021-)
- Member of the Scientific Committee of Human Technopole (2022-)

Selected Service Activities in Switzerland

- Member of the Research Board of EPFL (Ecole Polytechnique Fédérale, Lausanne) (1998-2004)
- Member of the Advisory Board of the Centre Interfacultaire Bernoulli, EPFL, since its foundation
- Board for Academic Promotion (CPA) of EPFL (since 2001)
- Member of the Doctoral School Board of EPFL (2002-2006)
- Chairman of the Mathematics Recruiting Commission of the EPFL (2004-2009)
- Chairman of the Recruiting Commission of MATHICSE (Mathematics Institute for Computational Sciences and Engineering) of the EPFL (2010-2015)
- Chair of the Evaluation Committee of the Institute of Mathematics, University of Zurich, 2022

Selected Service Activities: International

- Vice-chairman of the Mathematics and Computer Science TMR (Training, Mobility and Research) evaluation panel of the E.U., 1997
- Member of the scientific committee of ICOSAHOM Conference Series (1989 -)
- Member of the scientific committee od DD (Domain Decomposition) Conference Series (1998-2018)
- Chairman of the Mathematics and Computer Science RTN (Research Training Network) evaluation panel of the E.U., 1999
- Chairman of the AMIF (Applied Mathematics for Industrial Flows) research programme of the ESF (European Science Foundation) (1996-2001)
- Member of the Scientific Committee of INRIA (Institut de Recherche en Informatique et Automatique) (France), (1999-2003)
- Member of the Scientific Advisory Committee of the Research Center "MATHEON: Mathematics for key Technologies", TU Berlin (2003-2010)
- Member of the Scientific Steering Committee of the Oxford Centre for Nonlinear PDEs (since 2008)
- Member of the International Advisory Committee of CEMAT, IST Lisbon (since 2008)
- Member of the International Scientific and Technological Advising Committee of Laboratório Nacional de Computação Científica (LNCC), Rio de Janeiro, Brasil (since 2008)
- Member of the Advisory Board of the NSF Institute for the Life Sciences, Rice University, Houston University and the Texas Medical Center (since 2009)
- Chairman of the panel for the selection of invited speakers in Session 16 (Numerical Analysis and Scientific Computing) at ICM 2006 (International Congress of Mathematicians)
- Member of the SIAM Subcommittee on Journals (2009-)
- Member of the Research Review for Applied Mathematics of QUANU (Quality Assurance Netherland Universities), 2009
- Member of the Scientific Advisory Board of ACMAC (Archimedes Center for Modeling, Analysis and Computation), Crete (since 2010)
- Member of the Scientific Committee of FSMP (Fondation Sciences Mathématiques de Paris), (since 2010)
- Member of the SIAM Board of Trustees (2009-2012)
- Member of the SIAM Fellow Committee (2009-2011)
- Member of the Advisory Board of the Max-Planck-Institut fur Mathematik (since 2011)
- Chairman of the Lagrange Prize Committee, ICIAM 2011
- Chairman of the Gauss Prize Committee, IMU 2014
- Member of the Scientific Advisory Board of Oberwolfach (since 2014)
- Member of the Scientific Committee of the Computational Science Division of European Academy of Sciences (since 2014)
- Member of the ERC StG Panel PE1 (Mathematics), year 2012
- Chairman of the ERC CoG Panel PE1 (Mathematics), years 2014, 2016, 2018
- Member of the Scientific Board of the Riemann International School of Mathematics (2016-)
- Chairman of the Scientific Program Committee of ICIAM 2019, Valencia
- Member of the Scientific Committee of Centro Internacional de Matemática (CIM), Portugal (2018-)
- Member of the Electoral Board of the Sedleian Chair, University of Oxford, 2018
- Member of the SIAM J. Von-Neumann Lecture 2019 Committee
- Member of the Evaluation Committee Committee of the Institute of Applied and Computational Mathematics of the Foundation for Research & Technology Hellas (FORTH), 2022
- Chair of the Evaluation Committee of the Institute of Mathematics, University of Zurich, 2022
- Member of the IMU Committee for Fields Medal Selection 2019-22

Editor in Chief of the Following Book Series

- Book series « MS&A, Modeling, Simulation and Applications », Springer-Verlag. Founder and Editor in Chief (since 2009)
- Book series « Unitext », Springer-Verlag. Editor in Chief (since 2009)

Associate Editor of the Following Book Series

- Book series « Unitext », Springer-Verlag Italia, Milan, Editor (1998-2008)
- Book series « Scientific Computation », Springer-Verlag, New York, Editor (1998-)

Associate Editor of the Following Journals

- S.I.A.M. Journal on Numerical Analysis (1991-1996, 2002-2007)
- MMAN (formerly R.A.I.R.O.) (1995-present)
- Mathematical Models and Methods in Applied Sciences (1992-present)
- Journal on Numerical Mathematics (formerly East-West Journal on Numerical Mathematics) (1993-present)
- Journal of Computational Mathematics, honorary editor (1994-present)
- Computing and Visualization in Science (1996-2006)
- JEMS (Journal of the European Mathematical Society) (1998-2010)
- MECCANICA (1998-2004)
- Journal of Mathematical Fluid Mechanics (1998-present)
- Applied Numerical Mathematics (1999-2018)
- Annali di Matematica Pura e Applicata (1999-present)
- PCFD (Progress in Computational Fluid Dynamics) (2000-present)
- CMAME (Computer Methods in Applied Mechanics and Engineering) (2001-present)
- Advances in Computational Mathematics (1992-95)
- S.I.A.M. Journal on Multiscale Modeling and Simulation (MMS) (2002-present)
- Numerische Mathematik (2004-present)
- Revista Matematica Complutense (2004-present)
- Networks and Heterogeneous Media, AIMS (2006-present)
- Portugaliae Mathematica (2008-2022)
- Environmental Semeiotics (2008-present)
- Communications in Applied Mathematics and Computational Science (CAMCoS) (2008-present)
- MathematicS In Action, SMAI, Paris (2008-present)
- Journal de Mathématiques Pures et Appliquées (2009-2025)
- Int. J. Num. Meth. Biomed. Engng. (IJNMBE) (2010-present)
- Numerical Algorithms (2009-present)
- Journal on Mathematics in Industry (2010-present)
- Journal of Computational Dynamics (2011-present)
- Vietnam Journal of Mathematics (VJM), (2011-present)
- In Silico Pharmacology, Springer (2012-2019)
- SMAI Journal of Computational Mathematics (2014-present)
- CSIAM Transaction on Applied Mathematics (CSAM) (2019-present)
- Computers in Biology and Medicine (2021-2024)

Research Fields

- Mathematical Modelling, Numerical Analysis, Scientific Computing, Scientific Machine Learning
- Theoretical Analysis: Numerical Approximation of Partial Differential Equations by Finite Elements, Finite Differences, Finite Volumes, Spectral Methods, Domain Decomposition Methods, Reduced Basis Methods, Isogeometric Analysis
- Applications to: fluid mechanics; aerospace engineering; yacht engineering ; geophysics ; acoustics, elastic, seismic and electromagnetic wave propagation phenomena ; architectural landscape design by mathematical modeling; improvement of sports performance (America's cup sailing yachts, olympic rowing, swimsuits) ; sports and rehabilitation engineering
- Mathematical modeling for Medicine: Human Circulatory System, Heart Integration (electrophysiology, cellular ionic activity, mechanical contraction and relaxation, ventricular fluid dynamics, valve dynamics), assessment of risk for aneurysms, cerebrospinal fluid dynamics, optimization of prosthetic implants and surgical planning; epidemiological models.

Master Students, PhD Students, and Post-Doctors Supervised

- Mentor and supervisor of 70 PhD students in mathematics (top 100 supervisors in Mathematics ever)

  https://genealogy.math.ndsu.nodak.edu/id.php?id=95586,
  https://genealogy.math.ndsu.nodak.edu/most-students.php?count=100

- Mentor and supervisor of over 80 master students, and more than 100 post-docs.

- In the past fifteen years, many young researchers previously mentored by the PI have been appointed Professors or Researchers at: EPFL (Lausanne), Politecnico di Milano (Italy), Emory University (USA), SISSA (Italy), University of Coimbra (Portugal), University of Aachen (Germany), University College London (UK), Université de Grenoble (France), Université de Franche-Compté (France), Université Paris 13 (France), University of Houston (USA), University of Texas Austin (USA), TU Delft (NL), Loughborough University (UK), University of Oxford (UK), University of Sheffield (UK), Duke University (USA). Many others are now chief scientists in R&D divisions of Banks, Insurances, Industries, Formula One racing teams, in several Countries. Two former PhD students, A. Manzoni in 2012 and F. Negri in 2015, have won the prestigious ECCOMAS PhD Award for the best European PhD thesis on computational methods in applied sciences and engineering. My PhD student F.Regazzoni has received the Young Investigator Presentation Award from VPH2020 and he is Co-PI of an ERC Grant.

Selected Research Grants and Contracts (since 1998)

- Principal investigator, Swiss National Science Foundation, Project Nr. 21-54139.98 on "Domain decomposition and adaptive methods: analysis, development and applications", October 1998 - September 2000
- Co-principal investigator, Swiss National Science Foundation, Project Nr. 21-57119.99 on Bubble-stabilized Spectral Element Methods for Viscoelastic Flows", October 1999 - September 2001
- Principal investigator of a research project "Multiscale Methods in Biofluidmechanics", Politecnico di Milano, October 1999 - September 2001
- Cofin 1999 (MIUR, Italian Ministry for University, Education and Research) : « Approximation of non-coercive problems with applications to solid mechanics and electromagnetism »
- Principal investigator, Brite/Euram (OFES N. 97.0427-1) « IDEMAS : Industrial Demonstration of Accurate and Efficient Multidimensional Upwind and Multigrid Algorithms for Aerodynamic Simulation on Unstructured Grids ». Project Coordinator : Prof. H. Deconink, Von Karman Institute, Belgium. Main industrial partners: Dassault Aviation, ALENIA, DASA. (June 1999 - November 2000)
- Cofin 2000 (MIUR, Italian Ministry for University, Education and Research) : « Methods and Multiscale modelling for transfer and propagation problems »
- Principal investigator, Swiss National Science Foundation, Project Nr.21-59230.99 on "Mathematical modelling and numerical simulation of fluid flow and mass transport processes in heterogeneous media ", October 2000 - September 2003
- Principal investigator, Swiss National Science Foundation, Project Nr. 20-61862.00 on "Multimodels and multidomain methods for fluid-structure interaction problems", April 2001 - March 2003
- Cofin 2001 (MIUR, Italian Ministry for University, Education and Research) : «Numerical Methods in Fluid Dynamics and Electromagnetism »
- National Project Coordinator : Agenzia 2000-CNR (Italian National Council for Research), « Modelling fluid-structure interaction in the arterial system ». (CNRC00A3F1).
- Alinghi (Swiss Challenge for America's Cup 2003) - EPFL Scientific Partnership (2001-2003)
- Principal investigator, Swiss National Science Foundation, Project Nr. 20-65110.01 on "Accurate Solution of Navier-Stokes equations in moving domain and with non-standard boundary conditions", February 2002 - January 2004

- Principal investigator, Swiss National Science Foundation, Project Nr. 20-100637 on "Multiscale Models for blood flow", April 2003 - May 2004
- Project Coordinator. HaeMOdel, European Union Research Training Network on Mathematical Modelling for Haemodynamics. Partners : Politecnico di Milano, Ecole Polytechnique Fédérale de Lausanne, Imperial College, London, Technical University Graz, INRIA and University Paris VI, Istituto Superior Tecnico Lisbon. October 2002 - September 2006
- CTI (Swiss Commission for Technology and Innovation) - Debiotech SA (and Insel Hospital, Bern), Chronodial Project, January 2003 - December 2004, Principal Investigator
- Cofin 2003 (MIUR, Italian Ministry for University, Education and Research) : « Numerical Modelling for Scientific Computing and Advanced Applications », Principal Investigator
- INDAM (Istituto Nazionale di Alta Matematica), Project : « Numerical Modelling for Scientific Computing and Advanced Applications », May 2003 - April 2004
- Principal investigator, Swiss National Science Foundation, Project Nr. 200020-101800 on "Mathematical modelling and numerical simulation of fluid flow and mass transport processes in heterogeneous media", November 2003 - September 2005
- CTI (Swiss Commission for Technology and Innovation) - Alinghi (Swiss Challenge for America's Cup 2003 – Defender of America's Cup 2007) - EPFL Scientific Partnership. (2001 -2007), Co-principal investigator
- Solar Impulse (Bertrand Piccard's Round-the-World Flight in a Solar Aircraft) - EPFL Scientific Partnership. Icare Project. (2004-2007), Co-principal investigator
- SRE, Sport and Rehabilitation Engineering, EPFL Project (2004-2007), Co-principal investigator
- Principal investigator, Swiss National Science Foundation, Project Nr. 200021-103809 on "Finite element methods for Navier-Stokes equations with free-surface", May 2004 - April 2006
- Co-principal investigator, Swiss National Science Foundation, Project Nr. 200020-109602 on "Continuous/discontinuous finite element approximation of differential problems with multiple scales in heterogeneous media", October 2005 - September 2006
- Principal investigator, Swiss National Science Foundation, Project Nr. 200021-109378 on "Interface operators for fluid-structure interaction algorithms and applications", November 2005 - October 2007
- Principal investigator, Swiss National Science Foundation, Project Nr. 200020-112166 on "Finite element methods for Navier-Stokes equations with free-surface", May 2006 - October 2007
- Principal investigator, Swiss National Science Foundation, Project Nr. 200020-113304 on "Continuous/discontinuous finite element approximation of differential problems with multiple scales in heterogeneous media", October 2006 – September 2008
- Principal investigator, Swiss National Science Foundation, Project Nr. 200020-117587 on "Interface operators and solution algorithms for fluid-structure interaction problems with applications", January 2008 – December 2010
- Co-principal investigator, Synergia, Swiss National Science Foundation, Project Nr. CRSII2-125444/1, "Fluid dynamics and mixing behaviour in orbitally shaken bioreactors for mammalian cell cultivation", April 2009 – March 2012
- Alinghi project for the 33rd America's Cup, 2009-2010
- Principal investigator, HP2C High Performance and High Productivity Computing, HPC for Cardiovascular System Symulation, 2010-2012
- Principal investigator, FP7 ICT Project, Grant 224635, VPH2 – Virtual Pathological Heart of the Virtual Physiological Human, 2008-2011
- Principal investigator at the Politecnico di Milano of more than 50 research contracts funded by private companies on a broad variety of problems ranging from oil exploration, optimization of industrial processes, simulation of optical devices, nanomaterials, drug delivery, optimization of yacht and rowing hull performances, etc.
- Modeling and simulation of the human cardiovascular system with application to the diagnosis, treatment and surgical planning of cardiovascular diseases, Swiss-Brazilian Joint Project, September 2010 - August 2012
- Holder of an ERC Advanced Grant on Project "MATHCARD", 2009-2014
- Principal investigator, Swiss National Science Foundation, Project Nr. 200021-122136/1 « Reduced basis methods for the optimization of complex systems» January 2009- December 2011.

- CADMOS - Center for Advanced Modeling Science - cooperation between the University of Geneva, the University of Lausanne and EPFL.
- Principal investigator, Swiss National Science Foundation, Project Nr. 200021-135444 "Numerical simulation of a sailing boat: dynamics and shape optimization" April 2011- March 2013
- Principal investigator, Swiss National Science Foundation, Project Nr. 200021-141034/1 "Model reduction strategies for control, optimization and uncertainty quantification of parametrized systems », May 2012-2015
- Principal investigator, Swiss National Science Foundation, Project Nr. 200021E-140184/1 "Domain decomposition based fluid structure interaction algorithms for highly nonlinear and anisotropic elastic arterial wall models in 3D for the prediction of transmural stress distributions" October 2012- October 2015
- Principal investigator, Swiss National Science Foundation, Project Nr. 200021-147133 "Isogeometric analysis for partial differential equations: surface mdels and optimization problems in haemodynamics" May 2013- May 2016
- Holder of the ERC PoC (Proof of Concept) Award "From Math to Ward", 2012-2013
- Co-Principal investigator, PASC 2014
- Holder of the ERC PoC (Proof of Concept) Award "Math4AAARisk", 2015-2016
- Holder of the ERC Advanced Grant "iHEART", 2017-2022 (2.351 MEuros)
- Principal Investigator ot the PRIN Project "Modeling the heart across the scales: from cardiac cells to the whole organ", 2019-2022
- Principal Investigator of the Project "Un modello epidemiologico per analisi di scenario per l'epidemia COVID-19 in Italia", 2021-22, with DipoFAM – Presidenza del Consiglio dei Ministri, the Italian Governement
- Principal Investigator ot the FISR-2020 Project " Modellazione matematica degli effetti di COVID-19 sulla funzione cardiaca", 20210-22

Distinguished (and Named) Lectures

- Fifth International Conference on Computing Methods in Applied Sciences and Engineering, Versailles (France), December 1981, plenary lecturer
- First Int. Symp. on Domain Decomposition Methods for PDEs, Paris (France), 9 January 1987, plenary lecturer
- 2nd Int. Symp. on Domain Decomposition Methods for PDEs, Los Angeles (California), 15 January 1988, plenary lecturer
- ECMI (European Conference on Mathematics in Industry), Glasgow, August 1988, plenary lecturer
- First European Congress of Mathematics, Paris, 10 July 1992, keynote lecturer
- ICFD, Oxford, 4th Conference on Numerical Methods for Fluid Dynamics, 4 April 1995, plenary lecturer
- 3rd Intern. Conf. on Industr. and Applied Math. (ICIAM), Hamburg, 3-7 July 1995, plenary lecturer
- Carnegie-Mellon University, Pittsburgh (PA), International Conference on Modern Computational and Applied Mathematics, 11-13 April 1996, keynote lecturer
- Université de Grenoble (France), IMAG-INRIA Colloquium, 21 January 1999
- INRIA Monthly Colloquium, INRIA Rocquencourt, France, 20 April, 1999
- Winterthur, Switzerland, 1 September 1999: Conference of the European Society of Education in Engineering, plenary lecturer
- University of Macau, China, 11-14 January 2000, Int. Conf. On Mathematics and its Role in Civilization, plenary lecturer
- University of Magdeburg (Germany), Int.Conf. on Hyperbolic Problems (HYP2000), 27 February - 2 March 2000, plenary lecturer
- University of Goettingen (Germany), Annual GAMM Conference (GAMM2000), 3-7 April 2000, plenary lecturer
- Mathematical Webs Int. Conf., University of Coimbra, Portugal, 18-20 October 2000, plenary lecturer
- Fourth ENUMATH International Conference on European Numerical Mathematics, Ischia, Italy, 23-28 July 2001, plenary lecturer

- Distinguished Series on High Performance Computing, Singapore-MIT Alliance, MIT, November 28, 2001
- Scuola Normale Superiore (Pisa, Italy), Galileian Chair, distinguished lectures, February 2002
- ICM 2002, Beijing, August 2002, invited lecturer (Section 17 : Applied Mathematics)
- JSIAM2002, 21 September 2002, Keio University, Japan, plenary lecturer
- A. K. Aziz Lecture 2003, University of Maryland, College Park, MD, 7 March 2003
- 16th International Conference on Domain Decomposition Methods, New York University, 12 January 2005, plenary lecturer
- International Mediterranean Congress of Mathematics, Almeria, Spagna, 6-10 June 2005, keynote lecturer
- Karlovitz Lectures 2005, Georgia Institute of Technology, Atlanta, USA, 20-21 October 2005
- ICM2006, International Congress of Mathematicians, Madrid, Spain, August 2006, plenary lecturer http://www.mathunion.org/Videos/ICM2006/muster.php?quarteroni2006
- Lagrange Lecture 2007, University of Turin, 7 May 2007
- International Euler Symposium, Basel, 31 May 2007, plenary lecturer
- SIAM Conference on Analysis of Partial Differential Equations, Phoenix (AZ), USA, 28 November 2007, plenary lecturer
- IMA, University of Minnesota, Minneapolis, 13 February 2008, Math matters public lecture
- Festival della Matematica, Rome, Auditorium della Musica, Lectio Magistralis, 16 March 2008
- WCCM8-ECCOMAS08, Venice, 30 June 2008, plenary speaker
- Santalo' Lecture 2008, Universidad Complutense de Madrid, 16 October 2008
- Alan Tayler Lecture 2008, University of Oxford, 25 November 2008
- Frontiers Lectures, Texas A&M University, College Station, 1-5 February, 2010
- The XXVth Courant Lecture 2010, 29th April 2010
- Colloquium on the 100th anniversary of the Real Sociedad Matematica Espanola, La Coruna, Spain, 9th May, 2011
- The R.Mitchell lecture 2011, 24th Biennial Conference on Numerical Analysis, University of Strathclyde, Glasgow, June 2011
- The Harold J. Gay Lecture, WPI (Worcester Polytechnic Institute), 13 April 2012 http://www.wpi.edu/academics/Depts/Math/News/lectureseries.html
- The Feng Kang Lecture 2013, Chinese Academy of Sciences, Beijing, 7 May 2013 http://lsec.cc.ac.cn/fengkangprize/Fkdl-2013.htm

- Colloquia Patavina, Mathematics Department, University of Padova, 25 March 2014
- The IMA Lighthill Lecture, BACM 2014, Cardiff University, 28 April 2014 http://mathsevents.cf.ac.uk/bamc2014/
- EMS distinguished speaker 2014, FJIM 2014, Bilbao, June 30 – July 4, 2014 http://www.euro-math-soc.eu/node/1810
- PACM Colloquium, Princeton University, 21 September 2015
- ECCOMAS 2016 plenary lecture, Crete, June 6-10, 2016
- CMBE17, Opening Lecture, Pittsburgh, 10 April 2017 http://www.compbiomed.net/2017/invited-speakers.htm
- The Euler Lecture 2017 (Euler-Vorlesung 2017), Potsdam, 19 May 2017 http://www.euler-lecture.berlin/archiv.html
- Distinguished PDE Lecture Series, Lecturer 2017, Vienna Center for PDEs, Vienna, 6 June 2017 http://viennapde.tuwien.ac.at/events/pdelectures.html
- Colloquium, Institute of Mathematics Universitat de Barcelona, 18 October 2017
- Colloquium, Department of Mathematics, University of Maryland, 2 February 2018
- The Keith Stewartson Memorial Lecture, St Andrews, Scotland, 26 March 2018
- The Marker Lectures 2018, Penn State University, State College, October 2018 https://math.psu.edu/sites/default/files/section/MarkerBrochure%20AQ.pdf
- The Pedro Nunes Lectures 2018, Lisbon, Coimbra and Porto, November 2018 http://www.cim.pt/agenda/event/196
- LIFD Annual Lecture 2020, Leeds Institute of Fluid Dynamics, 10 February 2020
- The Sneddon Lecture 2021, The University of Glasgow, 4 May 2021

- 8ECM (European Congress of Mathematics), Opening Plenary Lecture, Portoroz, Slovenia, 21 June 2021
- The David Gottlieb Memorial Lecturship on Scientific Computing 2023, Brown University, April 3, 2023
- The Lagrange Lecture 2023, ICIAM2023 Conference, Tokyo, Japan, August 24, 2023
- The Piola Lecture 2024, University of Pavia, Italy, 1 October 2024
- Lecons Jacques Louis Lions 2024, Paris Sorbonne Université, 14-17 October 2024
- Lectio Magistralis, Opening of the Genova Science Festival, Genua, Italy, 24 October 2024
- The Blaise Pascal Lecture in Mathematics 2024, Lisbon Academy of Sciences, 30 October 2024
- Göran Gustafsson Lectures in Mathematics 2025, KTH, Stockholm, September 2025
- The Olof B. Widlund Lecture 2026, University of Bogotà, Colombia

Organization of International Conferences and Workshops (chair)

- First International Conference on Spectral and High Order Methods (ICOSAHOM), Como, Villa Olmo, June 1989 (co-chairman)
- Sixth International Conference on Domain Decomposition Methods, Como, Villa Olmo, (Italy) June 1992 (chairman)
- Workshop on Computational Fluid Dynamics, Scuola Normale Superiore, Pisa, (Italy) October 1993 (chairman)
- Workshop on Control Theory for Industrial applications, Scuola Normale Superiore, Pisa, (Italy) January 1996 (co-chairman)
- ESF European Research Conference on Mathematical and Numerical Models for the Simulation of Turbulent and Reactive Flows, Strasbourg, France, February 1996 (chairman)
- School on Numerical Approximation of Partial Differential Equations, International Center for Theoretical Physics, Trieste, (Italy) September 1996 (director)
- International Conference on Advanced Numerical Methods for Partial Differential Equations, International Center for Theoretical Physics, Trieste, (Italy) September 1996 (chairman)
- Workshop on "Images: Treatment, Analysis, Industrial and Medical Applications", Scuola Normale Superiore, Pisa (Italy), 11-14 January 1997 (co-director with Prof. P. L. Lions)
- C.I.M.E. Course on Advanced Numerical Approximation of Discontinuous Solutions of Conservation Equations, Cetraro, (Italy) June 1997 (director)
- Workshop on Parallel Computing in Applied Fluid Mechanics, Scuola Normale Superiore, Pisa, (Italy) September 1997 (co-director with Prof. T. Tezduyar)
- First AMIF International Conference, San Feliu de Guixol (Spain), 30 September - 3 October 1998 (co-chairman with P. L. Lions)
- Workshop on Advances on Stabilized Methods for Partial Differential Equations with Emphasis on Fluid Mechanics, Scuola Normale Superiore, Pisa, (Italy) April 1999 (with Prof. T. J. R. Hughes)
- Summer School on Computational Fluid Dynamics, Coimbra, Portugal, July 1999
- Second AMIF International Conference, Il Ciocco, Tuscany (Italy), 12-14 October 2000 (co-chairman with P. L. Lions)
- Workshop on Modelling and Simulation of Viscoelastic and Non-Newtonian Fluids, Scuola Normale Superiore, Pisa, (Italy) October 2000 (with Prof. A. Fasano)
- Workshop on Cardiovascular System: from Mathematical Models to Clinical Applications, MOX, Politecnico di Milano, 6-8 March 2002
- Summer School on Mathematical Modelling of the Cardiovascular System, EPFL, Lausanne, August 25-30, 2003
- 1st International Symposium on Modeling of Physiological Flows (MPF2003), EPFL, Lausanne, 1-3 September 2003
- Workshop (Progetto Intergruppo INDAM 2004): 'Integrazione di sistemi complessi in biomedicina: modelli, simulazione, rappresentazioni', Bergamo, Italy, 22-24 November 2004
- 2nd International Symposium on Modeling of Physiological Flows (MPF2005), Sesimbra, Portugal, 31 March-2 April, 2005
- Third International Symposium on Modeling of Physiological Flows (MPF2006), Bergamo, Italy, 25-27 September 2006

- MATHKNOW08, Mathematics and Knowledge, Politecnico di Milano, Milan, 22-24 May 2008, co-chair
- EMS-SMI Summer School on Mathematical and Numerical Models of the Cardiovascular System, Cortona, Italy, 18-30 August 2008
- Advances in Matematical Analysis, Workshop, EPFL (Lausanne), 26-27 March 2009
- Minisymposium on Coupled problems : analysis, simulation, applications, SIAM EDP Conference, Miami, FL, 6-10 December 2009
- CECAM Workshop on « Trends in Computational Hemodynamics », Lausanne, Switzerland, 10-12 May 2010
- 4th Int. Symposium on Modelling of Physiological Flows (MPF 2010), Chia Laguna, Sardinia, 2-5 June 2010
- Workshop on Computational Mathematics in Science and Engineering, CADMOS, EPFL, Lausanne, 1-2 September 2010
- Rocca MIT-PoliMi Workshop on Reduction Strategies for the Simulation of Complex Problems, Milan, 19-21 January 2011 (co-organizer : Anthony T Patera)
- IMA Thematic Year on Simulating Our Complex World: Modeling, Computation and Analysis, September 1, 2010 - June 30, 2011 – Co-organizer
- IMA Workshop on Computing in Image Processing, Computer Graphics, Virtual Surgery, and Sports, 5-11 March 2011, Co-organizer.
- ACMAC (Archimedes Center for Model, Analysis and Computation), Modern Techniques in the Numerical Solution of Partial Differential Equations Workshop, September 19-23, 2011, Heraklion, Greece, Organizing Committee
- RISM 3, Riemann International School of Mathematics on Multiphysics and Multiphase Flows, Verbania, 25-30 September 2011, Director
- International Conference on Scientific Computing, SC 2011, S.Margherita di Pula, Sardinia, Italy, October 10-14, 2011, Co-organizer (with Carsten Carstensen) of the minisymposium on Numerical Approximation of PDEs
- Workshop on Free Surface Flows: Numerical Methodologies and Application to Naval Architecture, SISSA, Trieste, 23-24 February 2012, Organizing and Scientific Committee
- CECAM Workshop on Reduced Basis, POD and Reduced Order Methods for model and computational reduction: 14-16 May, 2012, Co-organizer (with G.Rozza)
- SIAM Annual Meeting 2012, Minneapolis, MN, 9-13 July 2012, member of the Organizing Committee
- 5th International Symposium on Modelling of Physiological Flows (MPF 2013), Chia Laguna, Sardinia, 11-15 June 2013
- RISM (Riemann International School of Mathematics) 2019, Varese, Italy, 22-24 July 2019
- International Conference on Modeling the Cardiac Function (MCF), 2019, 2021, 2022 (Chair)
- 7th International Conference on Computational and Mathematical Biomedical Engineering, Milan, 28-30 June 2022 (Honorary Chair)
- Interfaces and Unfitted Discretization Methods, Institute Mittag-Leffler, Stockholm, co-organizer, Fall 2025

