

CURRICULUM VITÆ ET STUDIORUM

Prof. Alessandra Aimi

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PERSONAL DATA

Place and date of birth: Fidenza (PR), April 22nd, 1967.
Citizenship: italian.
Civil status: married, 3 children
Place of residence: via fra' S. Davoli 26, Fidenza (PR).

ACADEMIC POSITION

- **Since November 1st, 2023:** Full Professor in Numerical Analysis, working at Mathematical, Physical and Computer Sciences Department of Parma University.

PREVIOUS POSITIONS AND GRANTS

- **From 1/10/2014 to 31/10/2023:** Associate Professor in Numerical Analysis, working at Mathematical, Physical and Computer Sciences Department of Parma University.

- **From 16/11/1997 to 30/09/2014:** Assistant Professor in Numerical Analysis, working at Mathematics and Computer Science Department of Parma University.

- **From 1/11/1994 to 31/10/1997:** financially supported PhD student in *Computational Mathematics and Operational Research* at the University of Milano (X cycle).

- **From 1/1/1992 to 31/10/1994:** E.U.L.O. (Ente Universitario della Lombardia Orientale) grant holder, for research and teaching activities in Numerical Analysis at Engineering Faculty of Brescia University.

EDUCATION

- **1998: PhD in Computational Mathematics** with a thesis entitled: "*New numerical integration schemes for the solution of (hyper)singular integral equations with Galerkin BEM*" (supervisor: Prof. Mauro Diligenti).

- **1990: Graduated (summa cum laude) in Mathematics** at Parma University, with a dissertation entitled: "*Un'applicazione del metodo degli invarianti ortogonali all'operatore dell'elasticità in un rettangolo*" (supervisors: Prof. Lucilla Bassotti Rizza, Prof. Mauro Diligenti).

ATTENDANCE TO WORKSHOPS, SUMMER SCHOOLS AND SPECIALIZATION COURSES

- Workshop “*Power 2023*”, Politecnico di Torino, 26-28 July 2023
- Workshop “*Boundary Elements and Friends*”, Innsbruck, 25-27 August 2022
- Workshop GNCS “*Metodi di approssimazione locale con applicazioni all’analisi isogeometrica e alle equazioni integrali di contorno*”, Florence, 28-29 November 2019
- Workshop “*INTEGRAL EQUATIONS: RECENT ADVANCES AND APPLICATIONS*”, Politecnico di Torino, 23-24 September 2019
- Workshop “*Design of Reliable, Exact, and Application-oriented techniques for geometric Modeling and numerical Simulations (DREAMS)*”, INdAM, Rome, January 22-26, 2018
- Workshop GNCS “New numerical techniques for the solution of transient problems by BEM”, University of Parma, October 26-27, 2017
- INdAM Meeting “Structured matrices in Numerical Linear Algebra: Analysis, Algorithms and Applications, Cortona (Ar), September 4-8 2017
- Workshop “Due giorni di Algebra Lineare Numerica”, Università dell’Insubria, 16-17 Febbraio 2017
- Workshop “*Design of Reliable, Exact, and Application-oriented techniques for geometric Modeling and numerical Simulations (DREAMS)*”, Rome “Tor Vergata”, January 26-27, 2016
- Workshop INdAM-GNCS “*Analisi isogeometrica e metodi agli elementi di contorno*”, Parma, September 17, 2015
- Workshop IWATA “International Workshop on Approximation Theory and Applications”, Rifreddo (Potenza), September 12-13, 2013
- Workshop GNCS “Accoppiamento di metodi numerici per BIEs e PDEs relative a problemi evolutivi esterni e multistrato”, Torino Polythecnic, February 18-19, 2013
- Workshop “BEM on the Saar 2012”, Saarland University, Saarbrucken, May 14-16, 2012
- Workshop GNCS “Tecniche numeriche per problemi di propagazione di onde elastiche in multidomini”, Parma University, January 31, 2012
- Workshop “Time Domain Boundary Integral Equations: Algorithms, Analysis, Applications”, Max Plank Institute for Mathematics in the Sciences, Leipzig, May 4-6, 2011
- Workshop “Space-time Boundary Integral Equation Methods for Wave Propagation Problems”, Torino Polythecnic, September 9, 2010
- Workshop “Integral Equations: recent numerical developments and new applications”, Parma University, October 29-30, 2009
- DWCAA09, 2nd Dolomites Workshop on Constructive Approximation and Applications, Alba di Canazei (Trento), September 4-9, 2009
- International Workshop “Advanced Numerical Methods in Seismology”, Brescia University, November 17, 2008
- Workshop “Equazioni Integrali: recenti sviluppi numerici e nuove applicazioni”, Parma University, September 27-28, 2007
- SIMAI Meeting on Applied Mathematics development perspectives in Italy, Parma University, May 18-19, 2007
- Workshop “Algebra Lineare Numerica e Applicazioni”, Padua University, February 26-27, 2007
- Workshop “Algebra Lineare Numerica e Applicazioni”, Pisa University, January 31- February 1, 2002
- Workshop “Teoria dell’approssimazione nell’ambito della risoluzione numerica di equazioni differenziali e integrali”, Cortona, September 25-29, 1995
- International Workshop “Recent advances in Numerical Methods for P.D.E.”, Torino Polythecnic, February 14-16, 1995
- “XII Scuola di Matematica Computazionale”, Vico Equense, September 7-15, 1994
- “XI Scuola di Matematica Computazionale”, Vico Equense, September 15-25, 1993
- “X Scuola di Matematica Computazionale”, Maratea, September 2-12, 1992
- “Corso Express”, presso ACS, Milano, December 2-4, 1992
- “Tutorial course on Domain Decomposition Methods”, Pavia University, June 11-13, 1992