Colloquia, Seminars and Other Invited Talks

1977

- International Congress of Mathematicians, Helsinki University, August 1977

1978

- Institut für Angewandte Mathematik, Bonn University, October 1978

1979

- Congresso dell'Unione Matematica Italiana, University of Palermo, September 1979

1980

- Laboratoire d'Analyse Numérique, University of Paris VI: February 1980 and March 1980
- Oberwolfach Meeting on "Finite Elements", Oberwolfach (Germany), August 1980

1981

- Politecnico of Torino (Italy), January 1981
- Department of Mathematics of the University of Tel Aviv (Israel), May 1981
- Ecole Polytechnique Fédérale of Lausanne (Switzerland), May 1981

1982

- Institute for Computer Applications in Science and Engineering (ICASE) (NASA Langley Research Center, Hampton, Virginia), May 1982
- Workshop on "Spectral Methods for Partial Differential Equations", Hampton (Virginia), August 1982
- Euromech 159 on "Spectral Methods in Computational Fluid Dynamics", Nice (France), September 1982

1983

- Laboratoire d'Analyse Numérique, University of Paris VI: June 1983
- C.I.M.E. Course on Numerical Methods in Fluid Dynamics, Como (Italy), July 1983
- French-Soviet-Italian Symposium on Computational Mathematics and Applications INRIA-Novosibirsk
- Pavia Meeting, Rocquencourt (France), December 1983

1984

- First German-Italian Symposium on "Applications of Mathematics to Technology", Rome, March 1984
- Institute for Computer Applications in Science and Engineering (ICASE) (NASA Langley Research Center, Hampton, Virginia), April 1984
- I.M.A., Institute of Mathematics and Applications, Minneapolis (Minnesota), November 1984
- Department of Mathematics of the University of Maryland, College Park (Maryland), November 1984
- Department of Mathematics, University of Chicago, November 1984
- Institute for Computer Applications in Science and Engineering (ICASE) (NASA Langley Research Center, Hampton, Virginia), December 1984

1985

- Oberwolfach meeting on "Multivariate Approximation Theory", January 1985
- School of Mathematics, University of Minnesota, Minneapolis, February 1985
- Ecole Polytechnique, Centre de Mathematiques Appliquees, Palaiseau (France), October 1985
- Laboratoire d'Analyse Numérique, University of Paris VI: October 1985
- Department of Mathematics, University of Rennes (France), December 1985
- Seventh International Conference on Computing Methods in Applied Sciences and Engineering, Versailles (France), December 1985

1986

- Department of Mathematics, Università La Sapienza, Rome (Italy), January 1986
- INRIA School on "Spectral methods for nonlinear problems", Rocquencourt (France), January 1986
- I.M.A., Institute of Mathematics and Applications, Minneapolis (Minnesota), September 1986

1987

- INRIA Sophia Antipolis, France, 27 February 1987
- INRIA "School on Spectral Methods, for nonlinear problems 2", Rocquencourt (France), 24 March 1987
- SASIAM, Tecnopolis, Bari (Italy), 7 May 1987
- Istituto per le Applicazioni del Calcolo-C.N.R., Rome, 9 May 1987
- Politecnico of Milan (Italy), 11 May 1987
- Scuola Normale Superiore of Pisa (Italy), 19 May 1987
- Akademia Nauk., Moscow, 22-26 June 1987

- 2nd Int. Symp. on Vector and Parallel Computers, Accademia Nazionale dei Lincei, Rome, 22 September 1987

1988

- M.I.T., Cambridge (Massachussetts), 12 January 1988
- ICASE, NASA Langley Research Center, Hampton (Virginia), 19 January 1988
- SASIAM, Tecnopolis, Bari (Italy): Course on Computational Fluid Dynamics, 14-18 March 1988
- Politecnico of Milan (Italy), 25 March 1988
- Third German-Italian Symposium on "Applications of Mathematics to Technology", Siena, June 1988
- ICASE, NASA Langley Research Center, Hampton (Virginia), 7 September 1988
- International Meeting on Parallel Computing: Methods, Algorithms, Applications, Verona (Italy), 29 September 1988
- Department of Mathematics, University of Padova (Italy), 7 December 1988

1989

- Summer School on Domain Decompositions, Lambrecht, Pfalz Akademie (W. Germany), 1-5 May 1989 (cospeaker: prof. A.T.Patera, M.I.T., Cambridge)
- IBM Europe Institute on "Numerical Software", Garmisch (W. Germany), 1-5 August 1989
- International Conference on "Numerical Methods for Scientific Computing", Rolf Nevanlinna Institute, Helsinki, 20-25 August 1989
- Summer School on "Efficient Methods for Partial Differential Equations", University of Jyvaskyla, Finland, 28 August - 1st September 1989 (as unique speaker)
- Venice, Italy: 1-4 October 1989: Int. Symp. on Applied and Industrial Mathematics
- Pavia, Italy: October 5, 1989, Fourth Italian-French-Soviet Symposium on Computational Mathematics and Applications

1990

- Minnesota Supercomputer Institute, Minneapolis, March 16, 1990
- Department of Computer Science, Purdue University, Lafayette, March 17, 1990
- 8th Int. Conference on Water Resources, Venice, 11-15 June 1990
- SERC Summer School on Numerical Analysis, Lancaster (U.K.), 16-20 July 1990 (main speaker)
- 2nd WCCM, Stuttgart (West Germany), 27-31 August, 1990
- Army High Performance Computing Research Center, Minneapolis, 13 November 1990

1991

- Minnesota Supercomputer Institute, Minneapolis, 6 February 1991
- California Institute of Technology, Pasadena, 25 February 1991
- University of California at Los Angeles, 26 February 1991
- 5th Int. Conf. on Domain Decomposition Methods, Norfolk, VA, 6 May 1991
- University of Maryland, College Park, 9 May 1991
- 1st U.S. Conference on Computational Mechanics, Chicago, 22 July 1991
- University of Hong Kong, 16 August 1991
- Hangzhou (China), International Conference on Scientific Computing, 21 August 1991
- Shanghai University of Science and Technology, 26 August 1991
- Computer Centre of Academia Sinica, Beijing, 29 August 1991
- Catania, XIV U.M.I. Symposium, keynote lecture, 20 September 1991

1992

- Montpellier, 2nd ICOSAHOM, 22-26 June 1992, (keynote lecturer)
- Cagliari, International Conference on Numeric Intensive Computation in Physics and Chemistry, September 1992

1993

- Rome, International Conference in Numerical Analysis for Partial Differential Equations, January 1993

- Sophia Antipolis, (France), Numerical Tools in Scientific Computation with Applications to Flow, Turbulence and Combustion, 17-19 March 1993
- Minneapolis, IMA Workshop on Adaptive Methods, 19-23 July 1993
- Barcelona, Tutorial on Domain Decomposition Methods, 16-18 September 1993, (keynote lecturer)
- Heidelberg, Workshop on Mathematical and Numerical Methods for Navier-Stokes Equations, 25-28 October 1993

1994

- Von Karman Institute, Bruxelles, 10 March 1994. - Penn-State University, State College, PA, 22 April 1994
- Minnesota Supercomputer Institute, Minneapolis, (U.S.A), Workshop on Domain Based Parallelism, 24 April 1994
- Stuttgart, 2nd ECCOMASS Conference, 5-8 September, 1994 (keynote lecturer)
- Scuola Normale Superiore, Pisa, 8 November 1994
- Institut Henry Poincaré, Paris, 21 November 1994

1995

- University of Stuttgart, 27 January 1995
- San Antonio, TX, SIAM Geosciences Meeting, 10 February 1995
- ISMES, Bergamo (Italy), Quality of Scientific and Technical Computing, 11 April 1995
- Roma, Università "La Sapienza", 26 May 1995
- NATO-ASI School on Hypersonic Flows, Maratea, 27-31 May 1995 (keynote lecturer).
- ICIAM, Hamburg, July 1995, Plenary Speaker
- IMACS, International Conference on "Three Dimensional Complex Flows", EPFL, Lausanne, 13-15 September 1995 (keynote lecturer)
- Tunis, International Conference on "Numerical Modeling of Oil Reservoirs", 20-21 September 1995
- Pavia, French - Italian - Russian Symposium, October 13, 1995
- Venice, FEMIF 95, 19 October 1995 (keynote lecturer)
- Montreal, Workshop on Numerical Methods in Fluid Mechanics, 11-16 November 1995, (main lecturer)
- M.I.T., Cambridge (Massachusetts), Dept. of Mech. Eng., 17 November 1995

1996

- University of Pisa, Dept. of Math., 11 January 1996
- ETH (Polytechnic of Zurich), Parallel CFD Days, 13 March 1996
- University of Maryland, College Park, Dept. of Math., 9 April 1996
- Parallel CFD Conference, Capri, 19-23 May, 1996 (keynote lecturer)
- SIMAI-GAMM Conference, Pavia, 29 May 1996 (keynote lecturer)
- International Linear Algebra Year Conference, CERFACS, Toulouse, 11-14 June, 1996
- International Conference in Theoretical and Numerical Fluid Mechanics, Vancouver, 29 July - 2 August, 1996
- AHPCRC, University of Minnesota, 9 August, 1996
- School of Mathematics, University of Minnesota, Minneapolis, 12 August 1996
- Eccomas, Paris, 9-13 September 1996, Organizer of a minisymposium
- First Italian-Latin American Conference on Computational Mechanics, Padova, Italy, 26 September 1996 (keynote lecturer)
- Polytechnic of Turin, 14 October 1996
- Annual Conference on Scientific Research, Accademia Nazionale dei Lincei, Rome, 22 October 1996

1997

- CIRIC seminar, Politecnico di Milano, 28 January, 1997
- International Conference on Mathematical and Numerical Aspects of Fluid Mechanics, Lisbon, 27 February - 2 March, 1997
- Scientific Computing for the 21st Century, Tours, 6-7 May, Conference in honor of R.Glowinski

- International Conference on Theoretical and Computational Aspects of Navier-Stokes Equations, Varenna (Italy), 4 June 1997
- International Conference on Numerical Modeling in Continuum Mechanics, , Prague, 8-11 September 1997, (keynote lecturer)
- Workshop on Parallel Computing in Applied Fluid Mechanics, Scuola Normale Superiore, Pisa, (Italy) september 97 (lecturer)
- International Conference on Stability of Waves, Monopoli (Italy), october 97 (lecturer)
- University of Pisa, 14 October 1997
- Lombard Academy of Sciences, 23 October 1997
- Diderot Mathematical Forum, Venezia 18-19 December 1997, (lecturer)

1998

- Brown University, 21 January 1998
- Courant Institute, New York University, Conference in honour of Olof Widlund, 24 January 1998
- University of Kaiserslautern, Germany, 10-12 February 1998: compact course on Domain Decomposition Methods in Fluid Dynamics (10 hours)
- ITWM-Kolloquium, ITWM, University of Kaiserslautern, Germany, 13 February 1998
- Oberwolfach, Domain Decomposition and Multifield Problems, 27-30 April 1998
- Trieste (Italy), International Workshop on Nonlinear Conservation Laws, 14 May 1998
- Marseille, CaNum98, 21 May 1998
- Paris, Conference in honour of Jacques-Louis Lions, 27 May 1998
- University of Greenwich, 11th Int. Conf. on Domain Decomposition Methods, 23 July 1998
- NATO-ASI School on Adaptive Methods, Antalia, Turkey, 10-20 August 1998 (4 lectures)
- Centro Volta, Como (Italy), International School oon Turbulence, 7 September 1998
- Annual Meeting of the Swiss Mathematical Society, Airolo, 23 September 1998
- ETH Zurich, 50th anniversary of SAM (Seminar of Applied Mathematics), 18-22 November 1998

1999

- Scuola Normale Superiore, Pisa (Italy), Workshop on Stabilized Methods, 19 April 1999
- Monte Verità, Ascona (Switzerland), Workshop "Computational Sciences and Engineering", 4 May 1999
- Coimbra (Lisbon), 12-17 July, 1999, Summer School on Computational Fluid Dynamics, keynote lecturer (5 lectures)
- University of Boulder, Colorado, 4-6 August 1999: U.S. National Conference on Computational Mechanics, invited talk
- Department of Mathematics, University of Texas at Austin,10 August 1999
- University of Heidelberg, 6 September 1999, EMS-IWR Summer School, keynote lecturer
- University of Marseille, 13 September 1999, Conference on the State of the Art in CFD, keynote lecturer
- University of Ferrara, Italy, 15 September 1999, Int. Conf. on Navier-Stokes Equations, keynote lecturer

2000

- Intern. Conf. On Navier-Stokes Equations (Conference in honour of John Heywood), Capo-Miseno (Italy), 28-31 May 2000, plenary lecturer
- University of Aachen, 30 June 2000
- IMACS2000 International Conference, Lausanne, 21-25 September 2000, invited lecturer at AMIF Minisymposium
- ECCOMAS2000 International Conference, Barcelona, 11-14 October 2000, keynote lecturer
- Int.Symp. on Mathematical Modeling and Numerical Simulation in Continuum Mechanics, Yamaguchi University, Japan, Sept.29 - Oct.3, 2000, plenary lecturer

2001

- Instructional Conference on Nonlinear Partial Differential Equations, Heriot-Watt University, Edinburgh, 12 January 2001, invited lecturer

- International Workshop on « Simulation in Hemodynamics », University of Chicago, 21-23 March, 2001, invited lecturer
- International Conference on « Mathematics and Culture 2001 », Venise, 30-31 March 2001, invited lecturer
- International Conference on Contemporary Challenges in Applied Fluid Mechanics, Cape Miseno, Italy, June 1-5, 2001, invited lecturer
- 19th Biennial Conference on Numerical Analysis, University of Dundee, 26-29 June 2001, invited lecturer
- Symposium on Haemodynamics, ISB Congress 2001, Zurich, 8-12 July, 2001, invited lecturer
- Equadiff 10, Prague, 27-31 August, 2001, invited lecturer
- First SIAM/EMS Conference, Berlin, September 2-6, 2001, plenary lecturer
- Swiss-Japanese Seminar on « New Directions in Cellular and Tissues Biomechanics », 24-28 September, 2001, invited lecturer
- IPERCT01, National Conference on Hyperbolic Problems, Catania, Italy, 23 November 2001, invited lecturer
- Université de Paris VI, Seminaire d'Analyse Numérique, December 7, 2001

2002

- Max-Planck Institute for Mathematical Sciences, Leipzig, Germany, 18 January 2002
- International Workshop on Cardiovascular System: from Mathematical Modelling to Clinical Applications, Milan, March 8, 2002, invited lecturer
- Vismath 2002, Berlin, May 25, 2002, plenary lecturer
- University of Trento, Faculty of Engineering, 6 June 2002
- FBP2002 (International Conference on Free Boundary Problems), Trento, June 7, 2002, invited lecturer
- EMSTB, 5th International Conference on Mathematical Modeling and Computing in Biology and Medicine, University of Milan, 2-6 July, 2002
- WCCM5, Wien, July 8, 2002, minisymposium on Stabilized and Multiscale Finite Elements
- MSRI Summer School on Blood Flow, 29 July - 2 August, 2002, keynote lecturer
- International Conference on Nonlinear Partial Differential Equations, City University of Hong Kong, 29 July - 2 August, 2002, invited lecturer
- Kyushu University, Fukuoka (Japan), 17 September 2002
- The University of Electro-Communication, Tokyo, 24 September 2002
- University of Linz, Kepler Colloquium, November 5, 2002
- University of Vienna, Department of Mathematics, Colloquium, November 6, 2002
- Annual Ercoftac meeting, LEC (Leonard Euler Center), EPFL, Lausanne, 8 November 2002 (keynote speaker)
- Lombard Academy of Sciences, Milan, November 15, 2002
- Technical University of Berlin, International Conference on « Mathematics for Key Technologies », invited speaker, November 21, 2002
- Cogne, Italy, PRISTEM Annual Meeting, invited speaker, November 23, 2002
- Picone Lecture, University of Rome La Sapienza, December 6, 2002

2003

- Newton Institute, University of Cambridge, UK, invited speaker, January 24, 2003
- Mathematics Colloquium, University of Maryland, College Park, MD, 6 March 2003
- CHUV (University Hospital), Lausanne, European Meeting on Congenital Heart Diseases, invited lecture, March 29, 2003
- CERN Colloquium, Geneva, Switzerland, June 5, 2003
- University of Pavia, Conference in honour of Prof. E. Magenes, invited lecture, June 19, 2003
- University of Madeira, Portugal, Int. Conf. On Nonlinear Partial Differential Equations, invited lecture, June 27, 2003
- ICIAM2003, Sydney, invited lecture in a minisymposium, July 10, 2003
- HERCMA 2003, Athens, September 2003, plenary lecture.
- WIAS, Berlin, September 2003, lecture series
- University of Trieste, 10 October 2003

- Third Italo-Chinese International Conference, Grado, Italy, November 17, 2003
- Journee Calcul Scientifique et Applications Technologiques, Marcel Dassault Aviation, St. Cloud, Paris, November 27, 2003, invited lecture
- University of Crema, December 1st, 2003, invited seminar
- Museum of Science and Technology "Leonardo Da Vinci", Milan, December 9, 2003
- University of Florence, Italy, December 15, 2003

2004

- WONAPDE 2004, Concepcion, Chile, January 13, 2004, Plenary Lecturer
- University of Bologna, Italy, February, 18, 2004, invited seminar
- Istituto Lombardo di Scienze e Lettere, Milan, February, 19, 2004, Opening Conference Cycle
- Universitad autonoma de Madrid, Spain, March, 1-5, 2004, lecture series
- Rice University, Houston, USA, April 7-9, 2004, Conference: Advances in Computational Mechanics, Invited Plenary Lecturer
- Lugano and Locarno, Ticino, Switerland, May 3, 2004, Lecturer
- DD60 Science Festival, Berlin, Germany, May 7, 2004, Plenary Lecturer
- Catholic University Brescia, Italy, May 20, 2004, Invited Lecturer
- EPFL, Lausanne, High Tech Cars' day, May 27, 2004, Invited Lecturer
- ASM 2004, Applied Simulation and Modelling, IASTED, Rhodes, Greece, June 28-30, 2004, Invited Plenary Lecturer
- ICCFD 3, Utias, Toronto, Canada, July 12-16, 2004, Invited Plenary Lecturer
- ECCOMAS 2004, Jyvaskyla, Finland, July 24-28, 2004, Invited Plenary Lecturer
- CEMRACS 04, Marseille, France, July 26-30, 2004, Summer School Lecturer
- Nuova Scienza, Nuova Industria, Le sfide per la nuova Europa, Accademia dei Lincei-Fondazione Edison, Roma, Italy, 13-14 october 2004, Lecturer
- Istituto Lombardo di Scienze e Lettere, Omaggio a Eugenio Beltrami, 15 October 2004, Milan
- XXIV Congresso UMI-CIM, Matematica, Scuola, Societa', 21-22 October 2004, Catania, Italy, Plenary lecturer
- Matematica e Cultura, University of Bologna, 23 October 2004, Plenary lecturer
- International Conference on the Research Trend for PDE Modeling and Computation, Brown University, 7-8 November 2004, Providence, RI (USA)
- University of Modena, Italy, 6 December 2004, invited seminar

2005

- University of Naples, Italy, 3 February 2005, invited seminar
- "Alla Corte di Federico II", Naples, Italy, 3 February 2005, Colloquium
- University of Bari, Italy, two invited seminars, 11-12 March 2005
- Matematica e Cultura 2005, Venice, Italy, plenary talk, 18 March 2005
- Conference in Locarno on America's Cup with J.A. Manson, 11 April 2005
- Conference in honour of Carlo Banfi, Catholic University of Brescia, plenary talk, 22 April 2005
- Fourth International Workshop on Scientific Computing and its Applications, Shanghai Jiaotong University, Shanghai, China, June 20-23, 2005
- Mathematical Models in Life Sciences: Theory and Simulation, Summer School, Dobbiaco, Italy, 1-5 July 2005, Lecturer
- System Modeling and Optimization, IFIP TC7 Conference, Politecnico di Torino, plenary talk, 18-22 July 2005
- International Conference on Advances in Numerical Mathematics, 60th Birthday of Y. Kuznetsov, Moscow, Russia, 16-17 September 2005, Invited speaker
- Computational Life Sciences Workshop, Innsbruck, Austria, 12-15 October 2005, Invited speaker
- Istituto Lombardo Scienze e Lettere, Milan, Italy, November 2005, contributed lecturer

2006

- FluBio, University of Genova, Italy, 7 March 2006, Plenary Lecturer
- University of Genova, Italy, 8 March 2006, Invited Seminar
- Museo Mineralogico Campano, Vico Equense, Italy, 18 March 2006
- Matematica e Cultura 2006, Ca'Foscari University, Venice, 24-26 March 2006, Invited Lecturer

- ECCOMAS summer school on fluid structure interaction, Ibiza, Spain, 3-7 May 2006, Lecturer
- Scientiae Munus, Parma, Italy, 8 May 2006, invited Seminar
- SIMAI 2006, Italian Society for Industrial Applied Mathematics, Baia Samuele (Ragusa), Italy, 22-26 May 2006, Invited Speaker in the Session "New Trends in Scientific Computing"
- Scientific Conference Series, University of Perugia, 5 June 2006, Invited Lecturer
- MAFELAP, Mathematics of Finite Element and Applications, Brunel University, UK, 13-16 June 2006, Invited Speaker
- Conference "Comportement asymptotique en mécanique des fluides", Bernoulli Centre, EPFL, Lausanne, 24 July 2006, Invited Speaker
- ICM 2006 (International Congress of Mathematicians), Madrid, August 2006, plenary lecturer
- International Conference on Multifields Problems, Stuttgart, 4-6 October, plenary talk
- Inauguration of Ulm Center of Scientific Computing, Ulm, 23 November 2006, invited speaker
- Cluster Symposium on Numerical Methods for Model Order Reduction, Eindhoven University of Technology, 6 December 2006, invited lecture
- Philips NXP, Eindhoven, 8 December 2006, invited seminar
- Cluster Symposium on Numerical Methods for Medical Applications, Eindhoven University of Technology, 13 December 2006, invited lecture

2007

- University of Pisa, 11 January 2007, colloquium
- University of Cassino, 5 February 2007, invited lecture
- Basel Computational Biology Conference, Basel, 13 March 2007, invited lecture
- Workshop on Geometric Tomography and Applications, Politecnico of Milano, 30 March 2007, invited lecture
- Lagrange Lecture, University of Turin, 7 May 2007
- International Euler Symposium, Basel, 31 May 2007, plenary lecture
- International Conference on Recent Developments of Numerical Schemes for Flow Problems, Kyushu University, Fukuoka, 27 June 2007, plenary lecture
- ICIAM 2007, Zurich, 19 July 2007, minisymposium on computational medicine, invited lecture
- International Conference of Theoretical and Numerical Fluid Mechanics III, Vancouver, 16 August 2007, plenary lecture
- Corso di Orientamento della Scuola Normale Superiore di Pisa, Rovereto, Italy, 2 September 2007, invited lecture
- Conference in honour of Jacques Rappaz on the occasion of his 60th birthday, 6 September 2007, Lausanne, invited lecture
- Workshop on Blood Modelling, Aachen, Germany, 21 September 2007, invited lecture
- Festa della matematica, Castel San Pietro, Bologna, 6 October 2007, invited lecture
- Ispettorato PI Milano, 9 October 2007, invited lecture
- 2nd GACM Colloquium on Computational Mechanics, Munich, 12 October 2007, plenary lecture
- Politecnico di Milano, Colloquia of the Doctoral School, 15 October 2007
- Galileian year, Piccolo Teatro, Milano, 24 October 2007, invited lecture
- Tecnologie CAE per l'industria, priorità e sfide, Stezzano, Italy, 25 October 2007, keynote lecture
- Genova Science Festival, Italy, 27 October 2007, invited lecture
- Conference on Blood Diseases, Lyon, 8 November 2007, invited lecture
- Year of Computational Sciences, Universidad Autonoma de Barcelona, 12 November 2007, public lecture
- Confindustria-Orientagiovani, Fabriano, Italy, 16 November 2007, keynote lecture
- Holst memorial, TU Eindhoven, 22 November 2007, plenary lecture
- SIAM Conference on Analysis of Partial Differential Equations, Phoenix (AZ), USA, 28 November 2007, plenary lecture

2008

- DD18, 18th International Conference on Domain Decomposition Methods, Hebrew University of Jerusalem, 16 January 2008, invited
- University of Florence, Lincei per la Scuola, public lecture, 2 February 2008
- IMA, University of Minnesota, Minneapolis, 13 February 2008, Math matters public lecture

- University of Houston, Department of Mathematics, Colloquium, 15 February 2008
- Rose School on Engineering Seismology, University of Pavia, 11 March 2008, 4 lectures
- Festival della Matematica, Rome, Auditorium della Musica, Lectio Magistralis, 16 March 2008
- Workshop on Present and Future Trends in Computational Modeling of the Cardiovascular System, Rio de Janeiro, 6-7 May 2008, 3 lectures
- CEFRIEL, Milan, invited seminar, 16 May 2008
- International Workshop on Mathematics and Water, Zaragoza, Spain, 19-21 May 2008, invited lecture
- International Conference on Mathematics and Knowledge, Politecnico di Milano, Milan, 22-24 May 2008, invited lecture
- CSFI08, National Conference on Computational Physics, invited lecture, 30 May 2008
- Politecnico di Milano, Mathematical Culture Lecture Series, invited lecture, 3 June 2008
- Oxford Centre for Nonlinear PDE, invited lecture, Oxford, 5 June 2008
- WCCM8-Eccomas 2008, plenary lecture, Venice, 30 June - 4 July 2008
- WCCM8-Eccomas 2008, Symposium in honor of Prof. G.Maier, invited talk, Venice, 30 June - 4 July 2008
- ESOF 2008, Barcelona, invited talk
- Pavia, Festival dei Saperi, open lecture, 6 september, 2008
- Scuola Normale Superiore di Pisa, Corso di Orientamento, San Miniato, 7 September 2008
- CASPUR workshop on Parallel Computing, Grottaferrata, 9 September 2008, four lectures
- SIAM-SIMAI Conference, Rome, 16 September 2008, plenary lecturer.
- Santalo' Lecture, Universidad Complutense de Madrid, 16 October 2008
- Faculty of Mathematical Science, Universidad Complutense de Madrid, 17 October 2008, invited seminar
- International Conference on New Trends in Industrial and Applied Mathematics, University of Catania, 10-13 November 2008, invited lecture
- CESAER (19th Conference of European Schools for Advanced Engineering Education and Research), invited speaker, Politecnico di Milano, 13 November 2008
- International Workshop on Advanced Numerical Methods in Seismology, University of Brescia, 17 November 2008, invited lecture
- Centre for Mathematical Sciences, University of Cambridge, DAMTP/CMS seminar, 21 November 2008
- University of Oxford, "Alan Tayler Lecture 2008", 24 November 2008

2009

- Warwick Mathematics Institute, EPSRC Symposium Workshop on New Directions in Computational PDEs, 15 January 2009, invited lecture
- Warwick Mathematics Institute, Department Colloquium, 16 January 2009
- University of Trento, Italy, Department of Mathematics Colloquium, 30 January 2009
- Lombard Academy of Science, invited lecture, 5 February 2009
- Vietnamese Academy of Science, Int Conf HPSC 2009, 3 March 2009, plenary speaker
- University of Roma "Tor Vergata", Department of Mathematics Colloquium, 16 March 2009
- ENIT (Ecole Nationale d'Ingénieurs de Tunis), Colloquium LAMSIN-ENIT, 24 April 2009
- Ettore Majorana Centre for Scientific Culture, Erice, International Conference on "Variational Analysis and Applications", 11 May 2009, invited lecture
- ECM2009 International Conference, Hong Kong Polytechnic University, 29 May 2009, plenary speaker
- Eccomas Conference on Coupled Problems, Ischia Island, 10 June 2009
- Technical University of Munich, International Conference for the 50th anniversary of Numerische Mathematik, invited lecture
- CIME-EMS Summer School in Applied Mathematics. Multiscale and Adaptivity: Modeling, Numerics and Applications, Cetraro 7-11 July 2009, invited lecturer (6 Lectures)
- ICCB 2009 (IV International Conference on Computational Bioengineering), Bertinoro, Italy, 16-18 September 2009, keynote lecture
- 17th OMG Congress – Annual DMV Meeting (joint conference between Austrian and German Mathematical Societies), Graz, Austria, 20-25 September 2009, plenary lecture

- Politecnico di Milano, Progetto Rocca, 28 September 2009
- 5th China-Italy Conference on Computational and Applied Mathematics, INDAM, Rome, invited lecture, 9 November 2009
- Scuola Superiore di Catania, University of Catania, plenary lecture, 21 November 2009
- Int. Conf. on Advances on Scientific Computing, Brown University, Providence, RI, invited lecture, 6 December 2009

2010

- SISSA, Trieste, Director's Colloquium, 7 January 2010
- Centro Tecnico Sportivo della Confederazione Svizzera, Tenero, Switzerland, public conference, 18 January 2010
- ICES Colloquium, University of Texas at Austin, 2 February 2010
- Frontiers Lectures, Texas A&M University, College Station, 1-5 February, 2010
- HAFS, High Order Flow Simulations, Lausanne, 15-16 February 2010, invited speaker
- International Colloquium on "Perspectives in Fundamental Research". Tata Institute of Fundamental Research, Mumbai, India, 2-6 March 2010, plenary speaker
- IAMCS workshop on Complex Fluid Dynamics, KAUST, Saudi Arabia, 22-25 March 2010, invited speaker
- ETH/UZH Kolloquium in Mathematics, University of Zurich, 27 April 2010
- The XXVth Courant Lectures 2010, Courant Institute, NYU, 29-30 April 2010
- CISM Course on Computational Fluid Structure Interaction, 6 Lectures, 6-7 September 2010, CISM, Udine, Italy
- Workshop on Variational Analysis and Aerospace Engineering, invited speaker, Ettore Majorana Center for Scientific Culture, Erice, Italy, 10 September 2010
- ICNAAM 2010, Rhodos, Creete, 19-25 September 2010, plenary speaker
- Symposium of Applied Mathematics, Lothar Collatz 100th Birthday, University of Hamburg, 7-8 October 2010, plenary speaker
- Colloquium, Mathematics Department, University of L'Aquila, 26 October 2010
- OxPDE Workshop on Partial Differential Equations, Oxford, 12 November 2010
- MIT Computational Engineering Seminar, MIT, Cambridge, 9 December 2010

2011

- Africomp, Cape-Town, 7 January 2011, plenary speaker
- Georgia Scientific Computing Seminar, keynote speaker, Emory University, 12 February 2011
- SIAM Conference on Computational Science and Engineering, Reno, Nevada, February 28 – March 4, 2011, plenary speaker
- SIAM Conference on Computational Science and Engineering, Reno, Nevada, February 28 – March 4, 2011, minisymposium on reduced order models for complex problems, invited speaker
- IMA Workshop on Computing in Image Processing, Computer Graphics, Virtual Surgery, and Sports, 5- 11 March, 2011, plenary speaker.
- TED Talk, Trieste, April 8, 2011 http://www.ted.com/talks
- Colloquium on the 100th anniversary of the Real Sociedad Matematica Espanola, La Coruna, Spain, 9th May, 2011
- Workshop on Fast Solution of Partial Differential Equations, Oberwolfach, 24 May 2011, invited speaker
- Jacques Morgenstern Colloquium, INRIA Sophia-Antipolis, 9 June 2011 http://www-sop.inria.fr/colloquium/intervenant.php?nom=Quarteroni&prenom=Alfio
- New Trends in Analysis and Control of Nonlinear PDEs, INDAM, Rome, 12-15 June 2011, invited speaker http://www.altamatematica.it/it/node/60
- Università Campus Biomedico, Rome, 14 June 2011
- Sixth Summer School in Analysis and Applied Mathematics, Università La Sapienza, Rome, 20-24 June 2011, keynote lecturer (6 hours) http://www.mat.uniroma1.it/people/garroni/School2011.html
- The R.Mitchell lecture 2011, 24th Biennial Conference on Numerical Analysis, University of Strathclyde, Glasgow, June 2011 http://www.mathstat.strath.ac.uk/naconf

- International Conference on Numerical Methods for Hyperbolic Equations. Theory of Applications, plenary speaker, Santiago de Compostela, 4-8 July, 2011 http://www.usc.es/gl/congresos/nmhetatoro65/index.html
- RISM 3, Riemann International School of Mathematics on Multiphysics and Multiphase Flows, Verbania, 25 and 30 September 2011, 2 keynote lectures http://www.mate.polimi.it/RISM3/
- International Conference on Scientific Computing, SC 2011, S.Margherita di Pula, Sardinia, Italy, October 10-14, 2011, invited talk
- Analysis and Numerics of Partial Differential Equations, In memory of Enrico Magenes, Pavia, 2-4 November 2011, invited lecture http://www.imati.cnr.it/magenes2011/
- University of Graz, Austria, 11 November 2011, SFB Colloquium
- Simula Research Laboratory, Oslo, Challenges in Computing, 15-16 December 2011, plenary speaker http://simula.no/about/challenges

2012

- Institut Camille Jourdan Colloquium, Université de Lyon-1, 30 January 2012, Lyon
- Workshop on High Order Numerical Approximation for PDEs, Hausdorff Center for Mathematics, Bonn, February 6-10 2012, invited talk
- BCAM, Basque Center for Applied Mathematics, Bilbao, Public Lecure, 21 February 2012 http://www.bcamath.org/documentos_public/archivos/actividades_cientificas/M4TEMOZIOAPosterandAbstract.pdf
- Harold J. Gay Lecture Series, WPI (Worcester Polytechnic Institute), 13 April 2012 http://www.wpi.edu/academics/Depts/Math/News/lectureseries.html
- Parallel CFD 2012, 24th International Conference on Parallel Computational Fluid Dynamics, May 21-25, 2012, Atlanta, plenary speaker http://sites.jsums.edu/parcfd2012/
- Industrial and Environmental Mathematics Day, Sevilla, 8 June 2012, keynote speaker
- Nexus 2012, Relationships between Architecture and Mathematics, Milan, 11-14 June 2012, Milan, plenary speaker
- ICCS 2012, International Conference on Computational Science, Shanghai Normal University, Shanghai, July 16-20, 2012, plenary speaker
- XI Franco-Romanian Colloquium, Bucharest, 24-30 August 2012, plenary speaker
- Barcelona ESF International Conference on "Applied Partial Differential Equations in Physics, Biology and Social Sciences: Classical and Modern Perspectives », Universidad Autonoma de Barcelona, 3-6 September 2012, keynote speaker
- ECCOMAS, Minisymposium on Multiphysics Problems, Vienna, 10 September 2012, keynote lecture
- IMA Conference on Mathematics of Medical Devices and Surgical Procedures, UCL, London, 18 September 2012
- Studium Generale Lecture, Opening Ceremony of the Eindhoven Multiscale Institute, TU Eindhoven, 24 October 2012
- Bocconi Pristem lecture, 16 November 2012

2013

- Public Lecture, Museo della Scienza e della Tecnologia, 150th birthday of Politecnico di Milano, 7 February 2013
- EU Regional Doctoral School, University of Aachen 18-19 February 2013, 2 minicourses
- Public Lecture, "I Venerdi dell'Universo", Sala Estense, Ferrara, Italy, 15 March 2013
- Laboratoire Jacques Louis Lions, Université Paris VI, 29 March 2013
- Department of Mechanical and Aerospace Engineering, Stanford University, 11 April 2013
- Scientific Computing and Imaging Institute (SCI) Distinguished Lecture, University of Utah, 12 April 2013
- Institute for Computational & Mathematical Engineering (ICME) Colloquium, Stanford University, 15 April 2013
- Feng Kang Prize 2013, public lecture, Chinese Academy of Sciences, Beijing, 7 May 2013
- Peking University, public lecture, 8 May 2013
- Feng Kang Prize 2013, academic lecture, Chinese Academy of Sciences, Beijing, 9 May 2013
- Istituto Lombardo di Scienze e Lettere, Milan, invited lecture, 15 May 2013
- Computational Phantom 2013, International Workshop, plenary speaker, 22 May 2013

- Doctoral Course at University of Santiago de Compostela, Spain, 16-19 July 2013
- Third Int. Workshop on Thin Structures, Naples, 5-7 September 2013, invited lecture
- AlfaClass, Lectio Magistralis, Politecnico di Torino, 13 September 2013
- University of Konstance, Mathematics Colloquium, November 28, 2013

2014

- ICERM Workshop on "From the Clinic to Partial Differential Equations and Back", Brown University, plenary speaker, 20 January 2014 http://icerm.brown.edu/tw14-1-pdecm
- Accademia delle Scienze dell'Istituto di Bologna, 3 February 2014
  http://www.matematica.unibo.it/it/eventi/giornate-della-sezione-di-matematica-dellaccademia-delle-scienze-dellistituto-di-bologna
- Recent Advances on Partial Differential Equations and Applications, Levico Terme, Italy, 18 February 2014, invited speaker http://www.science.unitn.it/cirm/PDEs2014.html
- Colloquia Patavina, Mathematics Department, University of Padova, 25 March 2014
  http://www.math.unipd.it/~conti/colloquia_files/20140325_AlfioQuarteroni.html
- The IMA Lighthill Lecture, British Applied Math Colloquium, BACM 2014, Cardiff University, 28 April 2014 http://mathsevents.cf.ac.uk/bamc2014/
- Ecole Polytechnique de Paris, Palaiseau, 22 Mai 2014
  http://www.polytechnique.edu/accueil/actualites/seminaires-et-conferences/conference-les-mathematiques-pour-vivre-mieux--308884.kjsp
- ECMI2014, plenary lecturer, Taormina, Italy, 10 June 2014 http://www.taosciences.it/ecmi2014/
- EMS distinguished speaker 2014, FJIM 2014, Bilbao, June 30 – July 4, 2014
  http://www.euro-math-soc.eu/node/1810
- ECMOR XIV keynote speaker 2014, 14th European Conference on the Mathematics of Oil Recovery, Catania, September 8-11, 2014 http://www.eage.org/events/ecmor-2014
- CMBBE 2014, The 12th International Symposium in Biomechanics and Biomedical Engineering, plenary speaker http://www.cmbbe2014.com
- 37th Israel Symposium on Computational Mechanics (IACMM), keynote speaker, Tel Aviv, October 23, 2014

2015

- National University of Singapore, Mathematics Colloquium, January 6, 2015
- ZIB Colloquium, Konrad Zuse Center, Berlin, January 22, 2015
- FEF 2015, International Conference on Finite Elements for Fluids 2015, semi-plenary speaker, March 16-18, Taiwan,
- 2015
- International Conference on Optimization, Sparsity and Adaptive Data Analysis, Academia Sinica, Beijing, March 18-21, plenary speaker http://osada.csp.escience.cn/dct/page/1
- USI, Università della Svizzera Italiana, Lugano, March 31, 2015, Colloquium
- University of Naples Federico II, Alta Scuola Politecnica e delle Scienze di Base, Colloquium, April 15, 2015
- AFSI2015 International Conference, Istanbul (Turkey), 11-13 May 2015, Invited speaker
- AEIT Seminar, Politecnico di Milano, 19 May 2015
- XXIV CEDYA /XIV CMA, Cadiz (Spain), 8-12 June 2015, Plenary speaker
- Universidad de Sevilla (Spain), Public Lecture, 9 June 2015
- International Workshop on Computational Mathematics, Qingdao (China), 29 June- 2 July, 2015, Plenary speaker
- Third Aachen Conference on Computational Engineering Science (AC.CES), Aachen (Germany), 23-24 July 2015, Plenary speaker
- SMI Summer School on « Integrated Models for Computational Medicine », 26-31 July 2015, main lecturer
- Variational Analysis and Aerospace Engineering, III, International Center for Scientific Culture "E.Maiorana", Erice, 28 August 2015, plenary talk
- Variational Analysis and Applications, International Center for Scientific Culture "E.Maiorana", Erice, 30 August 2015, plenary talk
- PACM Colloquium, Princeton University, 21 September 2015

- University of Pisa, Ceremony for Galileo Galilei international prize for science, 3 October 2015
- Panorama of Mathematics, Hausdorff Center for Mathematics, University of Bonn, 21-23 October 2015, plenary speaker
  https://www.youtube.com/watch?v=FxyO52aEuvM&index=10&list=PLul8LCT3AJqQPydcscz9NZy4581-dmfgW
- Applied Math Days, Budapest University of Technology and Economics, 26 October 2015
- Mathematical Modeling Seminar, Budapest University of Technology and Economics, 27 October 2015
- 3rd International Workshop on RB, POD and PGD Model Reduction Techniques, ENS Cachan, 4-6 November 2015, keynote speaker, http://rom2015.sciencesconf.org/
- Exploratory Workshop on Applications of MOR in Industrial Research and Development, Luxenbourg City, 6 November 2015, keynote speaker, http://www.eu-mor.net/event/3477/

2016

- BIMoS Distinguished Lecture, TU Berlin, 11 January 2016
  http://www.bimos.tu-berlin.de/index.php/20-academics/27-distinguished-lectures
- IRMA Colloquium, Université de Strasbourg, 5 February 2016
- EPFL Life Science Faculty Retreat, Invited talk, 8 February 2016
- ETH D-BSSE Seminar, 8 March 2016, Basel (CH)
- 14 th Annual United Arab Emirates Math Day, Abu Dhabi, March 12th, 2016, plenary talk (cancelled due to flight cancellation)
- Diderot Mathematical Forum, Politecnico di Milano – UPMC Paris – Universidad Complutense Madrid, plenary talk, March 15, 2016
- ENEmath, IST Lisbon, keynote lecturer, March 19, 2016
- IBM Research Center, Zurich: invited seminar, April 13, 2013
- MUSE – Museo delle Scienze di Trento, public lecture, May 23, 2016
- National Congress of Swiss Surgeons, Lugano, 1-3 June 2016, invited talk
- ECCOMAS 2016, plenary lecture, Crete 6-10 June 2016
- ICOSAHOM 2016, Rio de Janeiro, keynote talk, 27 June 2016
- Conference on Valve Related Disorders, Cambridge, 23-25 July 2016, invited speaker
- Flow and Transport in permeable Media, Gordon Research Conference, Girona, Spain, 1-5 August 2016, invited speaker
- Nek5000 Workshop, M.I.T., Cambridge, 10-12 August 2016, invited speaker
- ESB-ITA Conference, Palermo, 8-9 September 2016, invited speaker
- SIMAI 2016 Conference, Milan, 13-16 September 2016, plenary speaker https://www.youtube.com/watch?v=Cr3O-b0mDy4
- NMPDEs 2016, Institut Henri Poincaré, Paris, 24 October 2016, invited speaker
- CIMPA School on Mathematical Models in Biology and Medicine, Mauritius Island, 12 December 2016, invited speaker

2017

- Linné FLOW Center Lecture 2017, KTH Stockholm, 12 January 2017
- DDXXIV, International Conference on Domain Decomposition Methods, Svalbard, Norway, 6-10 February 2017, plenary lecture
- International Conference on Mathematical and Numerical Modelling of the Cardiovascular System and Applications, University of Pavia, 22 February 2017, invited speaker (celebrating the 70 th birthday of P. Colli-Franzone)
- Seminari di Cultura Matematica, Politecnico di Milano, invited speaker (opening lecture), March 15, 2017
- University of Genova, minicourse at ISSUGE (Institute for Advanced Studies), 25 March 2017
- CMBE17, Opening plenary lecture, Pittsburgh, 10 April 2017
- http://www.compbiomed.net/2017/invited-speakers.htm
- Euler-Vorlesung 2017 (The Euler Lecture 2017), Potsdam, Berlin, 19 May 2017 http://www.euler-lecture.berlin/

- University of Naples Federico II, 5 June 2017, invited speaker
- Distinguished PDE Lecture Series, Lecturer 2017, Vienna Center for Partial Differential Equations, Vienna, 6 June 2017
  http://viennapde.tuwien.ac.at/events/pdelectures.html
- ECCOMAS Conference on Coupled Problems, Rhodes Island, 12-14 June 2017, opening plenary lecture
- Math Summer School 2017, 4 September 2017, Opening lecture, San Pellegrino Terme (Italy)
- ACOMEN 2017, Ghent (Belgium), 18-20 September 2017, plenary lecture
- Colloquium, Institute of Mathematics Universitat de Barcelona, 18 October 2017
- Honorary Lecture, EPFL, 6 December 2017
  https://memento.epfl.ch/event/prof-alfio-quarteroni-taking-mathematics-to-heart/

2018

- Athenaeum, LUISS International School, Rome, 8 January 2018
- Biomechanics Seminar Series, Université Paris-Saclay, 25 January 2018
- Colloquium, Department of Mathematics, University of Maryland, 2 February 2018
- Keynote lecture, World Leading Research Centers - Materials Science and Spintronics, Tohoku University, Sendai, Japan, 19 February 2018
- University of Tokyo, Komaba Campus, 21 February 2018
- The Keith Stewartson Memorial Lecture, BAMC 2018, St Andrews, Scotland, 26 March 2018
- Public Conference, Chiostro del Comune di Gioia del Colle, Italy, 7 April 2018
- Doctoral School of Politecnico di Milano, Mathematics and Philosophy in Medicina, 10 May 2018
- Università Federico II, Naples, short course in Numerical Methods for PDEs, 11 May 2018
- Università di Perugia, Colloqui di divulgazione scientifica, 25 May 2018
- Emoclinic Symposium, Cardiologia Ieri, Oggi, Domani, keynote lecture, Novara, June 8, 2018
- Management of Heart Failure: current challenges and future perspectives, invited lecture, ISMETT - Palermo, June 9, 2018
- Mathematical Institute Colloquia, University of Oxford, 15 June 2018
- VPH Summer School, Barcelona, keynote lecture, 21 June 2018 https://www.upf.edu/web/bcnvph_school
- VPH 2018 Zaragoza, Spain, 5-7 September 2018 http://vph-conference.org/program/keynote-speakers/
- The Marker Lecture Series, Penn State University, 22-24 October 2018, College Station, PA, https://math.psu.edu/events/seminar/384
- Mathesis2018, University of Milan, 17 November 2018, keynote speaker
- Pedro Nunes Lectures 2018, Coimbra-Lisbon-Porto, 21-23 November 2018, http://www.cim.pt/agenda/event/196
- Colloquium in Mathematical Engineering, Three Lectures on Numerical Models for Multiphysics, Naples, Università Federico II, 4-7 December 2018 http://www.scuolapsb.unina.it/downloads/materiale/allegati/Corso_Quarteroni.pdf

2019

- Niguarda Hospital, Milan, Italy, 24 January 2019, invited seminar
- Cardiolucca 2019 Conference, Lucca, Italy, 8 February 2019, invited presentation
- I Lincei per la Scuola, Cagliari, Italy, 15 February 2019, invited presentation
- SIAM Geosciences 2019, Houston, TX, plenary lecture, March 11, 2019
- Applied Mathematics Seminar, UC Berkeley / Lawrence Berkeley Laboratoriy, March 14, 2019
- Istituto Lombardo Accademia di Scienze e Lettere, Milano, 4 April 2019
- Università di Bari (Italy), invited seminar, 2 May 2019
- University of Graz, Austria, BioTecMed Flagship Lecture 2019, 15 May 2019 https://biotechmedgraz.at/en/news/detail/article/flagship-lecture-15052019-prof-alfio-quarteroni/
- ETNA25, Santa Margherita di Pula, Italy, 26 May 2019, invited speaker
- Isaac Newton Institute, Cambridge, UK, 4 June 2019, Industrial and Clinical Application of Cardiac Simulations: Quantifying Uncertainty in Model Prediction, invited speaker https://gateway.newton.ac.uk/event/ofbw45/programme

- Soft Tissue Modelling Workshop, University of Glasgow, 5-7 June 2019, invited speaker http://www.softmech.org/events/headline_587639_en.html
- Ha-Lu 2019 International Conference, GSSI-L'Aquila, 17-21 June 2019, invited speaker https://indico.gssi.it/event/8/
- TogetherVT, International Conference in Cardiology for Ventricular Tachicardia, San Raffaele Hospital, Milan, 27-28 June 2019, invited speaker
- SIMAI30, International Conference for the 30th birthday of SIMAI, Milan, 1-2 July 2019, invited speaker
- ICIAM 2019, invited lecture in minisymposium, Valencia, Spain, 16 July 2019
- Vienna Doctoral School of Mathematics, Weissensee, Austria, 23-27 September 2019, lecturer
- International Conference "The Future of Medicine Starts Now", Genova, 27 September, invited speake
- International Conference "Multiscale Modeling in Fluid Mechanics and Fluid-Structure Interaction", Vilnius, Lithuania, invited speaker, 7 October 2019
- Mathesis Annual Conference 2019, Matera, Italy, 25 October 2019, invited speaker
- Festival della Scienza, Genova, 26 October 2019, invited speaker
- Mathematics Colloquium, Scuola Normale Superiore, Pisa, Italy, 30 October 2019
- MUSE (Museo della Scienza), Trento (Italy), iHeart@MUSE day, 5 November 2019
- HEARTLINE 2019, Genova (Italy) 15 November 2019, plenary lecturer

2020

- Accademia dei Lincei, Rome, 10 January 2020, invited lecture
- PhD Lectures at GSSI (Gran Sasso Science Institute), L'Aquila, Italy, 15-17 January 2020
- LIFD Annual Lecture 2020, Leeds Institute of Fluid Dynamics, 10 February 2020
- MUST (Museum of Science and Technolkogy), Milan, 15 February 2020, invited presentation
- East China Normal University, Sanghai, Webinar, 15 July 2020
- OneWorld Numerical Analysis Seminar, opening seminar, 20 July 2020, https://www.icms.org.uk/V_OWNumAnal.php
- https://media.ed.ac.uk/media/Alfio+Quarteroni+20+July+The+mathematical+heartA+a+computational+model+for+the+simulation+of+the+heart+function/1_md5i3z4a
- ESOF 2020, Trieste, online seminar with T.Corno on Integrated Heart
- ESOF 2020, Trieste, online presentation at AROMA-CFD event
- BEMACS Lecture 2020, Università Bocconi, Milan, 7 October 2020
- Festival della Scienza 2020, Genova, invited lecture, 24 October 2020
- University of Florence, 50th Birthday of the Engineering Faculty, keynote lecture, 9 October 2020 https://www.ingegneria.unifi.it/upload/sub/50esimoScuola-9-10-2020.pdf
- EAMBES 2020 Fellows Presentation, Online meeting, December 1, 2020

2021 (all seminars online)

- LLNL (Lawrence Livermore National Laboratory) Seminar, UC Berkeley, January 27, 2021
- PhD graduate school in Applied Mathematics, 6 lectures, University of Padova, 8 February 2021
- Scuola Belleville di Scrittura Creativa, 2-hour seminar, Milan, February 27, 2021
- Indian Institute of Technology, Kanpur, India, plenary lecture, March 19, 2021
- Istituto Lombardo Accademia di Scienze e Lettere, keynote lecture, March 25, 2021
- The University of Western Australia, Perth, analysis seminar, April 14, 2021
- Festival di Scienza e Filosofia, Foligno, Italy, April 23, 2021, keynote presentation
- The Sneddon Lecture 2021, The University of Glasgow, 4 May 2021
- SSM (Scuola Superiore Meridionale) Colloquium, University of Naples, 20 May 2021
- 8ECM (European Congress of Mathematics), Opening Plenary Lecture, Portoroz, Slovenia, 21 June 2021
- Management of Cardiovascular Diseases: A Look at the Present and a Glance into the Future, Online Conference, 24-26 June 2021, invited lecture

- INDAM Workshop on Analysis and Numerics of Design, Control and Inverse Problems, invited lecture, 3 July 2021
- Seminar, Dipartimento di Matematica, Università di Bari, Bari (Italy), 8 July 2021 (in presence)
- « Il Libro Possibile » Book Festrival, public conference, Polignano (Italy), 8 July 2021 (in presence)
- Festival dell'Ingegneria, Politecnico di Milano, public confernce, 11 September 2021 (in presence)
- ZAG Day 2021, CRS4, Cagliari (Sardinia), keynote lecture, 13 September 2021
- Riemann Week, M. Morandini Foundation, public conference, 20 September 2021 (in presence)
- One Day in PDEs, Politecnico di Milano, keynote speaker, 1 October 2021 (in presence)
- Food and Science Festival, Mantova, 3 October 2021
- Università di Roma La Sapienza, Rome, 15 October 2021, Colloquium (in presence)
- I Venerdi della Scienza, Liceo Respighi, Piacenza, Italy, 22 October 2021(in presence)
- Festival della Scienza, Genova, 23 October 2021 (in presence)
- Novelties in Cardiovascular Medicine, Turin, Italy, invited lecture, 4 November 2021 (in presence)
- Mathesis Bergamo, Italy, 5 November 2021(in presence)
- New Bridges Between Mathematics and Data Science, International Symposium, Valladolid, Spain, plenary talk, 9 November 2021(in presence)
- Math Colloquium, University of Parma, Italy, 24 November 2021 (in presence)
- Biology and Technology, A 2-day workshop, Cagliari, Italy, 4-5 December 2021 (in presence)

2022

- 50th anniversary of Università Cattolica, Brescia (Italy), keynote lecture, 9 February 2022
- Math Colloquium, NYU-ABU DHABI, 14 February 2022
- Università Bocconi, Milan, OrientaMat, 25 February 2022
- Math Colloquium, Dipartimento Ulisse Dini, Università di Firenze, 31 March 2022
- Lincei per la Scuola, Scuola Normale Superiore, Pisa, Itay, 25 March and April 1st, 2022
- Conferenza Medici Pediatri Provincia di Piacenza, Italy, 9 April 2022
- Circolo dei Lettori di Torino, Turin, Italy, May 05, 2022
- Humanitas University, Milan, Conference in Cardiology, May 14, 2022
- Master Class, Procter&Gamble, Frankfurt, Germany, May 31st, 2022 (online)
- University of Evora, Portugal, July 5, 2022, plenary speaker
- BioToMath International Conference, Turin, September 6-8, 2022, invited speaker

2023

- Assyr Abdulle's Memorial, EPFL, Lausanne, February 2, 2023, invited speaker
- Masterclass @ MindTheValue, Milan, March 8, 2023
- Keynote lecture @ HSR (San Raffaele University Hospital) retreat, Stresa, March 9, 2023
- Sibe Mardesic Colloquium, Department of Mathematics, University of Zagreb, Slovenia, March 22, 2023 (online)
- The David Gottlieb Memorial Lectureship on Scientific Computing 2023, Brown University, April 3, 2023 (online)
- AI Week, Rimini (Italy), April 20, 2023, plenary speaker
- 22nd IACM Computational Fluids Conference CFC2023, Cannes, France, April 26, 2023, opening plenary speaker
- Unitre Lodi, May 25, 2023
- Department of Mathematics, University of Genoa, Italy, invited seminar, May 26, 2023
- First MaLGa Colloquium, Aula Magna University of Genoa, Italy, May 26, 2023
- M2P Eccomas Conference, Taormina, Italy, May 31, 2023, invited presentation
- FAU MoD Lecture, Friedrich-Alexander Universitat, Erlangen, Germany, July 6, 2023 (online)
- Seminario de EDP e Matematica Aplicada, Brasil, July 12, 2023 (online) https://www.youtube.com/watch?v=8Zbiczi71Vs&t=739s
- Lagrange Lecture 2023, ICIAM2023 Conference, Tokyo, Japan, August 24, 2023
- FMfI2023, Fukuoka, Japan, August 29, 2023, invited presentation (online)
- UMI 23 (Congresso Nazionale dell'Unione Matematica Italiana), Pisa, Public Lecture September 8, 2023
- XLVIII Summer School on Mathematical Physics, 6 lectures, Ravello, Italy, 11-16 September 2023
- Prato (Italy), Sincronie 6, September 13, 2023, invited lecture (online)

- Ordine degli Ingegneri, Bergamo (Italy), September 27, 2023, short course on AI
- Notte dei Ricercatori, Università degli Studi di Brescia, Public Lecture, September 29, 2023
- Università di Urbino (Italy), Math Colloquium, October 3, 2023
- Wired for Innovation, Prysmian Lecture, Milan, October 17, 2023
- Incontri di Cardiologia 2023, Crotone (Italy), October 20, 2023, invited lecture
- CANUTO23, Politecnico di Torino, November 2, 2023, invited presentation
- INDAM Colloquium 2023, Istituto Nazionale di Alta Matematica, Rome, November 9, 2023
- Liceo Cantonale di Bellinzona, Switzerland, November 13, 2023
- The Legacy of Enrico Magenes, Pavia, November 21, 2023, invited lecture
- Korea Biomedical Math Research Center, Colloquium, Seoul, November 22, 2023 (online)
- Abbott master course in Electrophysiology, December 4, 2023 (online)

2024

- Workshop on "Mathematics for Artificial Intelligence and Machine Learning", Bocconi University, Milan, January 17, 2024, plenary speaker
- Africomp 2024, Cape Town, South Africa, February 26, 2024, plenary speaker
- Workshop "Insight into Aortic Diseases", 4th Edition, Milan, invited speaker, March 15, 2024
- PhD Lecture Series, Brin Mathematics Research Center, University of Maryland, March – May 2024
- IIT (Italian Institute of Technology), seminar, April 12, 2024 (online)
- Oden Institute Distinguished Lecture, University of Texas at Austin, April 29, 2024
- CMAI Colloquium, George Mason University, Washington DC, 10 May 2024
- ELIXIRxNextGenIT, Milano Bicocca University, 24 June 2024
- Assolombarda AI workshop, Milan, 24 June 2024
- CIME Summer School on PDEs, Control and Deep Learning, July 21-25, 2024, Cetraro, Italy, 5 Lectures
- AIMETA 2024, University of Naples, Opening Plenary Lecture, 3 September 2024
- University of Jyvaskyla, Finland, memorial Yuri Kuznetsov, invited lecture, 26 September 2024, online
- Piteco Innovation Day, Milan, keynote lecture, 26 September 2024
- The Piola lecture 2024, University of Pavia, Italy, 1 October 2024
- The 3rd Reval Lecture 2024, ENI, Milan, 2 October 2024
- Accademia dei Lincei, Lettura Corsiniana (public lecture), Rome, 6 October 2024
- Lecons Jacques Louis Lions 2024, Paris Sorbonne Université, 14-17 October 2024
- Colloquium at Jacques-Louis Lions Laboratory, Paris Sorbonne Université, 18 October 2024
- AI Forum, Tavagnacco – Udine (Italy), 19 October 2024
- Lectio Magistralis, Opening of the Genova Science Festival, Genua, Italy, 24 October 2024
- Colloquium at Istituto Superior Tecnico IST Lisbon, 28 October 2024
- Collegio Ghislieri, Pavia, Public Lecture, 12 November 2024
- University of Brescia, Faculty of Engineering, Colloquium, 28 November 2024
- Accademia dei Lincei, Conferenza Istituzionale, Rome, 13 December 2024