ATTENDANCE TO NATIONAL AND INTERNATIONAL CONGRESSES

- GNCS-INdAM Congress, Rimini, 3-5 February 2026
- SMART 2025, Castello di Altafiumara (RC), September 28th-October 2nd, 2025
- SIMAI 2025, Trieste, September 1-5, 2025
- MCMAS 2025, Saidia, Morocco, May 26-29, 2025
- “Mathematics of Wave Phenomena”, KIT, Karlsruhe, February 24-28, 2025
- NAMAS-24, Gaeta, 16-20 September 2024
- ICNAAM 2024, Creta (online), 11-17 September 2024
- Waves 2024, Berlin (Germany), 30 June - 5 July 2024
- GNCS-INdAM Congress, Rimini, 14-16 February 2024
- SIMAI 2023, Matera, 28 August-1 September 2023
- CANA 2023, Cagliari, 5-9 June 2023
- MACMAS 2023, Turin, 29 May-1 June 2023
- ICNAAM 2022, Creta (online), 19-25 September 2022
- Waves 2022, Palaiseau (Parigi), 25-29 July 2022
- FAATNA 2022, Matera, 5-8 July 2022
- ECCOMAS 2022, 8th European Congress on Computational Methods in Applied Sciences and Engineering, Oslo (Norvegia), 5-9 June 2022
- SIMAI 2020+21, XV Biannual Congress of SIMAI, Parma, 30 August-3 September 2021
- IUTAM Symposium, Tokyo (online), 25-26 June, 2-3 July 2021
- GNCS-INdAM Congress, Montecatini Terme, 11-13 February 2020
- XXI Congresso U.M.I., Pavia, 2-7 September 2019
- Waves 2019, Wien (Austria), 26-30 August 2019
- NuMA 2018, Turin, 19-21 September 2018
- SIMAI 2018, XIV Biannual Congress of SIMAI, Rome, 2-6 July 2018
- IABEM 2018, Paris (France), 26-28 June 2018
- GNCS-INdAM Congress, Montecatini Terme, 14-16 February 2018
- ICNAAM 2017, Thessaloniki (Greece), 25-29 September 2017
- SIMAI 2016, XIII Biannual Congress of SIMAI, Milano, 13-16 Settembre 2016
- MAFELAP 2016, THE MATHEMATICS OF FINITE ELEMENTS AND APPLICATIONS 2016, Brunel University London (Great Britain), 14 - 17 June 2016
- ECCOMAS 2016, 7th European Congress on Computational Methods in Applied Sciences and Engineering, Crete (Greece), June 5-10, 2016
- GNCS-INdAM Congress, Montecatini Terme, February 2-4, 2016
- NETNA 2015, Falerna (Cosenza), 18-20 Giugno 2015
- SMART 2014, Pontignano (Siena), 28 September-1 October 2014
- ICNAAM 2014, Rodi (Grecia), 22-28 September 2014
- WCCM XI, Barcelona (Spain), July 20-25, 2014
- GNCS-INdAM Congress, Montecatini Terme, February 19-20, 2014
- BETEQ 2013, International Conference on Boundary Element Techniques, Paris, July 16-18 2013
- Waves 2013, Gammarth (Tunisia), June 3-7, 2013
- GNCS-INdAM Congress, Montecatini Terme, November 15-16, 2012
- ECCOMAS 2012, 6th European Congress on Computational Methods in Applied Sciences and Engineering, Wien (Austria), September 10-14, 2012
- SIMAI 2012, XI National Congress, Torino, June 25-28, 2012
- SC2011, International Conference on Scientific Computing, S. Margherita di Pula, Cagliari, October 10-14, 2011
- XIX UMI Congress, Bologna, September 12-17, 2011
- IABEM 2011, Brescia, September 5-8, 2011
- ICNAAM 2010, Rodi (Grecia), September 19-25, 2010
- X SIMAI Congress, Cagliari, June 21-25, 2010

- ECCM 2010, IV European Conference on Computational Mechanics, Paris (France), May 16-21, 2010
- CMMSE 2009, 9th International Conference on Computational and Mathematical Methods in Science and Engineering, Gijon (Spain), June 30 –July 3, 2009
- Waves 2009, Pau (France), June 15-19, 2009
- GNCS-INdAM Congress, Montecatini Terme, February 3-5, 2009
- IX SIMAI Congress, Rome, September 15-19, 2008
- GNCS-INdAM Congress, Montecatini Terme, February 4-6, 2008
- XVIII AIMETA National Congress, Brescia, September 11-14, 2007
- BETEQ 2007, International Conference on Boundary Element Techniques, Naples, July 24-26, 2007
- IABEM 2006, Symposium of the International Association for Boundary Element Methods, Graz (Austria), July 10-12, 2006
- VIII SIMAI Congress, Baia Samuele (Ragusa), May 22-26, 2006
- XVII AIMETA National Congress, Florence, September 11-15, 2005
- NAC 2005, International Conference of Numerical Analysis, Arcavacata di Rende, May 19-21, 2005
- VII SIMAI Congress, Venice, September 20-24, 2004
- ICCAM 2002, Tenth International Congress on Computational and Applied Mathematics, Leuven (Belgium), July 22-26, 2002
- IABEM 2002, Symposium of the International Association for Boundary Element Methods, Austin (Texas), May 28-30 2002
- XV AIMETA National Congress, Taormina, September 26-29, 2001
- A4A4, The Fourth International Symposium on Algorithms for Approximation, Huddersfield (UK), July 15-20, 2001
- IABEM 2000, Symposium of the International Association for Boundary Element Methods, Brescia, July 4-7, 2000
- V SIMAI National Congress, Ischia Porto, June 5-9, 2000
- IABEM International Symposium on Boundary Element Methods, Ecole Polytechnique, Palaiseau (Parigi), May 26-29, 1998
- National Congress of Numerical Analysis, Montecatini Terme, April 15-17, 1998
- IABEM Symposium: *Fundamental solutions in Boundary Elements: formulation and integration*, Seville (Spain), June 18-20, 1997
- XII AIMETA National Congress, Naples, October 3-6, 1995
- II SIMAI National Congress, Anacapri, May 31-June 3, 1994