2025

- CIME70, 70 years of C.I.M.E., University of Florence, keynote lecure, 11 January 2025
- DSABNS 2025, 16th Dynamical Systems applied on Biology and Natural Sciences, Naples, public lecture, 20 January 2025
- SISSA Colloquium, 12 February 2025, Trieste (Italy) https://www.youtube.com/watch?v=eu5aIBDFL38
- Georgia Tech, invited seminar, 17 April 2025
- Emory University, invited seminar, 18 April 2025
- Babuska Forum, Oden Institute of Computational Engineering and Science, UT Austin, 25 April 2025
- International Conference on Machine Learning Methods for Complex and Quantum Systems (ML2025), opening plenary lecture, University of Camerino (Italy), 4-6 June 2025
- School of Advanced Studies Sant'Anna, Pisa (Italy), 5 June 2025
- The Biorobotics Institute, Pontedera (Italy), 6 June 2025

- 7th SoftMech Workshop, Politecnico di Milano, 12 June 2025, public lecture
- AIT Austrian Institute of Technology, distinguished lecture, Vienna, 30 June 2025
- 20th OpenFoam Workshop, Vienna, July1st 2025, opening plenary lecture
- Opening Conference for Mathematical Challenges in Brain Mechanics, Norwegian Academy of Science and Letters, Oslo, 20-22 August 2025
- The Göran Gustafsson Lectures in Mathematics 2025, KTH, Stockholm, 9,10,11 September 2025
- 11th Summer School on "Physics-informed modeling, simulation and experiments with emphasis on the cardiovascular system", Graz University of Technology, lecture series, september 15-19 2025 (6 lectures)
- WIRED Next Festival 2025, Rovereto (Iotaly), 5 October 2025
- SIPMeL National Congress, Riva del Grada (Italy), plenary lecture, 6 October 2025
- SISSA mathLab Jubilee, Trieste, Italy, invited lecture, 29 October 2025
- Mathematics Colloquium, Levi-Civita Mathematics Department, University of Padua, 6 November 2025
- Mathesis, opening plenary lecture, Vicenza (Italy), 4 December 2025

2026

- Lecture series on « Mathematics in Society's Transformation », Goethe University, Frankfurt, 13 January 2026
- Dean's Distinguished Lecture, KAUST, Saudi Arabia, 25 January 2026
- Mathematical and Data Science Symposium, plenary lecture, KAUST, Saudi Arabia, 28 January 2026
- Festa della Matematica, Scuola di Formazione Scientifica L.Lagrange, Turin, 6 March 2026
- Università Cattolica del Sacro Cuore, Milano, 24 March 2026
- Museo Civico di Crema, public lecture, 9 April 2026
- Collegio Ghislieri, University of Pavia: Aspen Institute, invited talk, 10 April 2026
- Biennale di Tecnologia, Torino, public lecture, 18 April 2026
- Chinese University of Hong Kong, Shenzhen Loop Area Institute, 21 April 2026, invited talk
- Chinese University of Hong Kong, Shenzhen, School of Science and Engineering, 22 April 2026, invited talk
- Rovigo Festival Biblico, 9 May 2026
- Milano Bicocca invited talk, 22 May 2026
- Allianz Beyond the Horizon, Milan, 28 May 2026
- University of Auckland, New Zealand, invited talk, 9 June 2026
- Festival Il Fiume dei Libri, Lodi, 13 June 2026
- Festival Il Libro Possibile, Polignano, 10 July, 2026
- Italy-China First Mathematical Meeting, 8 September 2026
- Festival della Filosofia, Modena, 19 September 2026
- Annual Meeting of the Ordine Provinciale dei Medici, Pavia, 20 September 2026
- Festival della Scienza, Genova, 24 October 2026, plenary lecture
- MORE (Model Reduction and Surrogate Modeling) International Conference, Politecnico di Milano, Milan, Italy, 4 November 2026, plenary lecture

Teaching

- University of Pavia: Course on "Mathematical Analysis" faculty of engineering, from 1981 to 1984; Course on "Statistics and Applications", faculty of medicine, from 1982 to 1984
- University of Minnesota at Minneapolis (U.S.A.): Ph.D. Course on "Numerical methods for partial differential equations", fall quarter 1984.
- University of Brescia, Faculty of Mathematical Sciences: Course on "Numerical Analysis" from 1982 to 1989; Course on "Mathematical Analysis" from 1985 to 1989; Course on "Functional Analysis" from 1989 to 1992
- Politecnico di Milano: Course on "Numerical Analysis" from 1989 to 2019
- Politecnico di Milano: Course on "Numerical Methods in Egineering", from 1992 to 2014

- Politecnico di Milano, Course on “Numerical Analysis of PDEs”, 2004 to 2022
- University of Minnesota, Minneapolis, School of Mathematics: Ph.D. topic course on Numerical Analysis, 3 quarters, academic year 1990-91
- Ecole Polytechnique Fédérale de Lausanne: Course on "Mathematical Modelling of Cardiovascular Flows", Winter Semester 1998, 1999, 2000, 2002
- Ecole Polytechnique Fédérale de Lausanne: Course on "Domain Decomposition Methods for Partial Differential Equations", Winter Semester 2001
- Ecole Polytechnique Fédérale de Lausanne: Course on "Scientific Computing", Master in Mathematical Engineering - Winter Semester from 1998 to 2004
- Ecole Polytechnique Fédérale de Lausanne: Courses on "Numerical Analysis ‘’ Spring and Winter Semester from 1998 to 2017 (to virtually all the engineering branches at EPFL)
- Ecole Polytechnique Fédérale de Lausanne: Course on "Numerical Analysis of Partial Differential Equations", winter semester, from 1999 to 2017
- PostDoc (Continuing Education) Classes at Mox, Politecnico di Milano on Computational Fluid Dynamics and Finite Elements Method, from 2003 to 2022
- Master course “Numerical Methods for Partial Differential Equations”, HPC branch, Politecnico di Milano, from 2022 to date
- An (almost) unlimited number of courses and tutorials given at summer schools all around the World.
- University of Maryland at College Park, Spring 2024: Topic course: Digital models, scientific machine learning, and digital twins

LIST of PUBLICATIONS

B. Books (author)

B1 - C. Canuto, M. Y. Hussaini, A. Quarteroni and T. A. Zang, **Spectral Methods in Fluid Dynamics**, Springer-Verlag, New York, 1988, (557 p.)

B2 - A. Quarteroni and A. Valli, **Numerical Approximation of Partial Differential Equations**, Springer-Verlag, Heidelberg, 1994, SCM Series n. 23. (543 p.)

B3 - A. Quarteroni, **Elementi di Calcolo Numerico**, Esculapio, Bologna, 1994 (in Italian) (181 p.)

B4 - A. Quarteroni, R. Sacco and F. Saleri, **Matematica Numerica**, Springer-Verlag Italia, Milan, 1998; second edition, 2003 (in Italian) (440 p.); third edition, 2008 (509 p.); fourth edition, 2014 (529 p.) (authors: A. Quarteroni, R. Sacco, F. Saleri and P.Gervasio).

B5 - A. Quarteroni and A. Valli, **Domain Decomposition Methods for Partial Differential Equations**, Oxford University Press, Oxford, 1999, (360 p.)

B6 - A. Quarteroni, R. Sacco and F. Saleri, **Numerical Mathematics**, Springer-Verlag New-York, 2000, TAM Series n. 37, (655 p.); second edition, 2007 (655 p.)

B6a - A. Quarteroni, R. Sacco and F. Saleri, **Numerische Mathematik I**, **II** Springer-Verlag, Berlin and Heidelberg, 2002 (in German) (367 p. + 328 p.) (translation by L.Tobiska)

B6b - A. Quarteroni, R. Sacco and F. Saleri, **Méthodes Numériques pour le Calcul Scientifique**, Springer-France, Paris, 2000 (in French) (444 p.) (Translation by J.F.Gerbeau)

B7 - A. Quarteroni, **Modellistica Numerica per Problemi Differenziali**, Springer-Verlag Italia, Milan, 2000 (in Italian) (290 p.); second edition, 2003 (330 p.); third edition, 2006 (451 p.); fourth edition, 2008 (561 p.); fifth edition, 2012 (630 p.); sixth edition, 2016 (xix + 651 p.)

B8 - A. Quarteroni and F. Saleri, **Introduzione al Calcolo Scientifico. Esercizi e Problemi Risolti con MATLAB e Octave**, Springer-Verlag Italia, Milan (in Italian). First edition, 2001(219 p.), second edition, 2004; third edition, 2006 (306p.), fourth edition, 2008 (358p.).

B9 - A. Quarteroni, F. Saleri and P. Gervasio, **Calcolo Scientifico. Esercizi e Problemi Risolti con MATLAB e Octave**, Springer-Verlag Italia, Milan (in Italian). 5th edition, 2012 (450 p.)

B10 - A. Quarteroni and F. Saleri, **Scientific Computing with MATLAB and Octave**, Springer-Verlag Heidelberg, 2003 (257 p.); second edition, 2006 (318 p.)

B10a -A. Quarteroni and F. Saleri, **Calcul scientifique. Cours exercices corrigés et illustrations en Matlab et Octave**, Springer, 2006. (in French) (319p.) (Translation by J.F. Gerbeau)

B10b -A. Quarteroni and F. Saleri, **Cálculo Científico com MATLAB e Octave**, Springer, 2007. (in Portuguese) (320 p.) (translation by A. Sequeira)

B10c - A. Quarteroni and F. Saleri, **Cálculo Científico con MATLAB y Octave**, Springer, 2006. (in Spanish) (329 p.) (translation by R. Bermudez)

B10d - A. Quarteroni and F. Saleri, **Wissenschaftliches Rechnen mit MATLAB**, Springer, 2005 (in German) (269 p.) (Translation by K.Sapelza)

B11 - C. Canuto, M. Y. Hussaini, A. Quarteroni and T. A. Zang, **Spectral Methods: Fundamentals in Single Domains**, Springer, 2006. (563 p.)

B12 - C. Canuto, M. Y. Hussaini, A. Quarteroni and T. A. Zang, **Spectral Methods: Evolution to Complex Geometries and Applications to Fluid Dynamics**, Springer, 2007. (625 p.)

B13 - A. Quarteroni, **Numerical Models of Differential Problems**, Springer Series MS&A, Vol 2, 2009 (602 p.); 2nd edition, Springer Series MS&A, Vol 8, 2014 (656p.); 3rd edition, Springer Series MS&A, Vol 16, 2017 (xvii+681p.);

B14 -A. Quarteroni, F. Saleri and P. Gervasio, **Scientific Computing with MATLAB and Octave**, Springer-Verlag Heidelberg, 2010, third edition (360 p.); 2014 fourth edition (442 p.)

B14a – A. Quarteroni, F. Saleri and P. Gervasio, **Calcul scientifique. Cours exercices corrigés et illustrations en Matlab et Octave**, Springer-Milan, 2010 (in French) (365p.)

B14b - A. Quarteroni, F. Saleri and P. Gervasio, **Scientific Computing with MATLAB and Octave**, Maruzen Publishing Co. (Tokyo) 2014 fourth edition (502 p.) – in Japanese- (Translation by Takashi Kako)

B15 - C.D'Angelo and A. Quarteroni, **Matematica Numerica. Esercizi, Laboratori e Progetti**, Springer Series Unitext, Milan, 2009 (in Italian) (349 p.)

B15a - A. Quarteroni, **Matematica Numerica. Esercizi, Laboratori e Progetti**, Springer Series Unitext, Vol 75, Milan, 2nd edition, 2013 (in Italian) (406 p.)

B16 – A. Quarteroni, A. Manzoni and F. Negri, **Reduced Basis Method for Partial Differential Equations. An Introduction**. Springer Series Unitext, Vol.92, Milan, 2015 (296p.)

B17 – A. Quarteroni, L. Dede', A. Manzoni and C. Vergara, **Mathematical Modelling of the Human Cardiovascular System.** Data, Numerical Approximation, Clinical Applications. Cambridge University Press, 2019

B18 – A. Quarteroni and P. Gervasio, **I delfini delle Eolie, i battiti del cuore, i motori di ricerca** – Modelli matematici per comprendere, simulare, esplorare, Zanichelli, 2019 (235p., in Italian)

B19 – A. Quarteroni and P. Gervasio, **A Primer on Mathematical Modelling,** Springer Series Unitext Vol. 121, 2020

B20 – A. Quarteroni, **Le equazioni del cuore, della pioggia e delle vele**, Zanichelli, Chiavi di Lettura, 2020 (in Italian)

B21 – A. Manzoni, A. Quarteroni, and S. Salsa, **Optimal Control Problems for Partial Differential Equations: Analysis, Approximation, Applications**. Springer AMS, New York, 2021 (498 p.)

B22 –A. Quarteroni, **Algoritmi per un Nuovo Mondo,** Le Grandi Voci, Dedalo, 2021 (in Italian)

B23– A. Quarteroni, **Modelling Reality with Mathematics**, Springer, 2022; German Translation: **Modellieren der Realitat mit Mathematik**, Springer, 2024.

B24 –A. Quarteroni, **Algorithms for a New World,** Springer, 2022

B25 – A. Quarteroni, **L'Intelligenza Creata**. L'AI e il nostro futuro, Hoepli, 2025 (in Italian)

B26 – A. Quarteroni, **Artificial Intelligence**. Unveiling the Truth Beyond the Myths, Springer-Nature, Copernicus Series, 2025

B27 – A.Quarteroni, **Il Battito della Matematica**. Numeri che raccontano storie, Hoepli, 2026 (in Italian)

B28 – A.Quarteroni, **L'Ordine Invisibile del Mondo**. Mondadori, 2027 (in Italian) – in preparation

E. Books (editor)

E1 - C. Canuto and A. Quarteroni, Eds., **Spectral and High Order Methods for Partial Differential Equations**, Elsevier, North Holland, Amsterdam, 1990.

E2 - A. Quarteroni, J. Periaux, Y. A. Kuznetsov and O. B. Widlund, Eds., **Domain Decomposition Methods in Science and Engineering**, AMS, Providence, RI, 1994. (485 p.)

E3 - A. Quarteroni, Ed., **Advanced Numerical Methods for Hyperbolic Equations**, LNM, Springer-Verlag, Heidelberg, 1998. (450 p.)

E4 - A. Quarteroni, L. Formaggia and A. Veneziani, Eds., **Complex Systems in Biomedicine**, Springer Italia, 2006 (292 p.)

E5 - L. Formaggia, A. Quarteroni and A. Veneziani, Eds., **Cardiovascular Mathematics**. **Modeling and Simulation of the Circulatory System,** Springer Series MS&A,Vol 1, 2009

E6 - M. Emmer and A.Quarteroni, Eds., **MATHKNOW**, Springer Series MS&A Vol 3 2009 (264 p.)

E7 - D. Ambrosi, A.Quarteroni and G.Rozza, Eds., **Modelling Physiological Flows,** Springer Series MS&A,Vol 5, 2011 (240p.)

E8 - A. Quarteroni and G. Rozza, Eds., **Reduced Order Methods for Modeling and Computational Reduction,** Springer Series MS&A,Vol 9, 2014 (334p.)

E9 - A. Quarteroni, Ed., **Modeling the Heart and the Circulatory System,** Springer Series MS&A, Vol 14, 2015 (236p.)

E10 - P.Benner, S. Grivet-Talocia, A.Quarteroni, G.Rozza, W.Schilders, L.M.Silveira, Eds., **Model Order Reduction,** Vol I: System and Data-Driven Methods and Algorithms**,** De Gruyter, 2020 (in press)

E11 - P.Benner, S. Grivet-Talocia, A.Quarteroni, G.Rozza, W.Schilders, L.M.Silveira, Eds., **Model Order Reduction,** Vol II: Snapshot-Based Methods and Algorithms**,** De Gruyter, 2020

E12 - P.Benner, S. Grivet-Talocia, A.Quarteroni, G.Rozza, W.Schilders, L.M.Silveira, Eds., **Model Order Reduction,** Vol III: Applications**,** De Gruyter, 2020

E13 - L.Ambrosio and A.Quarteroni, Eds., **Conversations on Optimal Transport**, Springer Nature, 2023

J. Refereed Journals Publications

(black=printed, green=in press, blue=submitted)

J1 - A. Quarteroni, "Primal hybrid finite element methods for fourth order elliptic equations", **Calcolo XVI** (1979), pp.21-59

J2 - A. Quarteroni, "Error estimates for the assumed stresses hybrid methods in the approximation of fourth order elliptic equations", **R.A.I.R.O. An. Num. 13** (1979), pp.355-367

J3 - F. Brezzi, L. D. Marini, A. Quarteroni and P. A. Raviart, "On an equilibrium finite element method for plate bending problems", **Calcolo XVII** (1980), pp.271-291

J4 - A. Quarteroni, "Hybrid finite element methods for the Von Karman equations" **Calcolo XVI** (1979), pp.271-288

J5 - A. Quarteroni and A. Visintin, "On the numerical solution of a nonlinear variational equation related to a filtration problem", **Boll. U.M.I.** (5) 17-B (1980), pp.204-231

J6 - A. Quarteroni, "On mixed methods for fourth order problems", **Comp. Meths. Appl. Mech. Engrg. 24** (1980), pp.13-34

J7 - A. Quarteroni, "Mixed approximation of evolution problems", **Comp. Meths. Appl. Mech. Engrg. 24** (1980), pp.137-163

J8 - C. Canuto and A. Quarteroni, "Propriétés d'approximations dans les éspaces de Sobolev de systemes de polynomes orthogonaux", **C.R.Acad.Sci.Paris 290-A** (1980), pp.925-928

J9 - C. Canuto and A. Quarteroni, "Approximation Results for Orthogonal Polynomials in Sobolev Spaces", **Math. Comput. 38** (1982), pp.67-86

J10 - A. Quarteroni, "Some results of Bernstein and Jackson type for polynomial approximation in L^p spaces", **Japan Journal of Applied Math. 1** (1984), pp.173-181

J11 - C. Canuto and A. Quarteroni, "Spectral and Pseudospectral Methods for Parabolic Problems with Non Periodic Boundary Conditions", **Calcolo 23** (1981), pp.197-217

J12 - C. Canuto and A. Quarteroni, "Error Estimates for Spectral and Pseudospectral Approximations of Hyperbolic Equations", **SIAM J. Numer. Anal. 19** (1982), pp.629-642

J13 - C. Canuto and A. Quarteroni, "Spectral Methods for Hyperbolic Equations", **Rend. Sem. Mat. Univers. Politecn. Torino 39** (1981), pp.21-31

J14 - Y. Maday and A. Quarteroni, "Approximation de l'equation de Burgers stationnaire par des methodes spectrales", **C.R. Acad. Sci. Paris 293-I** (1981), pp.143-146

J15 - Y. Maday and A. Quarteroni, "Approximation of Burgers' equation by pseudo-spectral methods", **R.A.I.R.O. An. Num. 16** (1982), pp.375-404

J16 - Y. Maday and A. Quarteroni, "Legendre and Chebyshev spectral approximations of Burgers' equation", **Numer. Math. 37** (1981), pp.321-332

J17 - Y. Maday and A. Quarteroni, "Spectral and pseudo-spectral approximations of Navier-Stokes equations", **SIAM J.Numer. Anal. 19** (1982), pp.761-780

J18 - C. Canuto, Y. Maday and A. Quarteroni, "'Analysis of the Combined Finite Element and Fourier Interpolation", **Numer. Math. 39** (1982), pp.205-220

J19 - C. Canuto, H. Fujii and A. Quarteroni, "Approximation of Symmetry Breaking Bifurcations for the Rayleigh Convection Problem", **SIAM J.Numer. Anal. 20** pp.873-884 (1983), pp.873-884

J20 - C. Canuto, Y. Maday and A. Quarteroni, "Combined Finite Element and Spectral Approximation of the Navier-Stokes Equations", **Numer. Math. 44** (1984), pp.201-217

J21 - C. Canuto and A. Quarteroni, "Preconditioned Minimal Residual Methods for Chebyshev Spectral Calculations", **J. Comput. Phys. 60** (1985), pp.315-337

J22 - V. Battarra, C. Canuto and A. Quarteroni, "A Chebyshev Spectral Method for Gas Transients in Pipelines", **Comp. Meth. Appl. Mech. Engnrg. 48** (1985), pp.329-352

J23 - A. Quarteroni, "Blending Fourier and Chebyshev Interpolation", **J. Approx. Theory 51** (1987), pp.115-126

J24 - N. Bressan and A. Quarteroni, "Analysis of Chebyshev Collocation Methods for Parabolic Equations", **SIAM J. Numer. Anal. 23** (1986), pp.1138-1154

J25 - N. Bressan and A. Quarteroni, "An Implicit/Explicit Spectral Method for Burgers' Equation", **Calcolo XXIII** (1987), pp.265-284

J26 - C. Canuto and A. Quarteroni, "On the Boundary Treatment in Spectral Methods for Hyperbolic Systems", **J. Comput. Phys. 71** (1987), pp.100-110

J27 - A. Quarteroni, " Fourier spectral methods for pseudoparabolic equations", **SIAM J. Numer. Anal., 24** (1987), pp.323-335

J28 - D. Funaro, A. Quarteroni and P. Zanolli, "An iterative procedure with interface relaxation for domain decomposition methods", **SIAM J. Numer. Anal. 25** (6), (1988), pp.1213-1236

J29 - Y. Maday and A. Quarteroni, "Error Analysis for Spectral Approximations to the Korteweg de Vries Equation", **MMAN 22** (1988), pp.539-569.

J30 - A. Quarteroni, "Domain Decomposition Techniques Using Spectral Methods", **Calcolo XXIV** (1987), pp.141-177

J31 - F. Pasquarelli, A. Quarteroni and G. Sacchi-Landriani, "Spectral Approximations of the Stokes Problem by Divergence Free Functions", **J. Scientific Comput. 2** , (1987), pp.195-226

J32 - L. D. Marini and A. Quarteroni, "A Relaxation Procedure for Domain Decomposition Methods Using Finite Elements", **Numer. Math. 55**, (1989), pp.575-598

J33 - A. Quarteroni and G. Sacchi-Landriani, "Domain Decomposition Preconditioners for the Spectral Collocation Method", **J. Scientific Comput. 3 (1)**, (1988), pp.45-75

J34 - A. Quarteroni and G. Sacchi-Landriani, "Parallel Algorithms for the Capacitance Matrix Method in Domain Decompositions", **Calcolo 25 (1-2)** (1988), pp.75-102

J35 - F. Gastaldi and A. Quarteroni, "On the Coupling of Hyperbolic and Parabolic Systems: Analytical and Numerical Approach", **Applied Numerical Mathematics 6** (1989), pp.3-31

J36 - A. Quarteroni, "Domain Decomposition Methods for Systems of Conservation Laws: Spectral Collocation Approximations", **SIAM J. Sci. Stat. Comput., 11 (6)**, (1990), pp.1029-1052

J37 - A. Quarteroni, G. Sacchi Landriani and A. Valli, "Coupling of viscous and inviscid Stokes equations via a domain decomposition method for finite elements", **Numer. Math, 59** (1991), pp. 831-859

J38 - A. Quarteroni, " Domain Decomposition Method and Parallel Processing for the Numerical Solution of Partial Differential Equations", **Surveys on Mathematics for Industry 1(1991)** , pp.75-118

J39 - A. Quarteroni and E. Zampieri, "Finite Element Preconditioning for Legendre Spectral Collocation Approximations to Elliptic Systems and Equations", **S.I.A.M. J. Numer. Anal. 29**, (1992), pp. 917-936

J40 - L. Avaldi, A. Quarteroni and F. Saleri, "Finite Element Simulation of Electron Optical Systems", **Math. Models and Meth. in Applied Sciences, 2,** (1992), pp. 339-356

J41 - A. Cividini, A. Quarteroni and E. Zampieri, "Numerical Solution of Linear Elastic Problem by Spectral Collocation Methods", **Comp. Meth. Appl. Mech. Engnrg. 104**, (1993). pp. 49-76

J42 - A. Frati, F. Pasquarelli and A. Quarteroni, "Spectral Approximation to Advection-Diffusion Problems by the Fictitions Interface Method", **J. Comput. Physics 107**, (1993), pp. 201-212

J43 - V. I. Agoshkov, D. Ambrosi, V. Pennati, A. Quarteroni, F. Saleri, Mathematical and Numerical Modelling of Shallow Water Flow, **Computational Mechanics, 11**, (1993), pp. 280-299

J44 - A. Quarteroni, Metodi Numerici in Fluidodinamica, **Boll. U.M.I. (7) 6-A**, (1992), pp. 157-180

J45 - F. Pasquarelli, A. Quarteroni, Effective Spectral Approximation to Convection- Diffusion Equations, **Comput. Methods Appl. Mech. Engrg.**,116, 1994, pp.39-51

J46 - S. Micheletti, A. Quarteroni and R. Sacco, Current-Voltage Characteristics Simulation at Semiconductor Devices Using Domain Decomposition, **J. Comput. Phys.**, 119, (1995), pp. 46-61

J47 - V. I. Agoshkov, A. Quarteroni, F. Saleri, Recent Developments in the Numerical Simulation of Shallow Water Equations. I-Boundary Conditions, **Applied Numerical Mathematics**, 5, (1994), pp. 175-200

J48 - V. I. Agoshkov, E. Ovchinnikov, A. Quarteroni, F. Saleri, Recent Developments in the Numerical Simulation of Shallow Water Equations. Time-discretization Methods, **Mathematical Models and Methods in Applied Sciences**, vol.4, No.4, (1994), pp. 533-556.

J49 - P. Gervasio, A. Quarteroni and L. Valdettaro, Effective Algorithms for Spectral Methods with Applications, **Surveys on Mathematics in Industry**, 4 (1995), pp.319-336.

J50 - P. Gervasio, E. Ovchinnikov and A. Quarteroni, The Spectral Projection Decomposition Method for Elliptic Equations in 2D, **SIAM J. Numer. Anal.** 34 (1999), pp.1616-1639

J51 - E. Faccioli, A. Quarteroni and A. Tagliani, Spectral Domain Decomposition Methods for the Solution of Elastic Wave Equations, **Geophysics** , 61 (4) (1996), pp. 1160-1174

J52 - F. Maggio and A. Quarteroni, Acoustic wave simulation by spectral methods, **East-West Journal of Numerical Mathematics**, 2 (1994), pp.129-150

J53 - A. Quarteroni and L. Stolcis, Homogeneous and Heterogeneous Domain Decomposition Methods for Compressible Fluid Flows at High Reynolds Numbers, **CFD Review**, II (1998), pp.1064-1078

J54 - E. Faccioli, F. Maggio, R. Paolucci and A. Quarteroni, 2D and 3D Elastic Wave Propagation by a Pseudo-spectral Domain Decomposition Method, **Journal of Seismology,** 1 (1997), pp. 237-251

J55 - A. Quarteroni, Multifields Modeling in Numerical Simulation of Partial Differential Equations, **GAMM-Mitteilungen** 19 (1) (1996), pp.45-63

J56 - F. Gastaldi, L. Gastaldi and A. Quarteroni, Adaptive Domain Decomposition Methods for Advection-Dominated Equations, **East-West Journal of Numerical Mathematics**, 4 (1996), 165-206

J57 - F. Maggio and A. Quarteroni, Domain decomposed spectral methods for wave propagation, **ZAMM ,**76 (supplement 1) (1996), pp. 239-242

J58 - L. Formaggia, A. Scheinine and A. Quarteroni, A Numerical Investigation of Schwarz Domain Decomposition Techniques for Elliptic Problems on Unstructured Grids, **Mathematics and Computers in Simulations 44 (1997),** pp.313-330

J59 - A. Pinelli, A. Vacca and A. Quarteroni, A Spectral Multi-Domain Method for the Numerical Simulation of Turbulent Flows, **J. Comput. Phys.** 136 (1997) ,pp. 546-558

J60 - A. Quarteroni, D. Ambrosi, G. Fotia, G. Manzini, M. Mulas, L. Stolcis, Computational Fluid Dynamics at CRS4, **IEEE: Computational Science and Engineering**, 3 (3) (1996), pp. 4-8

J61 - L. Paglieri, D. Ambrosi, L. Formaggia, A. Quarteroni, A. L. Scheinine, Parallel Computation for Shallow Water Flow: a Domain Decomposition Approach, **Parallel Computing** 23 (1997), pp.1261-1277

J62 - A. Quarteroni, A. Veneziani, Vascular Fluid Dynamics: Models and Methods, **Istituto Lombardo Accademia di Scienze Lettere**, Incontro di Studio n. 16 (1998), pp. 219-271

J63 - D. J. P. Lahaye, F. Maggio, A. Quarteroni, Hybrid Finite Element Spectral Element Approximation of Waves Propagation Problems, **East-West Journal of Numerical Mathematics,** 5 (1997), pp.265-290

J64 - A. Quarteroni, A. Tagliani, E. Zampieri, Generalized Galerkin Approximations of Elastic Waves with Absorbing Boundary Conditions, **Comput. Methods Appl. Mech. Engrg**., 163 (1998), pp.323-341

J65 - A. Quarteroni, M. Tuveri, A. Veneziani, Computational Vascular Fluid Dynamics : Problems, Models and Methods, **Computing and Visualization in Science,** 2 (4), (2000), pp. 163-197

J66 - A. Quarteroni, F. Saleri, A. Veneziani, Factorization Methods for the Numerical Approximation of Navier-Stokes Equations, **Comput. Methods Appl. Mech. Engrg 188** (2000), p.505-526

J67 - A. Quarteroni, F. Saleri, A. Veneziani, Analysis of the Yosida method for the incompressible Navier–Stokes equations, **J. Math. Pures Appl.,** 78 (1999), pp.473-503

J68 - E. Miglio, A. Quarteroni and F. Saleri, Mixed Finite Element Approximation of Quasi-3D Shallow Water Equations **Comput. Methods Appl. Mech. Engng**., 174 (1999), pp.355-369

J69 - L. Formaggia, F. Nobile, A. Quarteroni and A. Veneziani, Multiscale Modeling of the Circulatory System: A Preliminary Analysis, **Computing and Visualization in Science,** 2 (1999), pp.75-84

J70 - L. Fontana, E. Miglio, A. Quarteroni and F. Saleri, A Finite Element Method for 3D Hydrostatic Water Flows, **Computing and Visualization in Science,** 2 (1999), pp.85-94

J71 - L. Fatone, P. Gervasio and A. Quarteroni, Multimodels for Incompressible Flows, **J. Math. Fluid Mechanics, 2** (2000), pp.126-150

J72 - L. Formaggia, J. F. Gerbeau, F. Nobile and A. Quarteroni, On the Coupling of 3D and 1D Navier-Stokes equations for Flow Problems in Compliant Vessels, **Comp. Methods Appl. Mech. Engnrg.** 191(6-7) (2001), pp.561-582

J73 - F. Casadei G. Fotia, E. Gabellini, F. Maggio and A. Quarteroni, `A mortar spectral/finite element method for complex 2D and 3D elastodynamic problems', **Comp. Methods Appl. Mech. Engnrg.** 191 (2002), pp.5119-5148

J74 - A. Quarteroni, A. Veneziani and P. Zunino, Mathematical and numerical modelling of solute dynamics in blood flow and arterial walls, **SIAM J. Numer. Anal.** Vol 39, No 5, (2001), pp. 1488-1511

J75 - L. Fatone, P. Gervasio and A. Quarteroni, Multimodels for Incompressible Flows : Iterative Solutions for the Navier-Stokes/Oseen Coupling, **M2AN (35), 3 (** 2001), pp.549-574

J76 - P. Gervasio, J. L. Lions and A. Quarteroni, Heterogeneous Coupling by Virtual Control Methods, **Numer. Math. 90 (2001) 2,** pp. 241-264

J77 - A. Quarteroni, A. Veneziani, P. Zunino, A Domain Decomposition Method for Advection-diffusion Processes with Applications to Blood Solutes , **SIAM J. Sci. Comput**. , Vol. 23 (2002), no. 6, pp. 1959-1980.

J78 - A. Quarteroni, S. Ragni and A. Veneziani, Coupling between lumped and distributed models for blood flow problems , **Computing and Visualization in Science**, 4 (2001) 2, pp.111-124

J79 - L. Formaggia, J. F. Gerbeau, F. Nobile and A. Quarteroni, Numerical treatment of defective boundary conditions for the Navier-Stokes equations, **SIAM J. Numer. Anal. 40 (2002) 1,** pp. 376-401

J80 - E. Miglio, A. Quarteroni and F. Saleri, Coupling of free-surface and groundwater flows, **Computers and Fluids,** Vol**. 32 (1)** (2003), pp. 73-83

J81 - A. Losinski, R. G. Owens and A. Quarteroni, On the Simulation of Unsteady Flow of an Oldroyd-B Fluid by Spectral Methods, **Journal of Scientific Computing,** 17 (2002), no. 1-4, pp. 375-383.

J82 - M. Discacciati, E. Miglio and A. Quarteroni, Mathematical and numerical models for coupling surface and groundwater flows, **Applied Numerical Mathematics 43** (2002) 57-74

J83 - K. Laganà, G. Dubini, F. Migliavacca, R. Pietrabissa, G. Pennati, A. Veneziani, A. Quarteroni, Multiscale modelling as a tool to prescribe realistic boundary conditions for the study of surgical procedures, **Biorheology 2002**;39 (3-4), pp.359-364.

J84 - A. Quarteroni and A. Veneziani, Analysis of a Geometrical Multiscale Model Based on the Coupling of ODE's and PDE's for Blood Flow Simulations, **SIAM J. on MMS**, Vol.1, No.2, pp. 173-195, 2003.

J85 - L. Formaggia, D. Lamponi and A. Quarteroni, One dimensional models for blood flow in arteries, **Journal of Engineering Mathematics**, N.47, pp.251-276, 2003.

J86 - M. Discacciati and A. Quarteroni, Convergence analysis of a subdomain iterative method for the finite element approximation of the coupling of Stokes and Darcy equations, **Computing and Visualization in Science,** Vol. 6, No. 2-3 (2004), pp. 93-104.

J87 - A. Quarteroni and G. Rozza, Optimal Control and Shape Optimization in Aorto-Coronaric Bypass Anastomoses, **Mathematical Models and Methods in Applied Sciences,** Vol.13 (12), pp.1801-1823, 2003.

J88 - N. Parolini and A. Quarteroni, Mathematical Models and Simulation for the America's Cup, **Comp.Meth.Appl.Mech.Eng**, Vol.194, pp. 1001-1026, 2005

J89 - B. V. R. Kumar, A. Quarteroni, L. Formaggia and D.Lamponi, On parallel computation of blood flow in Human Arterial Network Based on 1-D Modelling, **COMPUTING, N.71, pp.321-351, 2003.**

J90 - M. Prosi, P. Zunino, K. Perktold and A. Quarteroni, Mathematical and numerical models for transfer of low density lipoproteins through the arterial walls : a new methodology for the model set up with applications to the study of disturbed lumenal flow, **Journal of Biomechanics,** Vol.38, pp. 903-917**,** 2005.

J91 - M. Fernandez, V. Milisic and A. Quarteroni. Analysis of a geometrical multiscale blood flow model based on the coupling of ODE's and hyperbolic PDE's, in **SIAM J. on MMS**, Vol. 4 Number 1, pp. 215-236, 2005.

J92 - N. Parolini and A. Quarteroni. Simulazione Numerica per la Coppa America di Vela. **Bollettino U.M.I. –** Serie VII, Vol.7- A, pp. 1-15**,** 2004.

J93 - V. Milisic and A. Quarteroni. Analysis of lumped parameter models for blood flow simulations and their relation with 1D models, **M2AN**, Vol. IV, p.613-632, 2004.

J94 - V. I. Agoshkov, A. Quarteroni and G. Rozza. Shape Design in Aorto-Coronaric Bypass Anastomoses using Perturbation Theory. **SIAM J. Numer. Anal**., Vol. 44, No. 1, pp. 367-384, 2006.

J95 - P. Massimi, A. Quarteroni and G. Scrofani. An adaptive finite element method for modeling salt diapirism, **Mathematical Models and Methods in Applied Sciences**, Vol.16 (4), pp.587-614, 2006.

J96 - A. Quarteroni, M. Sala and A. Valli, An interface-strip domain decomposition preconditioner, **SIAM Journal on Scientific Computing**, Vol. 28, No. 2, pp. 498-516, 2006.

J97 - P. Zunino, D. Mastalli, A. Quarteroni, W. Van Biesen, D. Vecten, A. Pacitti, N. Lameire, F. Neftel, J-P. Wauters. Development of a new mathematical approach to optimize peritoneal dialysis, EPFL-IACS report 03.2006. Submitted.

J98 - V. I. Agoshkov, A. Quarteroni and G. Rozza. A mathematical approach in the design of arterial bypass using unsteady Stokes equations, **Journal of Scientific Computing**, Vol. 28, No. 2-3, pp.139-161, 2006.

J99 - L. Dede' and A. Quarteroni. Optimal Control and Numerical Adaptivity for advection-diffusion equations. **M2AN, Vol. 39, No.5,** pp.1019-1040, 2005.

J100 - S. Deparis, M. Discacciati, G. Fourestey and A. Quarteroni. Fluid-structure algorithms based on Steklov-Poincare' operators. **Comput. Methods Appl. Mech. Engnrg. 195**, p.5797-5812 (2006).

J101 - A. F. Corno, M. Prosi, P. Fridez, P. Zunino, A. Quarteroni and L. K. von Segesser. The non-circular shape of FLOWATCH-PAB prevents the need for pulmonary artery reconstruction after banding. **Eur. J. Cardiothorac. Surg.** Vol. 29, pp. 93-99 (2006).

J102 - V. I. Agoshkov, P. Gervasio and A. Quarteroni. Optimal Control in Heterogeneous Domain Decomposition Methods. **Russ. J. Numer. Anal. Math. Modelling,** Vol.20, No.3, pp.225-246 (2005).

J103 - V. I. Agoshkov, P. Gervasio and A. Quarteroni. Optimal Control in Heterogeneous Domain Decomposition Methods for Advection-Diffusion Equations. **Mediterranean Journal of Mathematics**, Vol. 3, No. 2, pp.147-176 (2006).

J104 - M. Discacciati, A. Quarteroni and A. Valli. Robin-Robin Domain Decomposition Methods for the Stokes-Darcy Coupling. **SIAM J. Numer. Anal.** Vol. 45, Issue 3, pp. 1246-1268 (2007)

J105 - A. Quarteroni and G. Rozza. Numerical Solution of parametrized Navier-Stokes equations by reduced basis methods. **Num. Meth. Part. Diff. Eq.**, Vol. 23, No. 4, pp. 923-948 (2007)

J106 - A. Quaini and A. Quarteroni. A Semi-Implicit Approach for Fluid-Structure Interaction Based on an Algebraic Fractional Step Method, **M3AS**, Vol. 17, No. 6, pp. 957-983 (2007)

J107 - P. Massimi, A. Quarteroni, F. Saleri and G. Scrofani. Modeling of Salt Tectonics, **Comput. Methods Applied Mech. Engnrg.** Vol 197, No. 1-4, pp. 281-293 (2007)

J108 - E. Burman, A. Quarteroni and B. Stamm. Interior penalty continuous and discontinuous finite element approximations of hyperbolic équations, **Journal of Scientific Computing**, Volume 43, Number 3, pp. 293-312 (2010), DOI: 10.1007/s10915-008-9232-6

J109 - E. Burman, A. Quarteroni and B. Stamm. Stabilization strategies for high order methods for transport dominated problems. **Bollettino U.M.I.**, Series IX,Vol.I, No.1,pp.57-77 (2008).

J110 - S. Badia, A. Quaini, and A. Quarteroni. Splitting methods on algebraic factorization for fluid-structure interaction. **SIAM J. Scientific Computing**, Vol.30, N.4, pp. 1778-1805 (2008).

J111 – A. Quarteroni, Fluid-Structure Interaction Between Blood and Arterial Walls, **Contemp. Chall. Math. Fluid Dyn. Appl**., 1, G.P. Galdi and R. Rannacher, Eds., World Sci. Publ., Hackensack, NJ, 2010, pp. 261–289, 76Z05 (74F10 74L15 92C35)

J112 - S. Badia, A. Quaini, and A. Quarteroni, Modular vs. Non-modular Preconditioners for Fluid-structure Systems with Large Added-mass Effect, **Comput. Methods Applied Mech. Engnrg,** Vol 197, N. 49-50, pp. 4216-4232 (2008).

J113 - R. Milani, A. Quarteroni, and G.Rozza, Reduced Basis Method for Linear Elasticity Problems with Many Parameters, **Comput. Methods Applied Mech. Engnrg.**Vol.197 (2008), pp. 4812-4829.

J114 - C. D'Angelo and A. Quarteroni, On the Coupling of 1D and 3D Diffusion-Reaction Equations. Application to Tissue Perfusion Problems, **M3AS**, Vol.18 (8), pp. 1481-1504 (2008).

J115 – L. Badea, M. Discacciati and A. Quarteroni, Numerical Analysis of the Navier-Stokes and Darcy Equations, **Numerische Mathematik**, Volume 115, Number 2 (2010), pp. 195-227

J116 – A. Quarteroni, Modelli Matematici, Calcolo Scientifico e Applicazioni, **Rendiconti del Seminario Matematico dell'Università e del Politecnico di Torino**, Volume 66, N.3 (2008), pp.173-183

J117 – T. Passerini, M.R. De Luca, L. Formaggia, A. Quarteroni, A. Veneziani, A 3D/1D geometrical Multiscale Model of Cerebral Vasculature, **Journal of Engineering Mathematics**, **Vol 69 (4),** pp.319-330

J118 – D. Detomi, N. Parolini and A. Quarteroni, Mathematics in the Wind, **Monografias de La Real Academia de Ciencias de Zaragoza, 31** (2009), pp.35-56

J119 –A. Quarteroni, Mathematical Models in Science and Engineering, **Notices of the AMS,** Volume 56, N.1 (2009), pp. 10-19

J120 –M. Discacciati and A. Quarteroni, Navier-Stokes/Darcy coupling: modeling, analysis and numerical approximation, **Revista Matematica Complutense** 22 (2009), no.2, pp 315-426

J121 – C. Canuto, P. Gervasio and A. Quarteroni, Finite-Element Preconditioning of G-NI Spectral Methods, **SIAM J. Sci. Comput.** 31 (2010), No 6, pp 4422 - 4451

J122 – M. D'Elia, L.Dedé and A.Quarteroni, Reduced Basis Method for Parametrized Differential Algebraic Equations, **Bol. Soc. Esp. Mat. Apl.,** 46 (2009), pp.45-73

J123 – X. Zhang, C.-A. Bürki, M. Stettler, D. De Sanctis, M. Perrone, M. Discacciati, N. Parolini, M. De Jesus, D.L. Hacker, A. Quarteroni and F.M. Wurm, Efficient oxygen transfer by surface aeration in shaken cylindrical containers for mammalian cell cultivation at volumetric scales up to 1,000 liters. **Biochemical Engineering Journal**, 45 (2009), pp.41–47

J124 – Z.C.Xuan, T.Lassila, G.Rozza and A. Quarteroni, On computing upper and lower bounds on the outputs of linear elasticity problems approximated by the smoothed finite element method, **Int. J. Numer. Meth. Engng.**, Volume 83, Issue 2, pages 174–195, published online, 9 July 2010

J125 - C. Leupi, E. Miglio, M. Altinakar, A. Quarteroni and M.O. Deville, A 3*D* Finite element model for free-surface flows, **Computers and Fluids**, 38 (10) (2009) pp. 1903-1916.

J126 – P.Crosetto, S.Deparis, G.Fourestey, A.Quarteroni, Parallel Algorithms for Fluid Structure Interaction Problems in Haemodynamics, **SIAM J. Sci. Comput.** 33 (2011), pp. 1598-1622

J127 – F.Della Rossa, C.D'Angelo and A.Quarteroni, A Distributed Model of Traffic Flows on Extended Regions, **NHM**, vol. 5, no. 3(2010), pp.525-544

J128 – D.Ambrosi, G.Arioli, F.Nobile and A.Quarteroni, Electromechanical Coupling in Cardiac Dynamics: the Active Strain Approach, **SIAM J. Applied Mathematics** 71 (2), (2011) pp. 605-621

J129 –A.Quarteroni and R.Ruiz-Baier, Analysis of a Finite Volume Element Method for the Stokes Problem, **Numerische Mathematik**, 118 (4) (2011), pp.737-764

J130 – P.Crosetto, Ph.Reymond, S.Deparis, D.Kontaxakis, N.Stergiopulos and A.Quarteroni, Fluid Structure Interaction Simulations of Physiological Aortic Blood Flow in the Aorta, **Computers & Fluids (2011)**, Vol 43, Issue 1, pp. 46-57

J131 – M.Lesinigo, C.D'Angelo and A.Quarteroni, A multiscale Darcy-Brinkman model for fluid flow in fractured porous media, **Numerische Mathematik**, 117 (4) (2011), pp. 717-752

J132 – L.Gaudio and A.Quarteroni, hN-adaptive spectral element discretization of optimal control problems for environmental applications, **SeMA Journal**, 53 (2011), pp. 55-69

J133 -- F. Nobile, A. Quarteroni and R. Ruiz-Baier, An active strain electromechanical model of cardiac tissue, **Int. J. for Numer. Meth. Biomedical Eng. 28, 1 (2012),** pp 52-71

J134 -- G.Pena, C.Prud'homme and A. Quarteroni, High order methods for the approximation of the incompressible Navier-Stokes equations in a moving domain, **CMAME**, Computer Methods in Applied Mechanics and Engineering, Volumes 209-212 (2012), 197-211

J135 -- P.J.Blanco, M.Discacciati and A. Quarteroni, Modeling Dimensionally Heterogeneous Problems: Analysis, Approximation and Applications, **Numerische Mathematik**: Volume 119, Issue 2 (2011), Page 299-335

J136 -- A.Manzoni, A. Quarteroni and G.Rozza, Shape optimization for viscous flows by reduced basis methods and free-form deformation, **Int. J. Numer. Meth. Fluids** 70(5) (2012), pp.646-670

J137 -- A.C.I.Malossi, P.Blanco, S.Deparis and A. Quarteroni, Algorithms for the partitioned solution of weakly coupled fluid models for cardiovascular flows, **Int. J. Numer. Meth. Biomedical Eng. 27 (12)**, 2011, 2035-2057

J138 -- G.Migliorati and A.Quarteroni, Multilevel Schwarz methods for elliptic partial differential equations, **Comput. Methods Applied Mech. Engnrg,** Volume 200, Issues 25-28 (2011), Pages 2282-2296

J139 -- M.Discacciati, A.Quarteroni and S.Quinodoz, Numerical approximation of internal discontinuity interface problems, to appear in **SIAM J. Sci. Comput**., 35 (5) (2013), pp. 2341-2369

J140 -- P. Hunter, P. V. Coveney, B. de Bono, V. Diaz, J. Fenner, A. F. Frangi, P. Harris, R.Hose, P. Kohl, P. Lawford, K. McCormack, M. Mendes, S. Omholt, A. Quarteroni, J. Skår, J.Tegner, S. R. Thomas, I. Tollis, I. Tsamardinos, J. H. G.M. van Beek and M. Viceconti, A vision and strategy for the virtual physiological human in 2010 and beyond, **Phil.Trans.R.Soc.A** (2010) **368**, 2595-2614

J141 -- T.Lassila, A.Quarteroni and G.Rozza, A reduced basis model with parametric coupling for fluid-structure interaction problems, **SIAM J.Sci.Comp**. 34 (2012), 1187-2013

J142 -- F.F.Antonietti, I.Mazzieri, A.Quarteroni and F.Rapetti, Non-conforming high order approximations for elastodynamics equation, **Comput. Methods Applied Mech. Engnrg,** Volumes 209-212 (2012), pp. 212-238

J143 – M.Discacciati, D.Hacker, A.Quarteroni, S.Quinodoz, S.Tissot and F.Wurm, Numerical simulation of orbitally shaken viscous fluids with free surface, **Int. J. Numer. Meth. Fluids (2013)**, 71(3), p. 294-315

J144 – P.Reymond, P.Crosetto, S.Deparis, A.Quarteroni and N.Stergiopulos, Physiological simulation of blood flow in the aorta: comparison of haemodynamic indices as predicted by 3-D FSI, 3-D rigid wall and 1-D models, **Medical Engineering and Physics** 35 (6)(2013), pp. 784–791

J145 – C.D'Angelo, G.Panasenko and A.Quarteroni, Asymptotic numerical derivation of the Robin-type coupling conditions for the macroscopic pressure at reservoir-capillaries interfaces, **Applicable Analysis** 92 (1) (2013), pp.158-171

J146 –A.Quarteroni, A.Manzoni and G.Rozza, Certified Reduced Basis Approximation for Parametrized Partial Differential Equations, **Journal of Mathemathics in Industry 1**:3 (2011), pp. 1-44

J147 –M.Astorino, J.Becerra Sagredo and A.Quarteroni, A Modular Lattice Boltzmann GPU-based Solver, **SeMA Journal**, 59 (2012), pp.53-78

J148 – P. Blanco, P. Gervasio, and A. Quarteroni, Extended variational formulation for heterogeneous partial differential equations, **CMAM** (Computational Methods in Applied Mathematics), 11 (2011), no. 2, pp. 141-172

J149 – S.Rossi, R.Ruiz Baier, L.Pavarino and A.Quarteroni, Orthotropic active strain models for the numerical simulation of cardiac biomechanics, **Int. J. Numer. Meth. Biomed. Engng.,** 28 (2012), pp 761-788

J150 – A.Manzoni, A.Quarteroni and G.Rozza, Model reduction techniques for fast blood flow simulation in parametrized geometries, **Int.J.Numer.Meth.Biomedical Engnrg.** 28 (2012), pp. 604-625

J151 – L.Iapichino, A.Quarteroni and G.Rozza, A Reduced Basis Hybrid Method for the Coupling of Parametrized Domains Represented by Fluidic Networks, **Comput. Methods Appl. Mech. Engnrg.** 221–222 (2012), 63–82

J152 – L.Formaggia, A.Quarteroni and C.Vergara, On the physical consistency between three-dimensional and one-dimensional models in haemodynamics, **Journal of Computational Physics**, 244 (2013), pp. 97-112

J153 – T.Lassila, A.Manzoni, A.Quarteroni and G.Rozza, A reduced computational and geometrical

framework for inverse problems in haemodynamics. **Int. J. Numer. Methods Biomed. Engrg.** 29 (7), pp. 741-776, 2013.

J154 – T.Lassila, A.Manzoni, A.Quarteroni and G.Rozza, Boundary control and shape optimization for the robust design of bypass anastomoses under uncertainty, **M2AN 47 (2013)**, pp 1107-1131

J155 –E.Faggiano, J.Bonnemain, A.C.I.Malossi and A.Quarteroni, A framework for the analysis of the haemodynamics in patients with ventricular assist device, submitted, 2012

J156 – A.C.I.Malossi, P.Blanco, P.Crosetto, S.Deparis and A.Quarteroni, Implicit coupling of one-dimensional and three-dimensional blood-flow models with compliant vessels, SIAM J Multiscale Model. Simul., 11 (2) (2013), pp.474-506

J157 – A.Manzoni, A.Quarteroni and G.Rozza, Computational reduction for parametrized PDEs: strategies and applications, **Milan Journal of Mathematics** 80 (2012), pp. 283-309

J158 – E.Faggiano, L.Antiga, G.Puppini, A.Quarteroni, G.B.Luciani and C. Vergara, Helical Flows and Asymmetry of Blood Jet in Dilated Ascending Aorta with Normally Functioning Bicuspid Valve, **Biomechanics and Modeling in Mechanobiology** 12(4) (2013), pp.801-813

J159 – J.Bonnemain, S.Deparis, M.Lesinigo, C.Malossi, A.Quarteroni, and L.v.Seghesser, Numerical simulation of left ventricular assist device implantations: Comparing the ascending and the descending aorta cannulations, **Medical Engineering & Physics,** Vol 35 (Issue 10), pp.1465-1475

J160 – P.Chen, A.Quarteroni, and G.Rozza, Stochastic optimal Robin boundary control problems of advection-dominated elliptic equations, **SIAM J. Numer. Anal**. 51-5 (2013), pp.2700-2722

J161 – A.Laadhari, A.Quarteroni, and R.Ruiz-Baier, Fully Eulerian finite element approximation of a fluid-structure interaction problem in cardiac cells**", Int. J. Numer. Meth. Engng.,** 96 (2013), pp. 712-738

J162 – R.Ruiz-Baier, A.Gizzi, S.Rossi, C.Cherubini, A.Laadhari, S.Filippi, and A.Quarteroni, Mathematical Modelling of Active Contraction in Isolated Cardyomyocites, **Mathematical Medicine & Biology** 31, 3 (2014), p. 259-283

J163 – P.Chen, A.Quarteroni, and G.Rozza, Comparison between reduced basis and stochastic collocation methods for elliptic problems, **J. Sci. Computing** 59, 1 (2014), p.187-216

J164 – T.Lassila, A.Manzoni, A.Quarteroni and G.Rozza, Generalized reduced basis methods and n-width estimates for the approximation of the solution manifold of parametric PDEs, In **Analysis and Numerics of Partial Differential Equations**. Contribution dedicated to Enrico Magenes (1923-2010). Springer, INdAM Series, vol. 4, F. Brezzi, P. Colli Franzone, U. Gianazza, G. Gilardi (Eds.), 2013. Re-printed also on Bollettino Unione Matematica Italiana (UMI), under permission/agreement Springer-UMI.

J165 – M.Astorino, F.Chouly and A.Quarteroni**,** A time-parallel framework for coupling finite element and lattice Boltzmann methods**, AMRX**, **Applied Mathematics Research eXpress**, Vol 2016, Issue 1, p 24-67, https://doi.org/10.1093/amrx/abv009, Published 09 October 2015

J166 – F.Negri, G.Rozza, A.Manzoni and A.Quarteroni, Reduced Basis Method for Parametrized Elliptic Optimal Control Problems, **SIAM J. Sci. Comput.** 35 (5) (2013), pp. A2316-A2340.

J167 – P.Chen, A.Quarteroni, and G.Rozza, Simulation-based Uncertainty quantification of human arterial network hemodynamics, **International Journal for Numerical Methods in Biomedical Engineering** 29(6): 698-721, 2013

J168 – L.Dedè and A.Quarteroni, Isogeometric analysis for second order partial differential equations on surfaces, **Comput. Methods Appl. Mech. Engnrg. 28 (2015),** pp.807-834

J169 – M.Lombardi, N.Parolini and A.Quarteroni, Radial Basis Functions for Inter-Grid Interpolation and Mesh Motion in FSI Problems, **Comput. Methods Appl. Mech. Engnrg. 26** (2013), pp. 117-131

J170 – D.Baroli, A.Quarteroni and R.Ruiz-Baier, Convergence of a stabilized discontinuous Galerkin method for incompressible nonlinear elasticity, **Advances in Computational Mathematics 39 (2013),** pp. 425-443

J171 – P.Hunter, T.Chapman, P.V.Coveney, B.de Bono, V.Diaz, J.Fenner, A.F. Frangi, P. Harris, R.Hose, P.Kohl, P.Lawford, K.McCormack, M.Mendes, S.Omholt, A.Quarteroni, N.Shublaq, J.Skar, K.Stroetmann, J.Tegner, S. R.Thomas, I.Tollis, I.Tsamardinos, J.HGM.van Beek and M.Viceconti, A vision and strategy for the VPH: 2012 update, **Interface Focus**, 20130004. http://dx.doi.org/10.1098/rsfs.2013.0004, 2013

J172– C. Vergara, S. Palamara, D. Catanzariti, C. Pangrazzi, F. Nobile, M. Centonze, E. Faggiano, M. Maines, A. Quarteroni and G. Vergara, Patient specific generation of the Purkinjie network driven by clinical measurements of a normal propagation, **Medical & Biological Engineering & Computing 52** (10) (2014), pp. 813-826

J173 – P.Chen, A.Quarteroni and G.Rozza, A Weighted Reduced Basis Method for Elliptic Partial Differential Equations with Random Input Data, **SIAM J. Numer. Anal.,** 51(6) (2013) :3163-3185

J174 – P.Chen, A.Quarteroni and G.Rozza, A Weighted Empirical Interpolation Method: A-priori Convergence Analysis and Applications, **ESAIM: Mathematical Modelling and Numerical Analysis 48 (4)** (2014), pp. 243-253, doi: 10.1051/m2an/2013128

J175 – M. Discacciati, P. Gervasio and A. Quarteroni, The Interface Control Domain Decomposition (ICDD) Method for Elliptic Problems, **SIAM J. Control Optim. 51(5)** (2013), pp. 3434-3458

J176 – P.Chen and A.Quarteroni, Accurate and Efficient Evaluation of Failure Probability for Partial Differential Equations with Random Input Data, **Computer Methods in Applied Mechanics and Engineering**, 267(0) (2013): 233-260

J177 – E.Faggiano, T.Lorenzi and A.Quarteroni, Metal artifact reduction in computer tomography images by a fourth-order variational flow, **Computer Methods in Biomechanics and Biomedical Engineering: Imaging & Visualization**, **4** (2016), pp. 202-2013

J178 – M. Discacciati, P. Gervasio and A.Quarteroni, Interface Control Domain Decomposition Methods for Heterogeneous Problems, **Int. J. Numer. Meth. Fluids** 76 (2014), pp. 471–496 DOI: 10.1002/fld.3942

J179 – A.Int.J.Numer.Methods, L.Dedè and A.Quarteroni, Isogeometric Analysis and Error Estimates for High Order Partial Differential Equations in Fluid Dynamics, **Computers & Fluids** 102 (2014), p. 277-303

J180 – M. Discacciati, P. Gervasio and A.Quarteroni, The Interface Control Domain Decomposition (ICDD) Method for the Stokes Problem, J. Coupled Syst. Multiscale Dyn. 1 (2013), pp. 372-392

J181 – T.Taddei, S.Perotto and A.Quarteroni, Reduced Basis Techniques for Nonlinear Conservation Laws, M2AN 49 (2015), pp.787-814

J182 – P.Antonietti, B.Ayuso de Dios, I.Mazzieri and A.Quarteroni, Stability analysis of discontinuous Galerkin approximations to the elastodinamics problem, **J.Scientific Computing**, 68(1) (2016), pp.143-170

J183 – P.Chen and A.Quarteroni, Weighted reduced basis methods for stochastic optimal control problems with elliptic PDE constraint, **SIAM/ASA Journal on Uncertainty Quantification 2 (1),** (2014), pp 364-396

J184 –B. Andreianov, M. Bendahmane, A.Quarteroni and R.Ruiz-Baier, Solvability analysis and numerical approximation of linearized cardiac electromechanics, **M3AS 25 (5)** (2015), pp. 959-993, DOI : 10.1142/S0218202515500244

J185 – S. Rossi, T. Lassila, R. Ruiz-Baier, A. Sequeira and A. Quarteroni, Thermodynamically consistent activation model capturing ventricular systolic wall thickening in cardiac electromechanics, **European Journal of Mechanics A/Solids** 48 (2014), pp.129-142

J186 – S.Deparis, G.Grandperrin and A. Quarteroni, Parallel Preconditioners for the unsteady Navier-Stokes Equations and applications to Hemodynamics Simulations, **Computers and Fluids** 92 (2014), p. 253-273

J187 – S. Deparis, D. and A. Quarteroni, A rescaled localized radial basis functions interpolation on non-cartesian and non-conforming grids, **SIAM J.Sci.Comput**. 36 (6) (2014), pp 2745-2762

J188 – A.Koshakji, A. Quarteroni and G.Rozza, Free form deformation techniques applied to 3D shape optimization problems, **Communications in Applied and Industrial Mathematics**, DOI: 10.1685/journal.caim.452

J189 – P. Chen, A. Quarteroni and G. Rozza, Multilevel and weighted reduced basis method for stochastic optimal control problems constrained by Stokes equations. **Numer. Math. 133 (1) (2016),** 67-102

J190 – P.Tricerri, L.Dedè, A.Gambaruto, A. Quarteroni and A.Sequeira, A numerical study of isotropic and anisotropic constitutive models with relevance to healthy and unhealthy cerebral arterial tissues, **International Journal of Engineering Science**, International Journal of Engineering Science, Vol. 101, 04.2016, p. 126-155.