SCIENTIFIC COMMUNICATIONS

(The asterisk * denotes personally presented talks, the circle ° invited)

- - **2025***: "Spline quasi- and quasi²- interpolating projectors for the numerical solution of Cauchy singular Fredholm integral equations", SMART 2025
- - **2025**: "Energetic boundary element method on graded meshes for the numerical solution of mixed elastodynamic problems on 2D polygonal domains", SIMAI 2025
- - **2025**: "Numerical solution of Cauchy singular integral equations by spline quasi-interpolating projectors", SIMAI 2025
- - **2025**: "Boundary Element Method for the evaluation of Asian barrier options", SIMAI 2025
- - **2025***: "Space-time adaptive boundary elements for the weakly singular BIE related to the wave equation", Conference on Mathematics of Wave Phenomena, KIT, 2025
- - **2024***: "Energetic BEM for frictional contact problems in elastodynamics", ICNAAM 2024
- - **2024**: "A Boundary Element and Finite Element Method for 2D hydraulic fractures", NAMAS-24
- - **2024**: "Boundary Elements for the numerical resolution of 2D contact frictional problems", NAMAS-24
- - **2024**: "Dynamic frictional contact by space-time Boundary Elements", Waves 2024
- - **2024**: "Boundary elements for wave equations in polyhedral domains", Waves 2024
- - **2024**: "Space-time adaptive boundary element method for the wave equation", Waves 2024
- - **2023**: "Integral formulation for 2D hydraulic fractures", SIMAI 2023, Matera

- - **2023**: “On the Energetic Galerkin Boundary Element Method applied to 3D Elastodynamics”, SIMAI 2023, Matera
- - **2023**: “Time-domain boundary elements for elastodynamics”, SIMAI 2023, Matera
- - **2023**^o: “Time-domain Boundary Elements for elastodynamic contact problems”, SIMAI 2023, Matera
- - **2023**: “Time domain boundary elements and mesh refinements”, ICIAM 2023, Tokyo
- - **2023**: “Time-Domain BEM for the resolution of Elastodynamic Contact Problems”, ICIAM 2023, Tokyo
- - **2023**^{*o}: “Time-domain BEM for the numerical solution of elastodynamic contact problems”, PoWER 2023, Turin
- - **2023**^o: “Time-domain Energetic Boundary Elements for the 3D elastodynamic equation on quasi-uniform meshes”, PoWER 2023, Turin
- - **2023**^o: “A New Framework for Joint Trajectory Planning Based on Time-Parameterized B-Splines”, SPM’23, Genova
- - **2023**^{*o}: “Energetic BEM for the numerical solution of elastodynamics contact problems”, CANA 2023, Cagliari
- - **2023**^o: “Energetic Boundary Element Method for 3D elastodynamics”, CANA 2023, Cagliari
- - **2023**: “Elastodynamic Contact Problems by Energetic Boundary Element Method”, M2P 2023, Taormina
- - **2023**^{*}: “Numerical solution of log-singular Hammerstein integral equations by spline QI projectors”, MACMAS 2023, Turin
- **2022**^{*o}: “Energetic BEM for the numerical solution of 2D elastodynamics interior problems”, ICNAAM 2022
- **2022**^o: “Energetic Boundary Element Method for 3D wavefield modelling”, Innsbruck Workshop 2022
- **2022**^o: “Recent Advances in 2D Elastodynamics by Time-Domain Energetic Boundary Element Method”, Innsbruck Workshop 2022
- **2022**^o: “Fast E-BEM by ACA compression - resolution of acoustic and elastic exterior problems”, Innsbruck Workshop 2022
- **2022**: “Recent Advances in Elastodynamics by Time-Domain Energetic Boundary Element Method”, Waves 2022
- **2022**^o: “Energetic Boundary Element Method for 3D wavefield modelling”, FAATNA 2022
- **2022**^o: “E-BEM for the resolution of 2D interior elastodynamic problems”, FAATNA 2022
- **2022**^o: “IGA-Energetic BEM for the numerical solution of 2D wave scattering problems in the space-time domain”, FAATNA 2022
- **2022**^{*o}: “Fast Energetic BEM for time-domain acoustic and elastic 2D scattering problems”, FAATNA 2022
- **2022**: “Algorithmic aspects of time-domain Energetic BEM for Elastodynamics”, ECCOMAS 2022
- **2022**: “Boundary Element Method for contactless estimation of spatially varying internal heat transfer coefficient in circular pipes”, UIT International Conference 2022
- **2021**: “ACA based acceleration of the Energetic Galerkin BEM for 2D acoustic and elastic wave propagation problems”, Sollerhaus Workshop, 2021
- **2021**: “ACA based acceleration of the Energetic Galerkin BEM for 2D wave propagation problems”, SIMAI 2020+21
- **2021**: “Energetic Galerkin BEM for 2D elastodynamic exterior problems with Neumann conditions: comparison between direct and indirect formulations”, SIMAI 2020+21
- **2021**: “Integral formulation for fracture propagation as a standard dissipative process: application to hydraulic fractures”, SIMAI 2020+21
- **2021**: “Energetic Galerkin BEM for 2D elastodynamics: integral operators with weak and strong singularities”, BEM/MRM 44, 2021
- **2019**: “Adaptive relaxation based BEM-FEM coupling for estimating anchor losses in MEMS”, Workshop GNCS, 2019
- **2019**^{*o}: “A kernel expansion based Energetic BEM applied to Neumann exterior wave propagation problems with damping”, Workshop “*INTEGRAL EQUATIONS: RECENT ADVANCES AND APPLICATIONS*”, 2019
- **2019**^{*o}: “Energetic BEM for elastodynamics exterior problems”, XXI Congresso U.M.I. 2019
- **2019**: “Numerical aspects of Energetic Boundary Element Method for 2D soft scattering in linear elastodynamics”, Waves 2019