J191 – T.Taddei, A. Quarteroni and S.Salsa, An offline-online Riemann solver for one-dimensional systems of conservation laws, **Vietnam Journal of Mathematics** 44, Issue 4 (2016), pp 873–891

J192 –T.Khashiwabara, C.M. Colciago, L.Dedé and A. Quarteroni, Well-posedness, regularity, and convergence analysis of the finite element approximation of a generalized Robin boundary value problem, **SIAM J. Numer. Anal**. 53 (1) (2015), pp. 105-126

J193 – M.Benzi, S.Deparis, G.Grandperrin and A. Quarteroni, Parameter estimates for the relaxed dimensional factorization preconditioner and application to hemodynamics, **Comput. Methods Appl. Mech. Engnrg. 300** (2016), pp. 129-145

J194 – P.Chen and A.Quarteroni, A new algorithm for high-dimensional uncertainty quantification based on dimension-adaptive sparse grid approximation and reduced basis methods , **J.Comput.Phys**. 298 (2015), pp 176-193

J195 – S.Pezzuto, D.Ambrosi and A.Quarteroni, An orthotropic active-strain model for the myocardium mechanics and its numerical approximation, **European Journal of Mechanics - A/Solids 48 (2014),** pp.83-96

J196 – L.Dedè, C.Jaeggli and A.Quarteroni, Isogeometric numerical dispersion analysis for elastic wave propagation, **Comput. Methods Appl. Mech. Engnrg.** 284 (2015), pp. 320-348, DOI: 10.1016/j.cma.2014.09.013

J197 – M.Discacciati, P.Gervasio, A.Giacomini and A.Quarteroni, The Interface Control Domain Decomposition method for Stokes-Darcy coupling**, SIAM J. Numerical Analysis** 54 (2) (2016), pp.1039-1068

J198 – F.Ballarin, A.Manzoni, A.Quarteroni, and G.Rozza, Supremizer stabilization of POD-Galerkin approximation of parametrized Navier-Stokes equations, **Int. J. Numer. Meth. Engng**, 102 (5) (2015), p. 1136-1161

J199 – R.Penta, D.Ambrosi and A.Quarteroni, Multiscale homogenization for fluid and drug transport in vascularized malignant tissues, **M3AS**, Vol. 25, Issue 01 (2015), pp. 79-108

J200 – P.Antonietti, P.Pacciarini and A.Quarteroni, A Discontinuous Galerkin Reduced Basis Element Method for Elliptic Problems, **M2AN,** Vol. 50 (2016), pp. 337-360

J201 –S. Palamara, C. Vergara, D. Catanzariti, E.Faggiano, C. Pangrazzi, M. Centonze, F. Nobile, M. Maines and A. Quarteroni, Computational generation of the Purkinje network driven by clinical measurements: The case of pathological propagations, **International Journal for Numerical Methods in Biomedical Engineering**, Volume 30, Issue 12 (2014), pp. 1558–1577

J202 – P.Tricerri, L. Dedè, S. Deparis, A. Quarteroni, A.M. Robertson, A. Sequeira, Fluid-structure interaction simulations of cerebral arteries modeled by isotropic and anisotropic constitutive laws, **Computational Mechanics**, Vol. 55, Issue 3, pp. 479-498

J203 – S.Zhu, L.Dedè and A. Quarteroni, Isogeometric analysis and proper orthogonal decomposition for parabolic problems, **Numerische Mathematik** 135 (2) (2017), pp.333-370

J204 – M.C.Colciago, S.Deparis and A. Quarteroni, Comparisons between reduced order models and full 3D models for fluid-structure interaction problems in haemodynamics, **J. Computational and Applied Mathematics** 265 (2014), pp.120-138

J205 – A.Laadhari and A. Quarteroni, Mathematical modeling of heart valves using resistive Eulerian surfaces, **IJNBME 32 (5) (2016)** DOI: 10.1002/cnm.2743, 2015

J206 – P.Chen, A. Quarteroni and G.Rozza, Reduced basis methods for uncertainty quantification, **SIAM/ASA J. Uncertainty Quantification**, 5(1) (2017), 813–869

J207 – L.Iapichino, A. Quarteroni and G.Rozza, Reduced basis method and domain decomposition for elliptic problems in networks and complex parametrized geometries, **CAMWA**, **Vol.71**, Issue 1 (2016), 408-430

208 – P.F.Antonietti, C., I. Mazzieri and A. Quarteroni, High order discontinuous Galerkin methods on simplicial elements for the elastodynamics equation, **Numerical Algorithms** 71,1 (2016), p.181-206

J209 – A., L.Dedè and A. Quarteroni, Isogeometric Analysis of High Order Partial Differential Equations on Surfaces, **Comput. Methods Appl. Mech. Engnrg.**, Vol. 295 (2015), pp. 446–469

J210 – M. G. C. Nestola, E. Faggiano, C. Vergara, R. M. Lancellotti, S. Ippolito, S. Filippi, A.Quarteroni and R. Scrofani, Computational comparison of aortic root stresses in presence of stentless and stented

aortic valve bio-prostheses, **Computer Methods in Biomechanics and Biomedical Engineering**, **Volume 20 (2),** (2017), pp 171-181

J211 – D.Forti, S.Deparis, G.Grandperrin and A.Quarteroni, FaCSI: a Block Parallel Preconditioner for fluid-Structure Interaction in Hemodynamics, **J. Comput. Physics (327)** (2016), 700-718

J212 – A.Tagliabue, L.Dedè and A.Quarteroni, Nitsche's Method for Parabolic Partial Differential Equations with Mixed Time Varying Boundary Conditions, ESAIM : **M2AN** 50 (2016), 541-563

J213 – A. S. Patelli, L. Dedè, T. Lassila, A. Bartezzaghi and A. Quarteroni, Isogeometric approximation of cardiac electrophysiology models on surfaces: an accuracy study with application to the human left atrium, **Comput. Methods Appl. Mech. Engrg - ISSN:0045-7825, DOI:10.1016/j.cma.2016.12.022, vol. 317, pp.248-273**

J214 – S.Deparis, D.Forti, P.Gervasio and A. Quarteroni, INTERNODES: an accurate interpolation-based method for coupling the Galerkin solutions of PDEs on subdomains featuring non-conforming interfaces, **Computers and Fluids** 141 (2016), pp. 221-41

J215 – C. Vergara, M. Lange, S. Palamara, T. Lassila, A. F. Frangi and A. Quarteroni, A coupled 3D-1D numerical monodomain solver for cardiac electrical activation in the myocardium with detailed Purkinje network, **J. Comput. Physics**, Volume 308 (C) (2016), pp 218-238

J216 – A.Quarteroni, A.Veneziani and C. Vergara, Geometric multiscale modeling of the cardiovascular system, between theory and practice, **Comput. Methods Appl. Mech. Engnrg. 302** (2016), 193-252

J217 – F.Ballarin, E.Faggiano, S.Ippolito, A.Manzoni, A.Quarteroni, G.Rozza, R.Scrofani, Fast simulations of patient-specific haemodynamics of coronary artery bypass grafts based on a POD–Galerkin method and a vascular shape parametrization, **J. Comput. Physics**, Volume 315 (C) (2016), pp.609-628

J218 – P.Pacciarini, P.Gervasio and A.Quarteroni: Spectral Based Discontinuous Galerkin Reduced Basis Element Method for Parametrized Stokes Problems, **CAMWA** 72(8) (2016), pp 1977-1987

J219 – D.Balzani, S.Deparis, S.Fausten, D.Forti, A.Heinlein, A.Klawonn, A.Quarteroni, O.Rheinbach and J.Schroeder, Numerical Modeling of Fluid-Structure Interaction in Arteries with Anisotropic Polyconvex Hyperelastic and Anisotropic Viscoelastic Material Models at Finite Strains, **IJNMBE**, **32**(10), (2016)

J220 – A.Tagliabue, L.Dedè and A.Quarteroni, Fluid dynamics of an idealized left ventricle: the extended Nitsche's method for the treatment of heart valves as mixed time varying boundary conditions, **International Journal for Numerical Methods in Fluids 85 (3) (2017)**, pp. 135-164

J221 – S.Zhu, L.Dedè and A.Quarteroni, Isogeometric Analysis and Proper Orthogonal Decomposition for the Acoustic Wave Equation, ESAIM: **M2AN 51** (2017), pp 1197-1221

J222 – A.Quarteroni, T. Lassila, S. Rossi, R. Ruiz-Baier, Integrated Heart – Coupling multiscale and multiphysics models for the simulation of the cardiac function, **Comput. Methods Appl. Mech. Engnrg. 314 (2017),** 345-407

J223 – A. Bartezzaghi, L. Dedè and A. Quarteroni, Isogeometric Analysis of Geometric Partial Differential Equations, i**n Computer Methods in Applied Mechanics and Engineering, 2016,** doi.org/10.1016/j.cma.2016.08.014, ISSN: 0045-7825, vol. 311 pp. 625-647

J224 – B.Guerciotti, C. Vergara, S. Ippolito, A.Quarteroni, C.Antona and R. Scrofani, Computational study of the risk of restenosis in coronary bypasses, **Biomechanics and Modeling in Mechanobiology**, February 2017, Volume 16 (1) (2017), 313–332

J225 – A. Ferroni, P.F. Antonietti, I. Mazzieri and A. Quarteroni, Dispersion-dissipation analysis of 3D continuous and discontinuous spectral element methods for the elastodynamics equation, **Geophysical Journal International**, 2017, Volume 211, Issue 3, 1 December 2017, Pages 1554–1574, https://doi.org/10.1093/gji/ggx384

J226 – D.Bonomi, A.Manzoni and A.Quarteroni, A matrix discrete empirical interpolation method for the efficient model reduction of parametrized nonlinear PDEs: application to nonlinear elasticity problems, **Comp. Methods Appl. Mech. Engnrg. 324** (2017), pp.300-326

J227 – S.Pagani, A.Manzoni and A.Quarteroni, A reduced-basis ensemble Kalman filter for state/parameter identification in large-scale nonlinear dynamical systems, **SIAM/ASA J Uncertainty Quantification** 5(1), pp. 890-921, 2017

J228 – Y.Maday, A.Manzoni and A.Quarteroni, An online intrinsic stabilization strategy for the reduced basis approximation of parametrized advection-dominated problems, **C. R. Acad. Sci. Paris**, Ser. I 354 (12), pp. 1188-1194, 2016

J229 –A.Manzoni, F.Negri and A.Quarteroni, Dimensionality reduction of parameter dependent problems through proper orthogonal decomposition, **Annals of Mathematical Sciences and Applications**, Vol. 1, No. 2 (2016), pp. 341-377

J230 – D.Forti, A.Quarteroni and S.Deparis, A parallel algorithm for the numerical solution of large-scale nonconforming fluid-structure interaction problems in hemodynamics, **Journal of Computational Mathematics 35** (3) (2017), pp. 363-380

J231 – M. Fedele, E. Faggiano, L. Dedè and A.Quarteroni, A Patient-Specific Aortic Valve Model based on Moving Resistive Immersed Implicit Surfaces, **Biomechanics and Modeling in Mechanobiology,** 2017; 16(5):1779-1803. doi: 10.1007/s10237-017-0919-1

J232 – M. Lange, S. Palamara, T. Lassila, C. Vergara, A. Quarteroni and A.F. Frangi, Improved Hybrid/GPU Algorithm for Solving Cardiac Electrophysiology Problems on Purkinje Networks, **Int. J. Numer. Meth. Biomed. Eng. 33(6)**,2017
https://onlinelibrary.wiley.com/doi/epdf/10.1002/cnm.2835

J233 – F.Ballarin, E.Faggiano, A.Manzoni, G.Rozza, A.Quarteroni, S.Ippolito, C.Antona and R.Scrofani, A fast virtual surgery platform for many scenarios haemodynamics of patient specific coronary artery bypass grafts, **Biomech. Model. Mechanobiol.** 16(4), pp. 1373-1399, 2017

J234 – A.Quarteroni, A.Manzoni and C.Vergara, The Cardiovascular System: Mathematical Modeling, Numerical Algorithms, Clinical Applications, **ACTA NUMERICA 26** (2017), pp. 365-590

J235 – P.Gervasio and A.Quarteroni, Analysis of the INTERNODES Method for Non-conforming Discretizations of Elliptic Equations, **Comput. Methods Appl. Mech. Engrg. 334** (2018) 138–166

J236 –A.Tagliabue, L.Dedè and A.Quarteroni, Complex blood flow patterns in an idealized left ventricle: a numerical study, **CHAOS**,2017; 27(9):093939. doi: 10.1063/1.5002120.

J237 – F. Scardulla[1], S. Pasta, L. D'Acquisto[1], S. Sciacca[3], V. Agnese, C. Vergara[4], A.Quarteroni, F. Clemenza[3], D. Bellavia[3] and M. Pilato, Shear Stress Alterations in the Celiac Trunk of Patients with Continuous-Flow Left Ventricular Assist Device by In-Silico and In-Vitro Flow Analysis, **Journal of Heart and Lung Transplantation**, 36(8), pp. 906-913, 2017

https://www.sciencedirect.com/science/article/pii/S105324981731731X

J238 – B.Guerciotti, C.Vergara, S.Ippolito, A.Quarteroni, C.Antona and R.Scrofani, A computational fluid-structure interaction analysis of coronary Y-grafts, **Med. Eng. Phys. 47 (2017), pp.117-127**

J239 – R.M.Lancellotti, C.Vergara, L.Valdettaro, S.Bose and A.Quarteroni, Large Eddy Simulations for Blood Fluid-Dynamics in Real Stenotic Carotids, **Int.J. Numer. Meth. Biomed. Eng., 33(11)**, 2017
https://onlinelibrary.wiley.com/doi/full/10.1002/cnm.2868

J240 – P.Antonietti, A.Ferroni, I.Mazzieri, R.Paolucci, A.Quarteroni, C.Smerzini and M.Stupazzini, Numerical modeling of seismic waves by discontinuous spectral element methods, **ESAIM 61** (2018), pp 1-37

J241 – A.Bartezzaghi, L.Dedè, A.Quarteroni, Biomembrane modeling with Isogeometric Analysis, **Comput. Methods Appl. Mech. Engrg. 347 (2019),** pp 103-119

J242 – A.Quarteroni, M for Models, **Lett Matt Int (2017)**, doi:10.1007/s40329-017-0175-3

J243 – A.Gerbi, L.Dedè, and A.Quarteroni, A monolithic algorithm for the simulation of cardiac electromechanics in the human left ventricle, 2017, **Mathematics in Engineering 1 (1) (2018),** p. 1-37

J244 – A.Zingaro, L.Dede', F.Menghini and A.Quarteroni, Hemodynamics of the heart's left atrium based on a Variational Multiscale - LES numerical model, 2020, **European Journal of Mechanics / B Fluids 89 (**2021), pp 380-400

J245 – F.Menghini, L.Dedè, and A.Quarteroni, Computational fluid dynamics of blood flow in an idealized left human heart, **Int. J. Num. Meth. in Biomedical Engineering 37 (11) (2021**https://doi.org/10.1002/cnm.3287

J246 – F.Regazzoni, L.Dedè, and A.Quarteroni, Active contraction of cardiac cells : a reduced model for sarcomere dynamics with cooperative interactions, **Biomechanics and Modeling in Mechanobiology 17 (6) (2018**), pp 1663-1686

J247 – A.Quarteroni, Taking Mathematics to Heart, **Notices of the American Mathematical Society**, **Vol 65** (2018), Number 1, p. 19-65

J248 – P.Antonietti, N. Dal Santo, I.Mazzieri, and A.Quarteroni, A high-order discontinuous Galerkin approximation to ordinary differential equations with applications to elastodynamics, **IMA J. Numerical Analysis**, Volume 38, Issue 4 (2018), p. 1709–1734

J249 – N. Dal Santo, S.Deparis, A.Manzoni and A.Quarteroni, Multi space reduced basis preconditioners for large-scale parametrized PDEs, **SIAM J. Sci. Comput. (**2018), 40 (2), A954–A983. (30 pages), doi.org/10.1137/16M1089149

J250 – N. Dal Santo, S.Deparis, A.Manzoni and A.Quarteroni, An algebraic least squares reduced basis method for the solution of nonaffinely parametrized Stokes equations, **Comp. Methods Appl. Mech. Engnrg.** 344, pp. 186-208, 2019

J251 – S.Deparis, M.Deville, F.Menghini, L.Pegolotti and A.Quarteroni, Application of the Rosenbrock methods to the solution of unsteady 3D incompressible Navier-Stokes equations, **Computers and Fluids 179 (2019)**, p. 112-122

J252 – L.Barbarotta, S.Rossi, L.Dede' and A.Quarteroni, A Transmurally Heterogeneous Orthotropic Activation Model for Ventricular Contraction and its Numerical Validation, **International Journal for Numerical Methods in Biomedical Engineering, 34**(12) (2018) :e3137. doi: 10.1002/cnm.3137

J253 – L.Dede' and A.Quarteroni, Isogeometric Analysis of a Phase Field Model for Darcy Flows with Discontinuous Data, **Chinese Annals of Mathematics, Series B, May 2018, Volume 39, Issue 3, pp 487–512 DOI: 10.1007/s11401-018-0079-3. ISSN:0252-9599**

J254 – M.Landajuela, M.Vergara, A.Gerbi, L.Dedè, L.Formaggia and A.Quarteroni, Numerical approximation of the electromechanical coupling in the left ventricle with inclusion of the Purkinjie network, **Int. J. Num. Meth. Biomed. Eng., 34 (7), (2018)**
https://onlinelibrary.wiley.com/doi/full/10.1002/cnm.2984

J255 – A.Quarteroni, The role of Statistics in the era of big data: a computational scientist' perspective, **Statistics and Probability Letters 136 (2018),** 63–67

J256 – L.Pegolotti, L.Dedè and A.Quarteroni, Isogeometric Analysis of the electrophysiology in the human heart: numerical simulation of the bidomain equations on the atria , **Comp. Methods Appl. Mech. Engnrg., Volume 343, 1 January 2019, Pages 52-73**

J257 – P.Gervasio, L.Dede', O.Chanon and A.Quarteroni, A Computational Comparison Between Isogeometric Analysis and Spectral Element Methods: Accuracy and Spectral Properties, **Journal of Scientific Computing**, Issue 1 (2020)

J258 – S.Pagani, A.Manzoni and A.Quarteroni, Numerical approximation of parametrtzed problems in cardiac electrophysiology by a local reduced basis method, **Comput. Meth. Appl. Mech. Engrg.** 340 (2018), pp. 530-558.

J259 – P. Gervasio and A. Quarteroni, The INTERNODES method for non-conforming discretizations of PDEs, **CAMC (Communications on Applied Mathematics and Computation)**, **Vol 1** Issue 3 (2019),pp. 361-401 (DOI) 10.1007/s42967-019-00020-1 (2019)

J260 – N. Dal Santo, S.Deparis, A.Manzoni and A.Quarteroni, Multi space reduced basis preconditioners for parametrized Stokes equations, **Comput. Math. with Appl., Vol 77** Issue 6 (2019), pp. 1583-1604 doi.org/10.1016/j.camwa.2018.09.036

J261 – S. Stella, L. Giovannacci, C. Vergara, A. Quarteroni and G. Prouse, Assessing the disturbed flow and the transition to turbulence in the arteriovenous fistula, **Journal of Biomedical Engineering 141 (10) (2019**)

J262 – F.Regazzoni, L.Dede' and A. Quarteroni, Machine learning for fast and reliable solution of time-dependent differential problems, **J. Comput. Phys**. 397 (2019), https://doi.org/10.1016/j.jcp.2019.07.050

J263 – A.Manzoni, A. Quarteroni and S.Salsa, A saddle point approach to an optimal boundary control problem for steady Navier-Stokes equations, **Mathematics in Engineering**, **1 (2)** (2019), p.252-280

J264 – A.Masci, L.Barone, L.Dede', M.Fedele, C.Tomasi, A.Quarteroni and C.Corsi, S.Pagani, A.Manzoni and A.Quarteroni, The Impact of Left Atrium Appendage Morphology on Stroke Risk Assessment in Atrial Fibrillation: A Computational Fluid Dynamics Study, **Front. Physiol**., 2019 Jan. 22 https://doi.org/10.3389/fphys.2018.01938

J265 – G.Prouse, S.Stella, C.Vergara, S.Engelberger, R.Trunfio, R.Canevascini, A. Quarteroni, and L. Giovannacci, Computational analysis of turbulent haemodynamics in radiocephalic arteriovenous fistulas with different anastomotic angles, **Annals of Vascular Surgery** 68 (2020), pp. 451-459

J266 – S.Buoso, A. Manzoni, H.Alkadhi, A. Plass, A. Quarteroni, V. Kurtcuoglu, Reduced-Order Modeling of Blood Flow for Non-Invasive Functional Evaluation of Coronary Artery Disease in Clinical Routine, **Biomechanics and Modeling in Mechanobiology,** 18 (6) (2019), pp 1861-1881 2019

J267 – F.Regazzoni, L.Dede' and A.Quarteroni, Machine learning of multiscale active force generation models for the efficient simulation of cardiac electromechanics, **CMAME 370** (2020), https://doi.org/10.1016/j.cma.2020.113268

J268 –P.F.Antonietti, I.Mazzieri, L.Melas, R.Paolucci, A.Quarteroni, C.Smerzini and M.Stupazzini, Three-dimensional physics-based earthquake ground motion simulations for seismic risk assessment in densely populated urban areas, **Mathematics in Engineering** 3(2) (2020), pp.1-31

J269 – M.Salvador, L.Dede' and A.Quarteroni, An intergrid transfer operator using radial basis functions with application to cardiac electromechanics, **Computational Mechanics**, **66** (2020) pp.491–511

J270 – F.Regazzoni, L.Dede' and A.Quarteroni, Active force generation in cardiac muscle cells: mathematical modeling and numerical simulations of actin-myosin interaction, **Vietnam Journal of Mathematics**, **49** (2021), pages 87–118

J271 – C.M.Colciago, S.Deparis, M.Domanin, C.Riccobene, E.Schenone and A.Quarteroni, Analysis of morphological and haemodynamical indexes in abdominal aortic aneurysms as preliminary indicators of intraluminal thrombus deposition, **Biomechanics and Modeling in Mechanobiology**, **19** (2020) pp. 1035–1053

J272 – N.Barnafi, L.Dede', P.Zunino, and A.Quarteroni, Mathematical analysis and numerical approximation of a general linearized poro-hyperelastic model, **CAMWA 91** (2021), Pp. 202-228

J273 – S.Di Gregorio, M.Fedele, G.Pontone, A.Corno, P.Zunino, C.Vergara, and A.Quarteroni , A multiscale computational model of myocardial perfusion in the human heart, **J. Comput. Physics 424 (2021)**, https://doi.org/10.1016/j.jcp.2020.109836

J274 – A.Frontera, S.Pagani, L.R.Limite, A.Hadjis, L.Dede', A.Manzoni, A.Quarteroni, P.Della Bella, Outer Loop and Isthmus in Ventricular Tachycardia Circuits: Characteristics and Implications, **Heart Rhythm Journal, vol 17, issue 10 (**2020), pp 1719-1728

J275– L.Azzolin, L.Dede', A.Gerbi, A.Quarteroni, Effect of fibre orientation and bulk value on the electromechanical modelling of the human ventricles, **Mathematics in Engineering**, 2(4) (2020), pp.614–638.

J276 –I.Fumagalli, M.Fedele, C.Vergara, L.Dede', S.Ippolito, F.Nicolo', R.Scrofani and A.Quarteroni, An Image-based Computational Hemodynamics Study of the Systolic Anterior Motion of the Mitral Valve, **Computers in Biology and Medicine 123** (2020)

J277 – S. Stella, C. Vergara, M. Maines, D. Catanzariti, P. C. Africa, C. Dematte', M. Centonze, F. Nobile, M. Del Greco and A. Quarteroni, Integration of activation maps of epicardial veins in computational cardiac electrophysiology**, Computers in Biology and Medicine 127 (2020)**

J278 – R. Piersanti, P. C. Africa, M. Fedele, C. Vergara, L. Dede', A. F. Corno, and A. Quarteroni, Modelling cardiac muscle fibers in ventricular and atrial electrophysiology simulations, **Comput. Meth. Appl. Mech. Engrg. 373** (2021), https://doi.org/10.1016/j.cma.2020.113468

J279 – M.Bucelli, M.Salvador, L. Dede', and A.Quarteroni, Multipatch Isogeometric Analysis for Electrophysiology: Simulation in a Human Heart, **Comput. Meth. Appl. Mech. Engrg. 376**, (2021), https://doi.org/10.1016/j.cma.2021.113666

J280 – S.Fresca, L. Dede', A.Manzoni, and A.Quarteroni, Deep learning-based reduced order models in cardiac electrophysiology, **PLOS One** (2020), https://doi.org/10.1371/journal.pone.0239416

J281 – A.Frontera, L.Limite, S.Pagani, A.Adjis, M.Cireddu, S.Sala, G.Tsitsinakis, G.Peretto, F.Lipartiti MD , C.Bisceglia, A.Radinovic MD , G.D'Angelo, A.Marzi, F. Baratto, P.Vergara, L.Dedè, S.Gulletta, A.Manzoni, P.Mazzone , A.Quarteroni and Paolo Della Bella, Characterization of cardiac electrogram signals during atrial arrhytmyas, **Minerva Cardiology and Angiology, 69**(1), 70-80.

J282 – F.Regazzoni, C.Vergara, L. Dede', P.Zunino, M. Guglielmo, R. Scrofani, L. Fusini, C. Cogliati, G. Pontone, A.Quarteroni, Modeling the cardiac response to hemodynamic changes associated with COVID-19: a computational study, **Mathematical Biosciences and Engineering 18 (4) (2021)** doi: 10.3934/mbe.2021168

J283 – F.Regazzoni and A.Quarteroni, An oscillation-free fully staggered algorithm for velocity-dependent active models of cardiac mechanics, **Comput. Meth. Appl. Mech. Engrg. 373** (2021), 1 January 2021, 113506

J284 – F.Regazzoni, L.Dede' and A.Quarteroni, Biophysically detailed mathematical models of multiscale cardiac active mechanics, **PLOS Comp. Biol.** (2020) https://doi.org/10.1371/journal.pcbi.1008294

J285 – S.Pagani, L.Dede', A.Manzoni and A.Quarteroni, Data integration for the numerical simulation of cardiac electrophysiology, **Pacing and Clinical Electrophysiology 44**(4), 726-736. https://doi.org/10.1111/pace.14198

J286 – G.Bevilacqua, P.Ciarletta and A.Quarteroni, Morphomecanical model of the torsional c-looping in the embryonic heart, **SIAM J. Appl. Math**. **81** (3), pp. 897-918

J287 – M.Fedele and A.Quarteroni, Polygonal surface processing and mesh generation tools for the numerical simulation of the cardiac function, **International Journal for Numerical Methods in Biomedical Engineering** 37.4 (2021): e3435.