- **2018:** "Integral Approach to Asian Barrier Option Pricing", *ICNAAM 2018*
- **2018:** "Application of energetic BEM to 2D elastodynamic scattering problems", *SIMAI 2018*
- **2018:** "BEM-FEM coupling for estimating anchor losses in MEMS", *SIMAI 2018*
- **2018:** "A stable 2D energetic Galerkin BEM approach for linear elastodynamic problems", *IABEM 2018*
- **2018:** "BEM-FEM coupling for estimating anchor losses in MEMS", *IABEM 2018*
- **2018***: "An IgA approach to Energetic BEM: preliminary results", *DREAMS Workshop 2018*
- **2017:** "Efficient assembly based on B-spline tailored quadrature rules for the IgA-SGBEM", *Workshop GNCS 2017*
- **2017:** "Energetic BEM for soft and hard scattering of 2D damped waves by open arcs", *Workshop GNCS 2017*
- **2017***: "Energetic BEM for the numerical solution of 2D damped waves propagation exterior problems", *ICNAAM 2017*
- **2017***: "On the Energetic Galerkin BEM and its algebraic reformulation", *INdAM Meeting "Structured matrices in Numerical Linear Algebra: Analysis, Algorithms and Applications"*, Cortona
- **2017:** "Energetic BEM for soft and hard scattering of 2D damped waves by open arcs", *XVII CMMSE Conference*
- **2017:** "Numerical pricing of geometric asian options with barriers", *XVII CMMSE Conference*
- **2017:** "Platonic Solids, Restriction Matrices and Space-Time Energetic Galerkin BEM", *Workshop "Due Giorni di Algebra Lineare Numerica"*, Como
- **2016***: "Energetic BEM for the numerical analysis of damped wave propagation exterior problems", *XIII SIMAI 2016 Congress*
- **2016:** "Development of a basis-oriented assembly strategy suited for isogeometric Galerkin BEMs", *XIII SIMAI 2016 Congress*
- **2016***: "An isogeometric approach to Symmetric Galerkin Boundary Element Method", *MAFELAP 2016*
- **2016***: "Energetic BEM for the numerical solution of damped wave propagation exterior problems", *ECCOMAS 2016*
- **2016***: "Analisi isogeometrica e metodi agli elementi di contorno", *GNCS-INDAM 2016 Congress*
- **2015:** "Current and future developments of IGA-SGBEM", *INDAM-GNCS Study Day, Parma*
- **2015***: "Efficient spline alternatives to Lagrangian basis in Symmetric Galerkin BEM", *NETNA 2015*
- **2014***: "Isogeometric Analysis and Symmetric Galerkin BEM: a 2D numerical study", *SMART 2014*
- **2014***: "Energetic BEM-FEM coupling for the numerical solution of the damped wave equation", *ICNAAM 2014*
- **2014***: "Numerical analysis of the damped wave equation by "energetic" formulations", *WCCM XI*
- **2014:** "Analysis of Damped Waves Using Energetic BEM-FEM Coupling", *BeTeq 2014*
- **2014***: "Metodi fast per la risoluzione numerica di sistemi di equazioni integro-differenziali", *GNCS-INDAM 2014 Congress*
- **2013***: "Energetic BEM-FEM for 2D wave propagation problems", *IWATA 2013*
- **2013***: "Energetic BEM-FEM coupling for wave propagation in layered media", *BeTeq 2013*
- **2013***: "Energetic BEM-FEM coupling for wave propagation in unbounded domains", *Waves 2013*
- **2013:** "BEM-FEM coupling for the one-dimensional Klein-Gordon equation", *Waves 2013*
- **2013:** "Platonic Solids, Restrictions Matrices and Space-Time Energetic Galerkin BEM", *Waves 2013*
- **2013***: "Accoppiamento di metodi numerici per BIEs e PDEs relative a problemi evolutivi esterni e multistrato", *GNCS Workshop*
- **2012***: "Accoppiamento di metodi numerici per BIEs e PDEs relative a problemi evolutivi esterni e multistrato", *GNCS-INDAM 2012 Congress*
- **2012:** "Restriction matrices for exploiting symmetry in 3D wave propagation analysis by Energetic BEM", *ECCOMAS 2012*
- **2012***: "An energetic approach to BEM-FEM coupling for wave propagation phenomena", *XI SIMAI Congress*
- **2012:** "A stable energetic Galerkin BEM for 3D wave propagation interior problems", *XI SIMAI Congress*
- **2012***: "An energy based BEM-FEM coupling for wave propagation problems: first results", *Workshop "BEM on the Saar"*
- **2011***: "On the regularization of Galerkin BEM hypersingular bilinear forms", *SC2011*

- **2011***: “Un metodo BEM energetico di tipo Galerkin per problemi di propagazione di onde”, *XIX UMI Congress*
- **2011**: “On the energetic Galerkin BEM applied to 3D wave propagation problems”, *IABEM 2011*
- **2011**: “Variational formulation for the energetic approach to 2D wave propagation boundary integral equations”, *IABEM 2011*
- **2011***: “Energetic Galerkin BEM and domain decomposition for 2D wave propagation problems in multi-layered media”, *Workshop “Time Domain Boundary Integral Equations: Algorithms, Analysis, Applications”*
- **2010**: “Energetic Galerkin BEM for 2D wave propagation problems in piecewise homogeneous media”, *ICNAAM 2010*
- **2010**: “Multi-domain BEM for two dimensional problems of wave propagation”, *X SIMAI Congress*
- **2010**: “Exploiting geometrical symmetries in space-time BIEs discretization”, *ECCM 2010*
- **2009**: “Efficient numerical integration schemes for the discretization of hypersingular BIEs related to wave propagation problems”, *DWCAA09 Workshop*
- **2009**: “Numerical integration schemes for the discretization of BIEs related to wave propagation problems”, *IX CMMSE Conference*
- **2009**: “Developments in Boundary Element Methods for Wave propagation problems”, *GNCS Congress*
- **2008**: “Boundary element methods for earthquake simulations: an introduction”, *International Workshop “Advanced Numerical Methods in Seismology”*
- **2008**: “An energy approach for time-domain boundary integral formulations of the wave equation”, *IX SIMAI Congress*
- **2008**: “On analytical integrations and time marching schemes in 3D BEM elastodynamics”, *Workshop “BEM on the Saar”*
- **2008**: “A space-time energetic approach for BEM related to wave propagation analysis”, *Workshop “BEM on the Saar”*
- **2008**: “A space-time energetic approach for BEM related to wave propagation analysis in layered media”, *GNCS Congress*
- **2007***: “An energetic space-time weak formulation for BIEs related to the wave problem”, *Workshop “Equazioni Integrali: recenti sviluppi numerici e nuove applicazioni”*
- **2007**: “Space-time variational formulations for BIEs related to the wave problem”, *XVIII AIMETA Congress*
- **2007**: “Numerical results for the wave propagation problem with space-time boundary element method”, *XVIII AIMETA Congress*
- **2007**: “Numerical results of one-dimensional wave propagation analysis in layered media”, *BETEQ 2007*
- **2007**: “Remarks on space-time variational formulations for BIEs related to the wave problem”, *BETEQ 2007*
- **2007**: “One-dimensional wave propagation analysis in layered media by BEMs”, *SIMAI Meeting 2007*
- **2006***: “Numerical Integration Schemes for Petrov-Galerkin Infinite BEM”, *IABEM 2006 Conference*
- **2006***: “Numerical approximation of a BGK-type relaxation model for reactive mixtures”, *VIII SIMAI Congress*
- **2006***: “Numerical Integration Schemes for hypersingular integrals on the real line”, *VIII SIMAI Congress*
- **2005**: “BEM simulations over unbounded domains”, *XVII AIMETA National Congress*
- **2004***: “Restriction Matrices and Panel Clustering Method for multi-domain SGBEM”, *VII SIMAI Congress*
- **2003**: “Restriction Matrices and Domain Decomposition Method for SGBEM Applications”, *XVI AIMETA National Congress*
- **2002***: “Groups Representation Theory and Restriction Matrices”, *ICCAM X*
- **2002***: “Restriction Matrices for SGBEM Application”, *IABEM 2002 Conference*
- **2002**: “Use of panel clustering method in numerical-analytical schemes for 3D SGBEM”, *VI SIMAI National Congress*
- **2001**: “A panel clustering algorithm for 3D SGBEM with analytical inner integrations in elasticity”, *XV AIMETA National Congress*
- **2001***: “Geometrical symmetry and restriction matrices”, *XV AIMETA National Congress*

- **2001***: “Geometrical Symmetry in Symmetric Galerkin BEM ”, International Symposium *ALGORITHMS FOR APPROXIMATION IV*
- **2000***: “Numerical integration in 3D Galerkin BEM solution of HBIEs”, *IABEM 2000*
- **2000***: “Hypersingular kernel integration in 3D Galerkin boundary element method”, *SIMAI National Congress*
- **1998***: “Nuovi schemi di integrazione numerica per la risoluzione di equazioni integrali (iper)singolari con il metodo di Galerkin agli elementi di contorno”, *National Congress of Numerical Analysis*
- **1998***: “Some results on analytical and numerical integration in 3D Galerkin BEM solution of HBIEs”, *IABEM International Symposium on Boundary Elements Method*
- **1997***: “Numerical integration schemes for evaluation of (hyper)singular integrals in 2D BEM”, *IABEM Workshop-Fundamental solutions in Boundary Elements: formulation and integration*
- **1995***: “Applications of the h-p version of symmetric boundary element method”, *XII AIMETA National Congress*
- **1994***: “Analisi di due algoritmi per la risoluzione in parallelo di problemi ellittici al contorno”, *II SIMAI National Congress*

INVITED CONFERENCES

- **28th May 2025**: “Some recent advances in space-time boundary element method for wave propagation problems”, Plenary Talk, MACMAS 2025
- **25th June 2021**: “Energetic BEM for the numerical solution of exterior problems in elastodynamics”, *IUTAM Symposium*
- **4th February 2020**: “Accurate quadrature schemes for Energetic BEM applied to 2D linear elastodynamics”, *Department of Mathematics, University of Turin*
- **27th January 2016**: “IgA-SGBEM: an overview”, *Workshop “Design of Reliable, Exact, and Application-oriented techniques for geometric Modeling and numerical Simulations (DREAMS)”*, *University of Rome “Tor Vergata”*
- **8th January 2014**: “Energetic BEM-FEM coupling for the numerical solution of wave propagation problems in unbounded multi-domains”, *Department of Mathematics and Computer Science, University of Florence*
- **27th May 2013**: “Energetic BEM-FEM coupling for wave propagation in unbounded media”, *MOX Seminars, Polytechnic of Milan*
- **23-25 November 2011**: “An energy approach to space-time Galerkin BEM for exterior wave propagation problems”, *INRIA, Monthly POEMS Seminars, Rocquencourt (Paris)*
- **9 September 2010**: “An energy approach to space-time Galerkin BEM for wave propagation problems”, *Workshop “Space-time Boundary Integral Equation Methods for Wave Propagation Problems”*, *Torino Polytechnic*