J288 –A.Quarteroni, Un modello matematico del cuore umano, **Giornale Italiano di Cardiologia**, Vol 21 (2020), pp. 907-914 (in Italian)

J289 -S.Di Gregorio, C.Vergara , G.Montino Pelagi, A.Baggiano, P.Fedele, M.Guglielmo, L.Fusini, G.Muscogiuri , A.Rossi, M.G.Rabbat, A.Quarteroni, and G.Pontone, Prediction of myocardial blood flow under stress conditions by means of a computational model, **Eur. J. Nucl. Med. Mol. Imaging** (2022). https://doi.org/10.1007/s00259-021-05667-8

J290 – F. Regazzoni, M. Salvador, P. C. Africa, M. Fedele, L. Dede', and A. Quarteroni, A Cardiac Electromechanial Model coupled with a Lumped ParameterModel for Closed-Loop Blood Circulation. Model derivation, numerical approximation, and applications, **J. Comput. Physics**, 457 (2022): 111083.

J291 –A.Frontera, S. Pagani, L.R.Limite, M.Cireddu, K.Vlachos, C.Martin, M.Takigawa, T.Kitamura, F.Bourier, G.Cheniti, F.Sacher, N.Derval, M.Hocini, A.Quarteroni, P. Della Bella, Michel Haissaguerre, P. Jaïs, Analysis of the EGM fractionation during sinus rhythm above non-diseased atrial tissue in patients with atrial fibrillation, **Pacing and Clinical Electrophysiology** 45.2 (2022): 219-228.

J292 –N.Parolini, G.Ardenghi, L.Dede' and A.Quarteroni, A Mathematical Dashboard for the Analysis of Italian COVID-19 Epidemic Data, **Int. J. Numer. Meth. Biomed. Engineering**, 37 (9) (2021), https://doi.org/10.1002/cnm.3513

J293 – J.W.Both, N.A.Barnafi, F.A.Radu, P.Zunino and A.Quarteroni, Iterative splitting schemes for a soft material poromechanics model, CMAME 388 (2022), https://doi.org/10.1016/j.cma.2021.114183

J294 – N.Parolini, L. Dede', P. F. Antonietti, G. Ardenghi, E. Miglio, A. Manzoni, A. Pugliese, M. Verani, and A. Quarteroni , SUIHTER: A new mathematical model for COVID-19. Application to the analysis of the second epidemic outbreak in Italy. https://arxiv.org/abs/2101.03369. **Proceedings of the Royal Society A**, 477 (2253) (2021), https://doi.org/10.1098/rspa.2021.0027

J295 – C.Vergara, S.Stella, M.Maines, D.Catanzariti, C.Demattè, M.Centonze, F.Nobile, A.Quarteroni, M.Del Greco, Computational electrophysiology to support the mapping of epicardial veins in cardiac resynchronization therapy, **Medical & Biological Engineering & Computing** 60.8 (2022): 2307-2319.

J296 –L. Dede', A. Quarteroni, F. Regazzoni, Mathematical and numerical models for the cardiac electromechanical function, **Atti Accad. Naz. Lincei Rend. Lincei Mat. Appl**., 2021

J297 – F. Di Michele, J. May, D. Pera, V. Kastelic, M. Carafa, C. Smerzini, I. Mazzieri, B. Rubino, P. F. Antonietti, A. Quarteroni, R. Aloisio, P. Marcati, Spectral elements numerical simulation of the 2009 L'Aquila earthquake on a detailed reconstructed domain, Geophysical Journal International, *Geophysical Journal International*, ggac042, https://doi.org/10.1093/gji/ggac042, 11 February 2022

J298 – R. Tenderini, S. Pagani, A. Quarteroni, S. Deparis, PDE-aware deep learning for inverse problems in cardiac electrophysiology, **SIAM Journal on Scientific Computing** 44.3 (2022): B605-B639.

J299 – S. Pagani, L. Dede', A. Frontera, M. Salvador, L.R. Limite, A. Manzoni, F. Lipartiti, G. Tsitsinakis, A. Hadjis, P. Della Bella and A. Quarteroni, A computational study of the electrophysiological substrate in patients suffering from atrial fibrillation, **Frontiers in Physiology, section Cardiac Electrophysiology**, 12 (2021): 673612.

J300 – A. Quarteroni, L.Dede' and F.Regazzoni, Modeling the cardiac electromechanical function: a mathematical journey, **Bullettin of the American Mathematical Society 59 (3)** (2022), pp.371-403

J301 – S. Fresca, A. Manzoni, L. Dede` and A. Quarteroni, POD-enhanced deep learning-based reduced order models for the real-time simulation of cardiac electrophysiology in the left atrium, submitted, **Frontiers in Physiology** (2021): 1431.

J302 – M. Salvador, M. Fedele, P.C. Africa, E. Sung, L. Dede', A. Prakosa, N.Trayanova, and A. Quarteroni, Electromechanical modeling of human ventricles with ischemic cardiomyopathy: numerical simulations in sinus rhythm and under arrhythmia, **Computers in Biology and Medicine** 136 (2021): 104674.

J303 – F. Mazhar, F. Regazzoni, C. Bartolucci, C. Corsi, L. Dedè, A. Quarteroni, S. Severi, Electro-Mechanical Coupling in Human Atrial Cardiomyocytes: Model Development and Analysis of Inotropic Interventions, *2021* **Computing in Cardiology** *(CinC)*. Vol. 48. IEEE, 2021.

J304 – N.Barnafi, S.Di Gregorio, L. Dedè, P.Zunino, C.Vergara and A. Quarteroni, A Multiscale Poromechanics Model Integrating Myocardial Perfusion and the Epicardial Coronary Vessels, **SIAM J. Applied Math.**, Vol. 82, No. 4, pp. 1167—1193, 2022

J305 – F.Regazzoni and A. Quarteroni, Accelerating the convergence to a limit cycle in 3D cardiac electromechanical simulations through a data-driven 0D emulator, **Computers in Biology and Medicine** 135 (2021): 104641.

J306 – F.Regazzoni, S. Pagani, A. Cosenza, A. Lombardi, and A. Quarteroni, A physics-informed multi-fidelity approach for the estimation of differential equations parameters in low-data or large-noise regimes, **Rendiconti dell'Accademia dei Lincei 32 (3) (2021)**, pp. 437-470

J307– R. Piersanti, F. Regazzoni, M. Salvador, Antonio F. Corno, L. Dedè, C. Vergara and A. Quarteroni, A 3D-0D closed-loop model for the simulation of cardiac biventricular electromechanics, 2021, **Comput. Meth. Appl. Mech. Engrg.** 391 (2022): 114607.

J308–I.Fumagalli, P.Vitullo, C.Vergara, M.Fedele, A. Corno, S. Ippolito, R. Scrofani and A. Quarteroni, Image-based computational hemodynamics analysis of systolic obstruction in hyperthrophic cardiomyopathy, **Frontiers Physiology**, section Computational Physiology and Medicine, 06 January 2022 | https://doi.org/10.3389/fphys.2021.787082

J309– S. Stella, F. Regazzoni, C. Vergara, L. Dede' and A. Quarteroni, A fast cardiac electro-mechanics model coupling the Eikonal and the nonlinear mechanics equations, **Mathematical Models and Methods in Applied** 32.08 (2022): 1531-1556.

J310 – A.Zingaro, I.Fumagalli, L.Dede', M.Fedele, P.C.Africa, A.F.Corno and A.Quarteroni, A multiscale CFD model of blood flow in the human left heart coupled with a lumped-parameter model of the cardiovascular system, **Discr Cont Dynam Syst** 15 (2022): 2391-427.

J311 – F. Regazzoni, M. Salvador, L. Dede', and A.Quarteroni, A machine learning method for real-time numerical simulations of cardiac electromechanics, **Comput. Meth. Appl. Mech. Engrg.** Volume 393, 1 April 2022, 114825

J312 – L.Cicci, L.Fresca, S.Pagani, A.Manzoni and A.Quarteroni, Projection-based reduced order models for parametrized nonlinear time-dependent problems arising in cardiac mechanics, **Mathematics in Engineering**, Volume 5, Issue 2, 1-38

J313 – M.Bucelli, L.Dede', A.Quarteroni and C.Vergara, Partitioned and monolithic algorithms for the numerical solution of cardiac fluid-structure interaction, **Communications in Computational Physics** 32 (2022), pp. 1217-1256

J314 – F.Colasuonno, F.Ferrari, P.Gervasio and A.Quarteroni, Some evaluations of the fractional p-Laplace operator on radial functions, **Mathematics in Engineering**, *arXiv:2112.08239* (2021).

J315 – N. Parolini, L. Dede', G. Ardenghi and A. Quarteroni, Modelling the COVID-19 and the vaccination campaign in Italy by the SUIHTER model, **Infectious Disease Modelling**, Vol.7, Issue 2 (2022), pages 45-63

J316 – M. Salvador, F. Regazzoni, S. Pagani, L. Dede', N. Trayanova and A. Quarteroni, The role of mechano-electric feedbacks and hemodynamic coupling in scar-related ventricular tachycardia, **Computers in Biology and Medicine**, 142 (2022): 105203.

J317 – A. Frontera, S. Pagani, L.R. Limite, A. Peirone, F. Fioravanti, B. Enache, J. Cuellar, K. Vlachos, C. Meyer, G. Montesano, A. Manzoni, L. Dedè, A. Quarteroni, D.G. Lațcu, P. Rossi, P. Della Bella, Slow conduction corridors and pivot sites characterize the electrical remodeling in atrial fibrillation, **Clinical Electrophysiology** 8.5 (2022): 561-577

J318 – A. Zingaro, I. Fumagalli, L. Dedè, M. Fedele, P. Africa, A. Corno and A. Quarteroni, A geometric multiscale model for the numerical simulation of blood flow in the human left heart,

Discrete and Continuous Dynamical Systems Series S., 15 (8) (2022): 2391-2427. Doi: 10.3934/dcdss.2022052

J319 – E. Zappon, A. Manzoni and A. Quarteroni, Efficient and certified solution of parametrized one-way coupled problems through DEIM-based data projection across non-conforming interfaces, Journal of Computational Physics, Volume 502, 1 April 2024, 112815

J320 – L. Cicci , S. Fresca, A. Manzoni, and A. Quarteroni, Efficient approximation of cardiac mechanics through reduced order modeling with deep learning-based operator approximation, **IJNMBE**, 40 (1) (2023) https://doi.org/10.1002/cnm.3783

J321 – P. Gervasio, A. Quarteroni, and D.Cassani, Let the paintings play, **Annals of the University of Craiova**, Mathematics and Computer Science Series, Volume 53(1), 2026, Pages 331{350, DOI: 10.52846/ami.v53i1.2412 ISSN: 1223-6934

J322 – M.Corti, A.Zingaro, L.Dede', and A. Quarteroni, Impact of Atrial Fibrillation on the Left Atrium Haemodynamics: A Computational Fluid Dynamics Study, **Comput Biol Med**. 2022 Sep 21;150:106143. doi: 10.1016/j.compbiomed.2022.106143

J323 – P.C.Africa, R.Piersanti, M.Fedele, L.Dede', and A.Quarteroni, lifex-fiber : an open tool for myofibers generation in cardiac computational models high-performance simulator of the cardiac function – package 1: fiber generation, **BMC Bioinformatics 24**, 143 (2023). https://doi.org/10.1186/s12859-023-05260-w

J324 – I.Fumagalli, L.Dede', and A.Quarteroni, A reduced 3D-0D fluid structure interaction model of the aortic valve that includes leaflets curvature, Biomechanics and Modeling in Mechanobiology, 2025, https://doi.org/10.1007/s10237-025-01960-9

J325 – L.Bennati, C.Vergara, V.Giambruno, I.Fumagalli, A.F.Corno, A.Quarteroni, G.Puppini, and G.B.Luciani, An image-based computational fluid dynamics study of mitral regurgitation in presence of prolapse, **Cardiovascular Engineering and Technology** 14.3 (2023): 457-475

J326 – F.Regazzoni, S.Pagani and A.Quarteroni, Universal Solution Manifold Networks (USM-Nets): non-intrusive mesh-free surrogate models for problems in variable domains, **Journal of Biomechanical Engineering** 144.12 (2022): 121004.

J327 – I.Fumagalli, R.Polidori, F.Renzi, L.Fusini, A.Quarteroni, G.Pontone, C.Vergara, Fluid-structure interaction analysis of transcatheter aortic valve implantation, **International Journal for Numerical Methods in Biomedical Engineering** 39.6 (2023): e3704.

J328 – P.C.Africa, M.Salvador, P.Gervasio, L.Dede' and A.Quarteroni, Matrix-free high-order solvers for the numerical solution of cardiac electrophysiology, **Journal of Computational Physics**, 478 (2023)

J329 – E. Zappon, A. Manzoni, P. Gervasio and A. Quarteroni, A reduced order model for domain decompositions with non-conforming interfaces, Journal of Scientific Computing 99 (1) (2024) https://doi.org/10.1007/s10915-024-02465-w

J330 – A.Zingaro, M.Bucelli, I.Fumagalli, L.Dede' and A. Quarteroni, Modeling Isovolumetric Phases in Cardiac Flows by an Augmented Resistive Immersed Implicit Surface Method, **International Journal for Numerical Methods in Biomedical Engineering**, 39.12 (2023): e3767.

J331 – M.Bucelli, A.Zingaro, P.C.Africa, I.Fumagalli, L.Dede' and A. Quarteroni, A mathematical model that integrates electrophysiology, mechanics, and fluid-dynamics. Application to the human left heart, **International Journal for Numerical Methods in Biomedical Engineering** 39.3 (2023): e3678.

J332-
M.Fedele,R.Piersanti, F.Regazzoni, M.Salvador, P.C.Africa, M.Bucelli, A.Zingaro, L.Dede' , A.Quarteroni, A comprehensive and biophysically detailed computational model of the electromechanics of the whole human heart, **CMAME 410** (2023), https://doi.org/10.1016/j.cma.2023.115983

J333 – F.Mazhar, F.Regazzoni, C.Bartolucci, C.Corsi, L.Dede', A.Quarteroni, and S. Severi, Electromechanical Coupling in Human Atrial Cardiomyocytes: Force-Frequency Relationship Study, **Computing in Cardiology (CinC).** Vol. 48. IEEE, 2021.

J334 – L. Ruffino, A. Santoro, S. Sparvieri, F. Regazzoni, D. A. lifex-cfd, A. Quarteroni, C. Vergara, A. F. Corno, Computational analysis of cardiovascular effects of COVID-19 infection in children, **Journal of Pediatric Advance Research**, 2023;2(2):1-10. http://dx.doi.org/10.46889/JPAR.2023

J335 – G.Ziarelli, L. Dede', N. Parolini, M.Verani, A.Quarteroni, Optimized numerical solutions of SIRDVW multiage model controlling SARS-CoV-2 vaccine roll out: an application to the Italian scenario, **Infect Dis Model** 2023 Sep;8(3):672-703.doi: 10.1016/j.idm.2023.05.012

J336 –A.Zingaro, M.Bucelli, R.Piersanti, F.Regazzoni, L.Dede', and A.Quarteroni, An electromechanics-driven fluid dynamics model for the simulation of the whole human heart, **Journal of Computational Physics**, 504 (1) (2024) https://doi.org/10.1016/j.jcp.2024.112885

J337 – F.Marcinnò, C.Vergara, L.Giovannacci, A.Quarteroni, and G.Prouse, Computational fluid-structure interaction analysis of themend-to-side radio-cephalic arteriovenous fistula, **Comput Methods Programs Biomed** 2024 Jun:249:108146.doi: 10.1016/j.cmpb.2024.108146.

J338 – M.Salvador, F.Regazzoni, L.Dede' and A.Quarteroni, Fast and robust parameter estimation with uncertainty quantification for the cardiac function, **Computer Methods and Programs in Biomedicine**, 2023 Apr:231:107402.doi: 10.1016/j.cmpb.2023.107402.

J339 – A.Zingaro, C.Vergara, L.Dede', F.Regazzoni, and A.Quarteroni, A comprehensive mathematical model for cardiac perfusion, **Scientific Reports 13(1)**, DOI: 10.1038/s41598-023-41312-0

J340 – M.Corti, P.F.Antonietti, L.Dede', and A.Quarteroni, Numerical Modelling of the Brain Poromechanics by High-Order Discontinuous Galerkin Methods, **Mathematical Models and Methods in Applied Sciences,** 33 (08):1577—1609 (2023)

J341 – A.Quarteroni, L.Dede', F.Regazzoni, and C.Vergara, A mathematical model of the human heart suitable to address clinical oproblems, Japan J. Indust. Appl. Math. (2023) https://doi.org/10.1007/s13160-023-00579-6

J342 – P.C.Africa, I.Fumagalli, M.Bucelli, A.Zingaro, L.Dede', and A.Quarteroni, lifex-cfd : an open-source computational fluid dynamics solver for cardiovascular applications, **Computer Physics Communications**, **Computer Physics Communications** 296 (2024): 109039

J343 – F.Regazzoni, S.Pagani, M.Salvador, L.Dede' and A.Quarteroni, Learning the Intrinsic Dynamics of Spatio-Temporal Processes through Latent Dynamics Networks, **Nature Communications 15**, 1834 (2024). https://doi.org/10.1038/s41467-024-45323-x

J344 – M.Corti, F.Bonizzoni, P.F.Antonietti, and A. Quarteroni, Uncertainty Quantification for Fisher-Kolmogorov Equation on Graphs with Application to Patient-Specific Alzheimer's Disease, **M2AN**, Vol. 58, pp. 2135–2154 (2024)

J345 – M.Salvador, M.Strocchi, F.Regazzoni, C.M.Augustin, L.Dede', S.A.Niederer, and A.Quarteroni, Whole-heart electromechanical simulations using Latent Neural Ordinary Differential Equations, **npj Digital Medicine** 7, 90, 2024

J346 – C.Vergara, F.Renzi, M.Fedele, V.Giambruno, A.Quarteroni, G.Puppini, G.B. Luciani, Accurate and Efficient 3D Reconstruction of Right Heart Shape and Motion from Multi-Series Cine-MRI, Int J Numer Method Biomed Eng. 2025 Jan;41(1):e3891doi10.1002/cnm.3891.

J347 – M.Bucelli, M.Geraint Gabriel, A.Quarteroni, G.Gigante, and C.Vergara, A stable loosely-coupled scheme for cardiac electro-fluid-structure interaction, **J.Comp.Physics,** 490 (1) 12326, 2023

J348 – M.Bucelli, F.Regazzoni, L.Dede', A.Quarteroni, Preserving the positivity of the deformation gradient determinant in integrid RBF interpolation: application to cardiac electromechanics, **CMAME, 417(B):116292**, 2023

J349 – F.Mazhar, C.Bartolucci, F.Regazzoni, M.Paci, L.Dedè, A.Quarteroni, C.Corsi, and S.Severi, A Detailed Mathematical Model of the Human Atrial Cardiomyocyte: Integration of Electrophysiology and Cardiomechanics, **Journal of Physiology**, 602(18):4543—4583 (2024).

J350 – P.C.Africa, R.Piersanti, F.Regazzoni, M.Bucelli, M.Salvador, M.Fedele, S.Pagani, L.Dede', and A.Quarteroni, lifex-ep: an open tool for cardiac electrophysiology simulations, **BMC Bioinformatics** 24 (1), 389, 2023

J351 E. Zappon, A. Manzoni, A. Quarteroni. A non-conforming-in-space numerical framework for realistic cardiac electrophysiological outputs. **Journal of Computational Physics**, 2024, 502: 112815, https://doi.org/10.1016/j.jcp.2024.112815.

J352 –A.Tonini, L.Dede', F.Regazzoni, C.Vergara, R.Scrofani, C.Cogliati, and A.Quarteroni, A mathematical model to assess the effects of COVID-19 on the cardiocirculatory system, **Scientific Reports**, **Nature**, 14, 8304, 2024

J353 – M.Corti, F.Bonizzoni, L.Dede', A.M.Quarteroni, and P.F. Antonietti, Discontinuous Galerkin Methods for Fisher-Kolmogorov Equation with Application to α-Synuclein Spreading in Parkinson's Disease, **CMAME**, 417:116450 (2023)

J354 –Marcinno' F., Vergara C., Giovannacci L., Quarteroni A., Prouse G., Computational fluid-structure interaction analysis of the end-to-side radio-cephalic arteriovenous fistula. **Comp. Meth. & Progr. Biomed.**, 249, 108146, 2024

J355 – A.Zingaro, Z.Ahmad, E.Kholmovski, K.Sakata, L.Dede', A.K.Morris, A.Quarteroni, and N.A.Trayanova, A comprehensive stroke risk assessment by combining atrial computational fluid dynamics simulations and functional patient data, **Scientific Reports, Nature**, 14, 9515 (2024).

J356 E. Zappon, M. Salvador, R. Piersanti, F. Regazzoni, L. Dede', and A. Quarteroni. An integrated heart–torso electromechanical model for the simulation of electrophysiological outputs accounting for myocardial deformation. **Computer Methods in Applied Mechanics and Engineering**, 2024, 427: 117077, https://doi.org/10.1016/j.cma.2024.117077.

J357 – M. Bucelli, F.Regazzoni, L.Dede', and A. Quarteroni, Robust radial basis function interpolation based on geodesic distance for the numerical coupling of multiphysics problems, **SIAM J. Sci. Comput.,** Vol.46 (6) (2024)

J358 – I.Fumagalli, S.Pagani, C.Vergara, L.Dede', D.A.Adebo, M.Del Greco, A.Frontera, G.B. Luciani, G.Pontone, R.Scrofani, and A.Quarteroni, The role of computational methods in cardiovascular medicine: a narrative review, **Translational Pediatrics**, Vol 13, No 1 (January 29, 2024), p. 146-163

J359 – I.Radišić, F.Regazzoni, L.Dede', A.Quarteroni, A mathematical model for irreversible damage of the collagen scaffold in the myocardium, submitted, 2026

J360 – Criseo E., Fumagalli I., Quarteroni A., Marianeschi S.M., Vergara C., Computational haemodynamics for pulmonary valve replacement by means of a reduced Fluid-Structure Interaction model. **Int. J. Num. Meth. Biomed. Eng.**, 40(9), e3846, 2024

J361 –A.Quarteroni, Virtual Heart Simulator Revolutionarizes Cardiovascular Science and Healthcare, **SIAM News**, July 29, 2024, https://www.siam.org/publications/siam-news/articles/virtual-heart-simulator-revolutionizes-cardiovascular-science-and-healthcare/

J362 – A.Tonini, F.Regazzoni, M.Salvador, L.Dede', R.Scrofani, L.Fusini, C.Cogliati, G.Pontone, C.Vergara, and A.Quarteroni, Two new calibration techniques of lumped-parameter mathematical models for the cardiovascular system, **International Journal for Numerical Methods in Engineering**, 3 January 2025 **https://doi.org/10.1002/nme.7648**

J363 – R.Piersanti, R.Bradley, S.Y.Alid, A.Quarteroni, L.Dede', N.A.Trayanova, Defining myocardial fiber bundle architecture in atrial digital twins, Computers in biology and medicine 188, 109774, 2025
https://www.sciencedirect.com/science/article/pii/S0010482525001246

J364 – P.Ferrero, A.Tonini, G.Valenti, M.Chessa, L.Kuthi, P.P.Bassareo, L.Dede', and A.Quarteroni, Appraisal of partial anomalous pulmonary venous drainage through a lumped-parameter mathematical model: a new pathophysiological proof of concept, Interdisciplinary CardioVascular and Thoracic Surgery ivae175 (2024). DOI: 10.1093/icvts/ivae175.

J365 – L.Dede', N.Parolini, A.Quarteroni, G.Villani, and G.Ziarelli, SEIHRDV: a multi-age multi-group epidemiological model and its validation on the COVID-19 epidemics in Italy, submitted, 2025

J366 –A. Quarteroni, P. Gervasio, F. Regazzoni, Combining physics–based and data–driven models: Advancing the frontiers of research with scientific machine learning, **M3AS**, Volume No. 35 (2025), Issue No. 04, pp. 905 - 1071.

J367 –F.Caforio, F.Regazzoni, S.Pagani, E.Karabelas, C.Augustin, G.Haase, G.Plank, A.Quarteroni, Physics-informed neural network estimation of material properties in soft tissue nonlinear biomechanical models, **Computational Mechanics,** pp.1-27, 2024

J368 – I.Radišic, F. Regazzoni, M. Bucelli, S. Pagani, L. Dede', and A. Quarteroni. Influence of cellular mechanocalcium feedback in numerical models of cardiac electromechanics. **Computer Methods in Applied Mechanics and Engineering**, 445:118172, Oct. 2025.

J369 –I. Fumagalli, L. Dede', and A.Quarteroni, A reduced 3D-0D fluid-structure interaction model of the aortic valve that includes leaflet curvature, **Biomechanics and Modeling in Mechanobiology**, Vol 24, p. 1169-1189 (2025)

J370 – A.Tonini, T.Bui-Thanh, F.Regazzoni, L.Dede', and A.Quarteroni, Improvements on uncertainty quantification with variational autoencoders, Mathematical Models and Methods in Applied Sciences 36, 787–823 (2026). DOI: 10.1142/S0218202526500144.

J371 – S.Celora, A.Tonini, F.Regazzoni, L.Dede', G.Parati, A.Quarteroni, Cardiocirculatory Computational Models for the Study of Hypertension, **J. Comput. Phys**., 115324 (2026). DOI: 10.1016/j.jcp.2026.115324.

J372 – P.P.Bassareo, P.Ferrero, A.Tonini, G.Valenti, S.Hoxha, L.Dedè, A.Quarteroni, and K.Dimopoulos, Analytical interpretation of hemodynamic data in patients with intracardiac shunts: role of mathematical modeling, **International Journal of Cardiology Congenital Heart Disease**, 100662 (2026). DOI: 10.1016/j.ijcchd.2026.100662.

J373 – A.Quarteroni, Come riconciliare intelligenza artificiale e scienza dei principi primi, Atti dell'Accademia Nazionale dei Lincei, Rendiconti, Anno CDXXII, 2025, Serie IX, Vol. XXXVI, Fascicolo 3-4, p.395-404

J374 –I.Radišic, F.Regazzoni, M.Bucelli, S.Pagani, L,Dede, and A.Quarteroni, Influence of the cellular mechano-calcium feedback in numerical models of cardiac electromechanics, 2025, submitted

J375 – A.Quarteroni, The Navier-Stokes Millennium-Prize Problem and the Knowledge Balance Equation, **M3AS**, to appear, 2026

I. Invited Conference Proceedings and Book Chapters

I1 - C. Canuto and A. Quarteroni, "Variational Methods in the Theoretical Analysis of Spectral Approximations", pp.55-78 in **Spectral Methods for Partial Differential Equations**, ed. R. G. Voigt, D. Gottlieb and M. Y. Hussaini, SIAM, Philadelphia (1984).

I2 - A. Quarteroni, "Theoretical and computational aspects of spectral methods", pp. 325 - 345 in **Computing Methods in Applied Sciences and Engineering**, V, ed. R. Glowinski and J. L. Lions, North-Holland, Amsterdam (1982).

I3 - A. Quarteroni, "Theoretical motivations underlying spectral methods", pp.79-92 in **Numerical Solutions of Non-Linear Problems**, INRIA, Rocquencourt (1983).

I4 - A. Quarteroni, "Spectral methods for flow problems", pp.124-132 in **Applications of Mathematics in Technology**, ed. V. Boffi and H. Neunzert, B. G. Teubner, Stuttgart (1984).

I5 - A. Quarteroni, "Approximation Theory and Analysis of Spectral Methods", pp.322-331 in **Multivariate Approximation Theory III**, ed. W. Schempp and K. Zeller, Birkhauser Verlag, Basel (1985).

I6 - A. Quarteroni, "Gas Transient Simulations with Spectral Methods", pp.123-136 in **Computing Methods in Applied Sciences and Engineering**, ed. R. Glowinski and J. L. Lions, North-Holland, Amsterdam (1986).

I7 - A. Quarteroni, "Semi-implicit time advancing schemes for spectral methods", in **Methodes Spectrales**, R. Temam Ed., Collection de la Direction des Etudes et Recherches d'Electricité de France, n.68, EYROLLES, Paris, 1988, pp.113-127.

I8 - L. D. Marini and A. Quarteroni, "An Iterative Procedure for Domain Decomposition Methods: A Finite Element Approach", pp.129-143 in **Domain Decomposition Methods for PDEs**, I, R. Glowinski et al., Eds., SIAM, Philadelphia (1988).

I9 - A. Quarteroni, "Domain decomposition methods for Partial Differential Equations", in Proc. of the French-Soviet-Italian Symposium on **Computational Mathematics and Applications**, Yu. Kuznetzov Ed., Moscow 1989, pp.79-92 (in Russian).

I10 - A. Quarteroni,"Domain Decomposition Algorithms for the Stokes Equations", pp. 431 - 442, **Domain Decomposition Methods**, T. Chan et al., Eds., SIAM, Philadelphia (1989).

I11 - A. Quarteroni and G. Sacchi-Landriani, "Iteration by Subdomain Methods in Fluid Dynamics", pp.54-76, in **Applications of Mathematics in Industry and Technology**, 1989, V. Boffi and H. Neunzert eds., Teubner Verlag, Basel.