SCIENTIFIC PARTICIPATION / RESPONSIBILITY RELATED TO INTERNATIONAL AND NATIONAL RESEARCH PROJECTS, SELECTED FOR FUNDING ON THE BASIS OF COMPETITIVE CALLS INVOLVING PEER REVIEW

- **FIL2026 – Action D (12 months, Euros 27756)**: “Nitsche’s energetic BEM-FEM coupling for wave propagation problems on bidomains” (**PI**)
- **FIL2025 – Action B (24 months)**: “A BEM-FEM coupling approach for the numerical resolution of multi-domain problems with relevant applications in civil engineering” (**participant**)
- **GNCS 2025 (12 mesi)**: “High-order BEM based numerical techniques for wave propagation problems” (**partecipante**)
- **PNRR 2024 – M4 C2 I 1.4 – BAC, Spoke 6 (12 mesi)**: “B4Web” (**participant** – Resp. locale: Prof. V. Bonnici)
- **GNCS 2024 (12 months)**: “Tecniche numeriche efficienti per problemi differenziali avanzati: BEM e paradigma isogeometrico” (**participant**)

- **BANCA D'ITALIA 2023 (12 months):** “Strumenti finanziari compensativi del rischio climatico” (**participant**)
- **PRIN PNRR 2022 (24 mesi):** “MATHematical tools for predictive maintenance and PROtection of CULTtural heritage (MATHPROCULT)” (**partecipante** Unità di Parma - Resp. locale: Prof. F. Freddi)
- **GNCS 2022 (12 mesi):** “Verso nuove frontiere dell'analisi isogeometrica” (**participant**)
- **Unipr Incoming research and teaching Visiting Professors Program (a.y. 2020/21, 20000 Euros, responsible)**
- **FIL2020 Quota Incentivante Linea A1 (24 months, 50000 Euros):** “Time-domain Energetic BEM for elastodynamic problems, with advanced applications” (**PI**)
- **GNCS 2020 (12 months):** “Metodologie innovative per problemi di propagazione di onde in domini illimitati: aspetti teorici e computazionali” (**participant**)
- **MINECO 2019 (36 mesi):** “Predictive Models for Risk in Insurance and Finance”- Project granted by Spanish government - Grant code: PID2019-105986GB-C21 (**participant**)
- **Fondazione ACRI 2019 (8 months, 32000 Euros, responsible)**
- **Fondazione CARIPARMA 2019 (participant)**
- **GNCS 2019 (12 months):** “Metodi di approssimazione locale con applicazioni all'analisi isogeometrica e alle equazioni integrali di contorno” (**participant**)
- **GNCS 2018 (12 months):** “Sviluppo di tecniche efficienti e accurate per metodi BEM” (**participant**)
- **Fondazione CARIPARMA 2017 (responsible)**
- **GNCS 2017 (7 months):** “Nuove tecniche numeriche per la risoluzione di problemi evolutivi mediante il metodo degli elementi di contorno” (**responsible**)
- **GNCS 2016 (12 months):** “Approccio isogeometrico e tecniche di quadratura per il metodo agli elementi di contorno in 3D” (**participant**)
- **FIL 2014 – Quota Incentivante (12 months):** research activity funded by UNIPR, through local call, and selected by peer review, focused on “Metodi numerici per il pricing di opzioni con barriera” (**participant**)
- **GNCS 2015 (12 months):** “Analisi isogeometrica e metodi agli elementi di contorno” (**responsible**)
- **GNCS 2014 (12 months):** “Dall’Approssimazione all’Algebra Lineare: metodi numerici per l’Analisi Isogeometrica” (**participant**)
- **GNCS 2013 (12 months):** “Metodi fast per la risoluzione numerica di sistemi di equazioni integro-differenziali” (**responsible**)
- **GNCS 2012 (12 months):** “Accoppiamento di metodi numerici per BIEs e PDEs relative a problemi evolutivi esterni e multistrato” (**responsible**)
- **GNCS 2011 (12 months):** “Tecniche numeriche per problemi di propagazione di onde elastiche in multidomini” (**responsible**)
- **PRIN 2009 (24 months):** “Tecniche numeriche BEM per problemi di propagazione di onde elastiche” (**participant** to Parma Unit – Local responsible: Prof. M. Diligenti)
- **PRIN 2007 (24 months):** “Tecniche numeriche BEM per problemi di propagazione di onde elastiche” (**participant** to Parma Unit – Local responsible: Prof. M. Diligenti)
- **PRIN 2004 (24 months):** “Teorie cinetiche in presenza di fenomeni non conservativi” (Parma Unit: resp. Prof. G. Spiga)
- **PRIN 2003 (24 months):** “Metodi computazionali ad alta accuratezza nell'elettromagnetismo e nella modellizzazione ambientale” (**participant** to Torino Polytechnic Unit – Local responsible: Prof. G. Monegato)
- **PRIN 2000 (24 months):** “Trattamento numerico di modelli alle derivate parziali aventi soluzioni irregolari e/o strutturate” (**participant** to Torino Polytechnic Unit – Local responsible: Prof. C. Canuto)
- **PRIN 1998 (24 months):** “Trattamento numerico di modelli alle derivate parziali avanti soluzioni irregolari” (**participant** to Torino Polytechnic Unit – Local responsible: Prof. C. Canuto)

RESEARCH FELLOWSHIPS AT FOREIGN AND INTERNATIONAL HIGH QUALITY ORGANISATIONS AND RESEARCH INSTITUTES

- 4-15 September 2023: **Research Program “Space-time adaptive boundary element methods for wave equations”, CIRM, Marsiglia**
- 23-27 August 2022: **Unit of Engineering Mathematics, University of Innsbruck**

- 28 June - 9 July 2021: **CRM, Barcellona**
- 23 August-5 September 2020: **MFO, Oberwolfach**
- November 2011: **INRIA, Rocquencourt (Paris)**

FOREIGN COLLABORATORS

- Prof. Chafik Allouch, Université Mohammed Premier, Nador, Morocco
- Prof. Franz Chouly, University of Uruguay Republic, Montevideo, Uruguay
- Prof. Heiko Gimperlein, University of Innsbruck, Austria
- Prof. Laurence Grammont, Université Jean Monnet Saint-Etienne, France
- Prof. Luis Ortiz-Gracia, University of Barcelona, Spagna
- Ass. Prof. Marco Riboli, SUPSI, Lugano, Switzerland
- Prof. Ernst P. Stephan, Leibniz University of Hannover, Germania
- Prof. Mohamed Tahrichi, Université Mohammed Premier, Oujda, Morocco

EDITORIAL ACTIVITY AND ACTIVITY AS A REVIEWER

- From 2018: member of the Editorial Board of the *Rivista di Matematica dell'Università di Parma*

I act as a Reviewer for several international scientific journals, among which:

- Annali dell'Università di Ferrara
- Applied Mathematics and Computation
- Applied Numerical Mathematics
- Communications in Nonlinear Sciences and Numerical Simulation
- Computational Mechanics
- Computer Methods in Applied Mechanics and Engineering
- CMES: Computer Modeling in Engineering and Sciences
- Computer Physics Communications
- Computers and Mathematics with Applications
- Engineering Analysis with Boundary Elements
- International Journal for Numerical Methods in Engineering
- International Journal of Computational Methods
- Journal of Computational and Applied Mathematics
- Journal of Computational Methods in Sciences and Engineering
- Journal of Integral Equations and Applications
- Journal of Scientific Computing
- Linear Algebra and its Applications
- Mathematical Methods in the Applied Sciences
- Mathematics and Computers in Simulation
- Mediterranean Journal of Mathematics
- Numerical Algorithms
- Rendiconti del Seminario Matematico Università e Politecnico di Torino
- Rivista di Matematica dell'Università di Parma
- SIAM Journal of Scientific Computing
- Springer INdAM Series

I'm also a Reviewer for

- Mathematical Review

SCIENTIFIC ASSOCIATIONS MEMBERSHIP

- IABEM International Association for Boundary Element Methods (Member of the Executive Council since 6/12/2024)
- INdAM-GNCS Istituto Nazionale di Alta Matematica – Gruppo Nazionale per il Calcolo Scientifico (Member of the Scientific Council since 19/9/2025)
- SIMAI Società Italiana di Matematica Applicata e Industriale
- UMI Unione Matematica Italiana
- IMACS International Association for Mathematics and Computers in Simulation

MAIN RESEARCH TOPICS

- Energetic BEM and BEM-FEM coupling for acoustic and elastic wave propagation problems in time domain
- Space-time adaptive BEM
- Applications to nonlinear elastodynamic contact problems with friction
- Collocation BEM for market options pricing
- IgA-BEM
- Numerical solution of linear and nonlinear Fredholm integral equations, with weakly and strongly singular kernels, by quasi-interpolating spline projectors
- BEM/B-splines for industrial problems
- Quadrature schemes for weakly, strongly and hyper-singular integrals
- Decomposition in subspaces method for differential and integral problems with invariance property w.r.t. groups of congruences

SCIENTIFIC PRODUCTION

Research papers (on Scientific Journals or Books with peer review process):

[82AR] **A.Aimi, G. Di Credico, H.Gimperlein, C.Guardasoni:** “A space-time adaptive boundary element method for the wave equation”, *SIAM J. Sci. Comput.*, **48** (2), 984-1005, (2026)

[81AR] **A. Aimi, C. Allouch, M. Tahrichi:** “Projection and Multi-projection type methods for linear Fredholm integro-differential equations”, *Mathematics and Computers in Simulation*, **247**, 306–317, (2026)

[80AR] **A. Aimi, M.A. Leoni, S. Remogna:** “A numerical method based on spline quasi-interpolating projectors for a class of Cauchy singular integral equations”, *Mathematics and Computers in Simulation*, **246**, 805–819, (2026)

[79AR] **A. Aimi, M.A. Leoni, S. Remogna:** “Spline quasi-interpolating and quasi²-interpolating projectors for the numerical solution of Cauchy singular integral equations”, *J. Comput. Appl. Math.*, **483**, 117376, 1-15, (2026)

[78AR] **A.Aimi, L.Desiderio, H.Gimperlein, C.Guardasoni:** “Space-Time Boundary Elements on GradedMeshes for 3D Elastodynamics”, *Internat. j. Numer. Methods Engrg.*, **126**, e7016, 1-28, (2025)

[77AR] **A.Aimi, G.Di Credico, H. Gimperlein, C. Guardasoni:** “Adaptive time-domain boundary element methods for the wave equation with Neumann boundary conditions”, *CAMWA*, **198**, 196–213, (2025)