I12 - A. Quarteroni, "Iteration by Subdomain Algorithms for Systems of Hyperbolic Equations", pp. 181-192 in **Parallel Computing: Methods, Algorithms, Applications**, D. J. Evans and C. Sutti, Eds., Adam Hilger, Bristol, 1989.

I13 - A. Quarteroni and A. Valli, "Domain Decomposition for a Generalized Stokes Problem", Proc. of the **Third European Conference on Mathematics in Industry**, Kluwer and B. G. Teubner, Stuttgart, 1990, pp.59-74.

I14 - F. Gastaldi, A. Quarteroni and G. Sacchi-Landriani, "On the coupling of two-dimensional hyperbolic and elliptic equations: analytical and numerical approach", In T.Chan et Al., Eds. **Domain Decomposition Methods for Partial Differential Equations, III**, SIAM, Philadelphia, 1990, pp.22-63.

I15 - A. Quarteroni and E. Zampieri, "A multilevel domain decomposition method for elliptic problems", Proc. of the Eight French-Soviet-Italian Symposium on **Computational Mathematics and Applications**, E.Magenes, Ed., I.A.N.-C.N.R., Pavia, 1989, pp.327-349.

I16 - A. Quarteroni and A. Valli, "Theory and application of Steklov-Poincaré operators for boundary value problems", in **Applied and Industrial Mathematics**, R.Spigler Ed., Kluwer Academic Publisher, Dordest, 1990, 179-203

I17 - D. Pavoni and A. Quarteroni, "Numerical Solution of the Navier-Stokes equations by domain decomposition methods", in **Computational Methods in Surface Hydrology**, Eds. G.Gambolati et Al., CMP, Springer, Berlin, 1990, pp.313-320

I18 - A. Quarteroni, "An Introduction to Spectral Methods for Partial Differential Equations", in **Advances in Numerical Analysis, Vol. I: Nonlinear Partial Differential Equations and Dynamical Systems**, Ed. W.Light, Clarendon Press, Oxford, 1991, 96-146.

I19 - A. Quarteroni and A. Valli, "Theory and Applications of Steklov-Poincaré Operators for Boundary-Value Problems: The Heterogeneous Operators Case", in **Domain Decomposition Methods for Partial Differential Equations, IV**, R.Glowinski et Al., Eds., SIAM, Philadelphia, 1991, 58-81

I20 - A. Quarteroni, F. Pasquarelli and A. Valli, "Heterogeneous Domain Decomposition: Principles, Algorithms, Applications", **Domain Decomposition Methods for Partial Differential Equations, V**, D.Keyes et Al., Eds., SIAM, Philadelphia, 1992, 129-150

I21 - A. Quarteroni and A. Valli, Mathematical Modelling and Numerical Approximation of Fluid Flow, in **METECC, Methods and Techniques in Computational Chemistry**, Vol. C: Structure and Dynamics, E.Clementi Ed., STEF, Cagliari, 1993, pp. 247-298

I22 - A. Quarteroni, "Mathematical Aspects of Domain Decomposition Methods", Proceedings of the **First European Congress of Mathematics**, Vol.2, A.Joseph et Al., Eds., Birkauser, Basel, 1994, pp.355-380

I23 - C. Carlenzoli, A. Quarteroni, Adaptive Domain Decomposition Methods for Advection - Diffusion Problems, in Babuska, Ivo et al. Eds., **Modeling, Mesh Generation, and Adaptive Numerical Methods for Partial Differential Equations**, series: IMA Volumes in Mathematics and its Applications, vol. 75, Springer Verlag, 1995, pp. 165-199

I24 - A. Quarteroni, Adaptive Numerical Methods for Transport Dominated Processes, in **Modelling of Flood Propagation Over Initially Dry Areas**, P.Molinaro and L.Natale, Eds., ASCE, New York, 1994, pp.114-126

I25 - A. Quarteroni, Domain Decomposition Methods for the Incompressible Navier-Stokes Equations, in **Computational Fluid Dynamics '94**, S.Wagner et Al., Eds., pp.72-77, Wiley, New York, 1994

I26 - C. Carlenzoli, A. Quarteroni and A. Valli, "Numerical Solution of the Navier -Stokes Equations for Viscous Compressible Flows", in **Applied Mathematics in Aerospace Science and Engineering**, A.Miele and A.Salvetti, Eds., Plenum Press, New York, 1994, pp.81-114

I27 - A. Quarteroni, Domain Decomposition Methods for Wave Propagation Problems, in **Domain - Based Parallelism and Problem Decomposition Methods in Computational Science and Engineering**, D.E.Keyes, Y.Saad and D.G.Truhlar, Eds., S.I.A.M., Philadelphia, 1995, pp.21-38.

I28 - A. Quarteroni, L. Stolcis, Heterogeneous Domain Decomposition for Compressible Flows, Proc. of the ICFD Conference on **Numerical Methods for Fluid Dynamics**, K.W.Morton and M.Baines, Eds., Oxford University Press, Oxford 1995, pp. 113 - 128

I29 - G. Fotia and A. Quarteroni, Modelling and Simulation of Fluid Flow in Complex Porous Media, **ICIAM 95**, Hamburg 3-7 July, 1995, K.Kirchgässener, O. Mahrenholtz, R. Mennicken, Eds., Akademie Verlag, Berlin, 1996, pp. 55-85

I30 - A. Quarteroni and A. Valli (1996), Domain Decomposition Methods for Partial Differential Equations, **von Karman Lecture Series 1996-06**, H.Deconinck Ed., pp.1-90

I31 - L. Paglieri, A. Scheinine, L. Formaggia and A. Quarteroni, Parallel Conjugate Gradient with Schwarz Preconditioner Applied to Fluid Dynamics Problems, **Proceedings of the Parallel CFD '96 Conference** , Capri, May 20-23, 1996 Schiano P. et al.Eds, Elservier (1997)

I32 - A. Quarteroni, A. Veneziani, Modeling and Simulation of Blood Flow Problems J. Periaux et al. **Computational Science for the 21st Century,** J. Wiley and Sons (1997) , pp. 369-379

I33 - F. Casadei, E. Gabellini, F. Maggio and A. Quarteroni, Wave Propagation in Complex Media by the Mortar Approximation, 4th Int. Conf. on **Mathematical and Numerical Aspects of Wave Propagation**, June 1-5, 1998, Colorado School of Mines, Golden, Colorado

I34 - P. Gervasio, A. Quarteroni and F. Saleri, Spectral Approximation of Navier-Stokes Equations, in **Fundamental Directions in Mathematical Fluid Mechanics**, G.P. Galdi, J. G.Heywood and R. Rannacher, Eds, Birhauser, Basel, 2000, p. 71-128

I35 - A. Quarteroni and A. Valli, Domain Decomposition Methods for Compressible Flows, in **Error Control and Adaptivity in Scientific Computing**, H.Bulgak and C.Zenger, Eds, Kluwer, Dordrecht, 1999, pp.221-245

I36 - A. Quarteroni, F. Saleri and A. Veneziani, Approximation of Navier-Stokes Equations via Algebraic Factorizations, in **Navier-Stokes Equations : Theory and Numerical Methods**, R.Salvi, Ed, Pitman Research Notes in Mathematics n.388, 1998, pp.322-334

I37 - A. Quarteroni, Modelling the Cardiovascular System : a Mathematical Challenge, in **Mathematics Unlimited – 2001 and Beyond**, B.Engquist and W.Schmid, Eds., pp. 961-970, Springer-Verlag, Berlin, 2000

I38 - L. Formaggia, F.Nobile and A. Quarteroni, A One Dimensional Model for Blood Flow : Application to Vascular Prosthesis, in Mathematical Modeling and Numerical Simulation in Continuum Mechanics**, Lecture Notes in Computational Science and Engineering, 19,** I.Babuska, P.G.Ciarlet and T.Miyoshi, Eds.., Springer-Verlag, Berlin, Berlin, 2001

I39 - P.Gervasio, J. L. Lions and A. Quarteroni, Domain Decomposition and Virtual Control for Fourth Order Problems, p.263-269 in **Domain Decomposition Methods in Science and Engineering, XIII,** N.Debit et Al Eds., CIMNE, Barcelona, 2002

I40 - L. Formaggia, F. Nobile, A. Quarteroni, A. Veneziani and P.Zunino, Advances on Numerical Modelling of Blood Flow Problems, in **ECCOMAS 2000 Conference Proceedings, E.Onate Ed. (CDROM, ISBN 84-89925-70-4).**

I41 - R. Pietrabissa, A. Quarteroni, G. Dubini, A. Veneziani, F. Migliavacca and S. Ragni, From the Global Cardiovascular System Hemodynamics down to the Local Blood Motion : Preliminary Applications of a Multiscale Approach, in **ECCOMAS 2000, E.Onate Ed.**

I42 - E. Miglio, A. Quarteroni and F. Saleri, Mathematical Modelling of Free Surface Flows, in G.Galdi R.Rannacher, Eds**., Quaderni di Matematica, "Topics in Mathematical Fluid Mechanics",** in press

I43 - A. Quarteroni, Mathematical Modelling of the Cardiovascular System, pp.839-850 in LI Tatsien Ed., Proceedings of the **International Congress of Mathematicians**, Vol.III, Higher Education Press, Beijing, 2002

I44 - C. Canuto and A. Quarteroni, Spectral Methods, Chapter in **Encyclopedia of Computational Mechanics**, E.Stein et Al, Eds., John Wiley&Sons, 2004

I45 - M. Discacciati and A. Quarteroni, Analysis of a Domain Decomposition Method for the Coupling of Stokes and Darcy Equations, in **Numerical Mathematics and Advanced Applications, ENUMATH 2001**, F. Brezzi et Al. Eds. , p.3-20. Springer, Milan, 2003

I46 - A. Quarteroni, M. Sala, M. L. Sawley, N. Parolini and G. W. Cowles. Mathematical Modelling and Visualisation of Complex Three-dimensional Flows, in **Visualisation and Mathematics III,** Springer-Verlag series **"Mathematics and Visualization"**, Hans-Christian Hege and Konrad Polthier (eds), pages 361-377, Heidelberg 2003.

I47 - J. Peiro, S. J. Sherwin, K. H. Parker, V. Franke, L. Formaggia, D. Lamponi and A. Quarteroni, Numerical Simulation of the Arterial Pulse Propagation Using One-Dimensional Models, in **Wall-Fluid Interactions in Physiological Flows** , pp.1-36, M.W.Collins et al, Eds., WIT Press, Southampton, 2004.

I48 - A. Quarteroni and L. Formaggia, Mathematical Modelling and Numerical Simulation of the Cardiovascular System, Chapter in **Modelling of Living Systems, Handbook of Numerical Analysis Series,** P.G Ciarlet et J.L. Lions Eds., Elsevier, Amsterdam, 2004.

I49 - N. Parolini and A. Quarteroni, Numerical Simulation for Yacht Design. **Proceedings of the 6th Conference on Informatics and Mathematics, HERCMA 2003** (E.A. Lipitakis, ed.), Vol. 1, pp. 38-44, Athens, 2004.

I50 - D. Mastalli, A. Quarteroni, P. Zunino, Modelli Matematici per l'Ottimizzazione della dialisi peritoneale, **Istituto Lombardo di Scienze e Lettere, Collezione delle Lezioni del Ciclo "Scienze e tecnologie per lo sviluppo sostenibile della societa' umana", anno 2002/2003,** 2004 , 13 pp.

I51 - S. Deparis, M. Discacciati, A. Quarteroni. A domain decomposition framework for fluid-structure interaction problems. **Proceedings of the third International Conference of Computational Fluid Dynamics ICCFD3,** Toronto, July 2004. C. Groth and D. W. Zingg Eds., Springer, New York, 2006. p.41-58.

I52 - C. Leupi, E. Miglio, M. S. Altinakar, A. Quarteroni, M. Deville. A quasi 3-D finite element shallow-water flow with k-e turbulence model. **Proceedings of the 6th International Conference on Advances in Hydro-science and Engineering, ICHE,** Altinakar et al. eds. Brisbane, Australia, 2004, pp.400-410. (on CD-Rom)

I53 - A. Quarteroni, G. Rozza, L. Dede', A. Quaini. Numerical approximation of a control problem for advection-diffusion processes. **Proceedings of the IFIP TC7 Conference,** Turin, July 2005 in **System Modeling and Optimization,** Springer, 2006. p.261-273

I54 - A. Quarteroni and G. Rozza. Tecniche a Basi Ridotte per l'Ottimizzazione di Configurazioni di Innesto per Bypass Coronarici. **Istituto Lombardo, Accademia di Scienze e Lettere,** Quaderni Incontro di Studio, N.39, pp. 225-238, 2007.

I55 - L. Formaggia, A. Quarteroni and A. Veneziani. The Mathematics of the Circulatory System: from Case Studies to Mathematical Modeling. In **Complex Systems in Biomedecine**, A. Quarteroni, L. Formaggia and A. Veneziani Eds., Springer 2006.

I56 - A. Quarteroni. Cardiovascular Mathematics. **Proceedings of the ICM 2006 Conference**, M. Sanz-Sole, J. Soria, J. L. Varona, J. Verdera Eds., EMS 2006, Madrid, Vol I, pp. 479-512

I57 - A. Quarteroni, G. Rozza, A. Quaini. Reduced Basis Methods for Optimal Control of Advection-Diffusion Problems, in **Advances in Numerical Mathematics,** edited by W.Fitzgibbon, R.Hoppe, J.Periaux, O.Pironneau, Y.Vassilevski, Moscow, Institute of Numerical Mathematics, Russian Academy of Sciences, pp193-216

I58 - D. Mastalli, A. Quarteroni, P. Zunino. A steepest descent algorithm for control problems with switches. Application to the optimization of peritoneal dialysis. **Proceedings of the Fourth International Workshop on Scientific Computing and Applications**, June 20-23 2005, Shanghai, China, published by Science Press of China, pp. 50-62

I59 - N. Parolini and A. Quarteroni. Modelling and Numerical Simulation for Yacht Engineering. **Proceedings of the 26th Int. Symp. On Naval Hydrodynamics**, published by Strategic Analysis, Inc., Arlington, VA, USA, 2007.

I60 - A. Quarteroni. Modellistica Matematica e Calcolo Scientifico. To appear in **Enciclopedia della Scienza e della Tecnica (Treccani)**, published by Istituto dell'Enciclopedia Italiana, 2007.

I61 - M.Discacciati, P.Gervasio and A.Quarteroni, Heterogeneous mathematical models in fluid dynamics and associated solution algorithms, in **Multiscale and Adaptivity: Modeling, Numerics and Applications**, C.I.M.E. Summer School, Cetraro, Italy 2009. Editors: G. Naldi, G. Russo. Series: Lecture Notes in Mathematics, Springer, Vol. 2040, January, 2012.

I62 - I.Mazzieri, C.Smerzini, P.F.Antonietti, F.Rapetti, M.Stupazzini, R.Paolucci and A. Quarteroni, Non-conforming Spectral Approximations for the Elastic Wave Equation in Heterogeneous Media, **COMPDYN 2011, ECCOMAS Thematic Conference on Computational Methods in Structural Dynamics and Earthquake Engineering**, M.Papadrakakis, N.D.Lagaros, M.Fragiadakys (eds.), Corfu, Greece, 26-28 May 2011

I63 - L.Gaudio and A.Quarteroni, Spectral element discretization of optimal control problems, in **Spectral and High Order Methods for Partial Differential Equations,** Lecture Notes in Computational Science and Engineering, Volume 76, pp. 393-401, 2011

I64 – P.Blanco, P.Gervasio and A.Quarteroni, Mortar coupling for heterogeneous partial differential equations, in **Domain Decomposition Methods in Science and Engineering, XX (DD20)**, Bank, R.; Holst, M.; Widlund, O.; Xu, J. (Eds.) Lecture Notes in Computational Science and Engineering, Vol. 91/. Springer-Verlag, Berlin, 2013, XVI, 680 p. ISBN 978-3-642-35274-4, pp. 443-450,

I65 – P.F. Antonietti and A. Quarteroni. Numerical performance of discontinuous and stabilized continuous Galerkin methods for convection-diffusion problems. In Vazquez-Cendon et al. editors, **Numerical Methods for Hyperbolic Equations**, pages 75–86, London, 2013. Taylor and Fancis Group. ISBN 978-0-415-62150-2

I66 – R. Ruiz-Baier, D. Ambrosi, S. Pezzuto, S. Rossi and A. Quarteroni Activation models for the numerical simulation of cardiac electromechanical interactions In: G.A. Holzapfel and E. Kuhl (eds.), **Computer Models in Biomechanics: From Nano to Macro**, Springer-Verlag (2013), 189-201

I67 – M.Lombardi, N.Parolini, A.Quarteroni and G.Rozza, Numerical solution of sailing boats : dynamics, FSI, and shape optimization, in **Variational Analysis and Aerospace Engineering II**, **Optimization and its applications**. Buttazzo, G. and Frediani, A. Eds. Springer, 2012.

I68 – M. Lombardi, M. Cremonesi, A. Giampieri, N. Parolini and A. Quarteroni, A strongly coupled fluid-structure interaction model for wind-sail simulation, *Proceedings of the **4th High Performance Yacht Design Conferenec**, Auckland, NZ, 12-14 March, 2012, pp.212-221 Publisher:* The Royal Institution of Naval Architects (RINA), ISBN: 978-1-905040-97-1.

I69 –J.Bonnemain, S.Deparis and A.Quarteroni, Connecting Ventricular Assist Device to the Aorta : a Numerical Model, in Imagine Math – Between Culture and Mathematics, M.Emmer Ed., Springer, pp.211-226

I70 – T.Lassila, A.Manzoni, A.Quarteroni and G.Rozza, Model reduction in fluid dynamics: challenges and perspectives, in **Reduced Order Methods for Modeling and Computational Reduction**, A.Quarteroni and G.Rozza, Eds., Springer Series MS&A, Vol. 9, 2013, pp.235-274

I71 – P.Antonietti, I.Mazzieri and A.Quarteroni, Numerical Methods for seismic risk migration strategies, in **Rendiconti dell'Accademia Nazionale dei Lincei**, Proceeding of the Conference "I Modelli Matematici", 11-12 December 2013, Rome, pp. 91-108, 2018

I72 – N.Parolini and A.Quarteroni, Sport, in The **Princeton Companion to Applied Mathematics**, N.Higham, Ed., p.598-604, Princeton University Press, 2015

I73 – L.Iapichino, A.Quarteroni, G.Rozza and S.Volkwein, Reduced basis method for Stokes equations in decomposable domains using greedy optimization, in **ECMI 2014**

I74 –P.F.Antonietti, I.Mazzieri and A.Quarteroni, Improving seismic risk protection through mathematical modeling, in **Imaging Maths. Between culture and mathematics**: 4, M. Emmer, M. Abate, M. Villarreal Editors, pp. 271-282, 2015.

I75 – Lange M., Palamara S., Lassila T., Vergara C., Quarteroni A., Frangi A.F., Efficient Numerical Schemes for Computing Cardiac Electrical Activation over Realistic Purkinje Networks: Method and Verification, in **"Functional Imaging and Modeling of the Heart",** Proceedings of the 8th International Conference, FIMH 2015, van Assen, Hans, Bovendeerd**,** Peter, Delhaas, Tammo (Eds.), Springer, pp. 430-438, 2015

I76 – S.Deparis, D.Forti and A. Quarteroni, A fluid-structure interaction algorithm using radial basis function interpolation between non-conforming interfaces, in **Advances in Computational Fluid Structure**, Eds. Y.Bazilevs, K.Takizawa, Springer, 439-450, 2016

I77 – P.Antonietti, A.Ferroni, I.Mazzieri and A.Quarteroni, *hp*-version discontinuous Galerkin approximations of the elastodynamics equation, in Bittencourt M., Dumont N., Hesthaven J. (eds) **Spectral and High Order Methods for Partial Differential Equations ICOSAHOM 2016**. Lecture Notes in Computational Science and Engineering, vol 119. Springer, Cham

I78 – P.Gervasio and A.Quarteroni, INTERNODES for elliptic problems, in **Domain Decomposition Methods in Science and Engineering XXIV (DD24)**, pp. 347-356. Lecture Notes in Computational Science and Engineering, Vol. 125 <https://www.springer.com/it/book/9783319938721>.Springer International Publishing. DOI: 10.1007/978-3-319-93873-8_32 <http://dx.doi.org/10.1007/978-3-319-93873-8_32>

I79 – P.Gervasio and A.Quarteroni, INTERNODES for heterogeneous coupling, in **Domain Decomposition Methods in Science and Engineering XXIV (DD24),** pp. 61-73. Lecture Notes in Computational Science and Engineering, Vol. 125 <https://www.springer.com/it/book/9783319938721>. Springer International Publishing. DOI: 10.1007/978-3-319-93873-8_5 <http://dx.doi.org/10.1007/978-3-319-93873-8_5>

I80 – N. Dal Santo, A. Manzoni, S. Pagani, and A. Quarteroni, Reduced order modeling for applications to the cardiovascular system, **Model Order Reduction. Vol III : Applications**, P.Benner el Al. Eds., De Gruyter, 2020,pp 251-278

I81 – C.Farhat, S.Grimberg, A. Manzoni, and A. Quarteroni, Computational bottlenecks for PROMs: Pre-computation and hyperreduction, **Model Order Reduction. Vol II : Snapshot-Based Methods and Algorithms,** P.Benner el Al. Eds., De Gruyter, 2020, pp. 181-244

I82 – A. Manzoni, D. Bonomi, A. Quarteroni, Reduced order modeling for cardiac electrophysiology and mechanics: challenges & perspectives. In **Mathematical and Numerical Modeling of the Cardiovascular System and Applications**, D. Boffi, L. Pavarino, G. Rozza, S. Scacchi, C. Vergara (Eds.), Springer: pp. 115-166, 2018

I83 – A.Gerbi, L.Dede' and A.Quarteroni, Segregated algorithms for the numerical simulation of cardiac electromechanics in the left human ventricle, **The Mathematics of Mechanobiology: CIME Lecture Notes,** D.Ambrosi and P.Ciarletta, Eds., Cetraro, Italy 2018 (2020): 81-116.

I84 - A.Quarteroni, L.Dede' and L.Parolini, Data Analysis and Predictive Mathematical Modeling for COVID-19 Epidemic Studies, **Math in the Time of Corona**. Cham: Springer International Publishing, 2020. 21-27.

I85 – A.Quarteroni, La matematica del cuore, **Lettera Matematica**, 2023

I86 – L.Cicci, S.Fresca, E.Zappon, S.Pagani, F.Regazzoni, L.Dede', A.Manzoni, and A.Quarteroni, Reduced order modeling of the cardiac function across the scales, Ch 21, Elsevier, F.Chinesta and R.Ohayon. 2024

I87 – A.Quarteroni, Dal Calcolo Scientifico al Scientific Machine Learning, **Nuova Lettera Matematica**, 6 (2027), p.34-49

I88 – A.Quarteroni, A Virtual Heart Simulator for Sustainable Healthcare Innovation, **EurASC Proceedings**, Lisbon, 2024

I89 – A.Quarteroni, P.Gervasio and F.Regazzoni, Scientific Machine Learning for differential problems: integrating physics-based and data-driven approaches, **CIME Course on PDEs, Control and Deep Learning**, G.Coclite and E.Zuazua, Eds., July 22-26, 2024, in press

I90 – A.Quarteroni, A Virtual Heart Simulator for Sustainable Healthcare Innovation, in **Science for Sustainability**, Chapter 44, A.Pombeiro et Al., Eds, 2026 World Scientific Publishing Company, in press https://doi.org/10.1142/9789819823949_0044

I91 – L.Dede', C.Guastamacchia, A.Quarteroni, and F.Regazzoni, Scientific Machine Learning for Cardiac Electrophysiology: A Latent Dynamics Perspective, In **Machine Learning in Cardiovascular Biomechanics**, Elsevier, 2026, in press

C. Conference Proceedings: Contributed Papers

C1 - F. Gastaldi, A. Quarteroni and G. Sacchi-Landriani, "Effective Methods for the Treatment of Interfaces Separating Equations of Different Character", pp. 65-74 in **Computers and Experiments in Fluid Flow**, G. M. Carlomagno and C. A. Brebbia Eds.,Computational Mechanics Publications, Springer, Berlin, 1989.

C2 - F. Gastaldi, A. Quarteroni and G. Sacchi-Landriani, "Coupling of two-dimensional hyperbolic and elliptic equations", **Spectral and High Order Methods for Partial Differential Equations**, C. Canuto and A. Quarteroni, Eds., Elsevier, Amsterdam, 1990, pp.347-354.

C3 - C. Carlenzoli, A. Quarteroni and A. Valli, "Spectral Domain Decomposition Methods for Compressible Navier-Stokes Equations", in **Domain Decomposition Methods for Partial Differential Equations, V**, D.Keyes et AL., Eds., SIAM, Philadelphia, 1992, 441-450

C4 - V. I. Agoshkov, A. Quarteroni, F. Saleri, "Modified Finite Element Approximation to Shallow Water Equations and Stability Results", in **Finite Elements in Fluids, part II**, K Morgan et Al., Eds., Pineridge Press, 1993, 1020-1025

C5 - M. Azaiez and A. Quarteroni, A Spectral Stokes Solver in Domain Decomposition Methods in **Domain Decomposition Methods in Scientific and Engineering Computing, VII**, D.E.Keyes and J.Xu, Eds., AMS, Providence, 1995, 151-156

C6 - S. Micheletti, A. Quarteroni and R. Sacco, Non Linear Block Iterative Solution of Semiconductor Device Equations by a Domain Decomposition Method, in **Domain Decomposition Methods in Scientific and Engineering Computing, VII**, D.E.Keyes and J.Xu, Eds., AMS, Providence, 1995, 525-532

C7 - E. Faccioli, A. Quarteroni, A. Tagliani, Spectral multi domain methods for the simulation of wave propagation in heterogeneous media, in **Domain Decomposition Methods for Partial Differential Equations, VI**, A. Quarteroni, J.Periaux, Yu.A.Kuznetsov, O.Widlund, Eds. AMS, Providence, 1994, pp. 447-456

C8 - F. Gastaldi, L. Gastaldi, A. Quarteroni, The ADN and ARN Domain Decomposition Methods for Advection Diffusion Equations, **DD9 Proceedings**, P.Bjorstad, M. Espedal and D. Keyes Editors, H.Wiley, 1997, pp. 334-341

C9 - L. Fatone, P. Gervasio and A. Quarteroni, Iterative methods of multimodels for incompressible flows, **Enumath 99 - Proceedings of the 3rd European Conference on Numerical Mathematics and Advanced Applications**, Jyväskylä, Finland, July 26-30, 1999, P. Neittanmäki, T. Tiihonen and P. Tarvainen Eds., World Scientific, Singapore, 2000, pp. 470-477

C10 - A. Quarteroni, A. Veneziani and P. Zunino, Numerical investigation of transport and absorption phenomena of blood solutes, in **18th UIT National Heat Transfer Conference**, A.Niro et Al., Eds., ETIS, Pisa, 2000, pp. 955-966

R. Internal Scientific Reports

R1 - A. Quarteroni, "Implementation of primal hybrid finite element methods and associated numerical problems", **Report n.211, Istituto di Analisi Numerica del C.N.R., Pavia** (1979).

R2 - A. Quarteroni, "Hybrid finite element approximation of elliptic boundary value problems", **Sonderforschungsbereich 72 - Approximierung und Optimierung n. 255, Universitaet Bonn** (1979).

R3 - F. Brezzi, C. Chinosi, L. Della Croce, L. D. Marini, A. Quarteroni, G.Sacchi and T. Scapola, "Recent developments on non-standard finite element methods", **Report n.199, Istituto di Analisi Numerica del C.N.R., Pavia** (1979).

R4 - A. Quarteroni and T. Scapolla, "Implementation of Hellan-Herrmann-Johnson mixed mehod with rectangular decomposition", and L. D. Marini and A. Quarteroni, "Implementation of two equilibrium finite elements for plate bending problems", **Report n.231, Istituto di Analisi Numerica del C.N.R., Pavia** (1979).

R5 - C. Canuto and A. Quarteroni, "Numerical Analysis of Spectral Methods for Partial Differential Equations", **Report n.418, Istituto di Analisi Numerica del C.N.R., Pavia** (1984).

R6 - P. Consonni, G. Fotia, S. Mantica, A. Quarteroni, A. Rosella, Blending Finite Elements and Finite Volumes for the Solution of Miscibile Incompressible Flow, **ECMOR - European Conference Mathematics in Oil Recovery**, June 1994

R7 - P. Zunino, D. Mastalli, A. Quarteroni, F. Neftel, J. P. Wauters Development of a new mathematical approach to optimize peritoneal dialysis, **Série d'Analyse et Analyse Numérique**, Département de Mathematiques, EPFL, No.11, 2004.

R8 - M. de Luca, D. Ambrosi, A.M.Robertson, A.Veneziani, A.Quarteroni: Finite element analysis for a multi-mechanism damage model of cerebral arterial tissue, MOX Report, 2011

P. Papers for Popularization of Mathematics

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P5 - A. Quarteroni, Modellistica matematica per la progettazione, la simulazione e l'innovazione, **Rendiconti Istituto Lombardo di Scienze e Lettere**, 2004 (text of the Lecture opening the 201st Academic Year).

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