- [76AR] **A. Aimi, C. Guardasoni, L. Ortiz-Gracia, F. Zanni**: “Analysis of historical average temperatures for weather derivatives valuation. The case of Parma (Italy)”, *SEMA SIMAI Springer Series*, **41**, 85-105, (2025)
- [75AR] **M. Riboli, M. Silvestri, E. Manconi, A.Aimi, R. Garziera**: “Collision-free motion generation for dual-gantry robotic systems”, *Robotics and Autonomous Systems*, **192**, 105031, (2025)
- [74AR] **A. Aimi, M.A. Leoni, S. Remogna**: “Numerical solution of nonlinear Fredholm–Hammerstein integral equations with logarithmic kernel by spline quasi-interpolating projectors”, *Mathematics and Computers in Simulation*, **223**, 183–194, (2024)
- [73AR] **M.Riboli, E.Manconi, R.Garziera, A.Aimi**: “A General Approach for Planning a Smooth Planar Path Within a Channel Using NURBS”, *IEEE ROBOTICS AND AUTOMATION LETTERS*, **9** (7), 6744-6751, (2024)
- [72AR] **A.Aimi, G.Di Credico, H. Gimperlein**: “Space–time boundary elements for frictional contact in elastodynamics”, *Comput. Methods Appl. Mech. Engrg.*, **427**, 117066, (2024)
- [71AR] **A. Aimi, C. Guardasoni**: “BEM based semi-analytical approach for accurate evaluation of arithmetic Asian barrier options”, *CAMWA*, **167**, 74–91, (2024)
- [70AR] **A. Aimi, M.A. Leoni, S. Remogna**: “Numerical solution of Fredholm integral equations by quasi-interpolating projectors”, *SEMA SIMAI Springer Series*, **37**, 109-122, (2024)
- [69AR] **A. Aimi, G. Di Credico, H. Gimperlein, C. Guardasoni, G. Speroni**: ”Weak imposition of boundary conditions for the boundary element method in the time domain”, *Appl. Num. Math.*, **200**, 18–42, (2024)
- [68AR] **A.Aimi, G.Di Credico, H. Gimperlein**: “Time domain boundary elements for elastodynamic contact”, *Comput. Methods Appl. Mech. Engrg.*, **415**, 116296, (2023)
- [67AR] **M.Riboli, E.Manconi, D.Fusai, M.Silvestri, A.Aimi**: “Vibration Minimisation of Moving Flexible Slender Structures Based on Time-Parameterised B-Spline”, *Vibration*, **6**, 743–761, (2023)
- [66AR] **M.Riboli, M.Jaccard, M.Silvestri, A.Aimi, C.Malara**: “Collision-free and smooth motion planning of dual-arm Cartesian robot based on B-spline representation”, *Robotics and Autonomous Systems*, **170**, 104534, (2023)
- [65AR] **A.Aimi, G.Di Credico, H. Gimperlein, E.P. Stephan**: “Higher-order time domain boundary elements for elastodynamics - graded meshes and hp-versions”, *Numer. Math.*, **154**, 35-101, (2023)
- [64AR] **A. Aimi, S. Dallospedale, L. Desiderio, C. Guardasoni**: “A space-time Energetic BIE method for 3D Elastodynamics. The Dirichlet Case”, *Comp. Mech.*, **72**, 885-905, (2023)
- [63AR] **A. Aimi C. Guardasoni, L. Ortiz-Gracia, S. Sanfelici**: “Fast Barrier Option Pricing by the COS BEM Method in Heston Model (with Matlab code)”, *Comp. Methods Appl. Math.*, **23**(2), 301-331, (2023)
- [62AR] **M.Riboli, F.Corradini, M.Silvestri, A.Aimi**: “A New Framework for Joint Trajectory Planning Based on Time-Parameterized B-Splines”, *Computer-Aided Design*, **154**, 103421, (2023)
- [61AR] **A.Aimi, L.Desiderio, G.Di Credico**: “Partially pivoted ACA based acceleration of the energetic BEM for time-domain acoustic and elastic waves exterior problems”, *CAMWA*, **119**, 351–370, (2022)
- [60AR] **A.Aimi, G. Di Credico, M.Diligenti, C.Guardasoni**: “ Highly accurate quadrature schemes for singular integrals in energetic BEM applied to elastodynamics”, *J. Comp. Appl. Math.*, **410**, 114186, (2022)

- [59AR] **A.Aimi, A.S. Boiardi**: “IgA-Energetic BEM: an effective tool for the numerical solution of wave propagation problems in space-time domain”, *Mathematics*, **10**(3), 344, 1-30, (2022)
- [58AR] **A.Aimi, C.Guardasoni**: “Multi-Asset Barrier Options pricing by Collocation BEM (with Matlab code)”, *Axioms*, **10**(4), 310-318, (2021)
- [57AR] **A.Aimi, L.Desiderio, P.Fedeli, A.Frangi**: “A fast boundary-finite element approach for estimating anchor losses in Micro-Electric-Mechanical Sysyem resonators”, *Appl. Math. Model.*, **97**, 741-753, (2021)
- [56AR] **A.Aimi, M.Diligenti, C.Guardasoni**: “Energetic Boundary Elemet Method for accurate solution of damped waves hard sattering problems”, *J. Eng. Math.*, **127**:29, 1-30, (2021)
- [55AR] **A.Aimi, F.Calabrò, A.Falini, M.L.Sampoli, A.Sestini**: “Quadrature formulas based on spline quasi-interpolation for hypersingular integrals arising in IgA-BEM”, *Comput. Methods Appl. Mech. Engrg.*, **372**, 113441, 1-23, (2020)
- [54AR] **A.Aimi, L.Desiderio, M.Diligenti, C.Guardasoni**: “Application of Energetic BEM to 2D Elastodynamic Soft Scattering Problems”, *Communications in Applied and Industrial Mathematics*, **10** (1), 182-198, (2019)
- [53AR] **A.Aimi, M.Diligenti, C.Guardasoni**: “Restrictions matrices for Platonic solids invariance and applications to space-time energetic BEM”, *J. Comp. Appl. Math.*, **360**, 18-40, (2019)
- [52AR] **A. Aimi**: “An Isogeometric approach to Energetic BEM: preliminary results”, in C.Giannelli, H.Speleers (Eds.), Springer INdAM Series, **35**, 1-21, (2019)
- [51AR] **A.Aimi, M.Diligenti, C.Guardasoni**: “Energetic BEM for the numerical solution of 2D hard scattering problems of damped waves by open arcs”, in D.Bini, F.Di Benedetto (Eds.), Springer INdAM Series, **30**, 267-283, (2019)
- [50AR] **A.Aimi, F.Martuzzi, E.Bignetti**: “Rational curves modeling psychophysical tests data: a computational approach compatible with TBM cognitive model”, *Far East Journal of Mathematical Sciences*, **107** (1), 81-108, (2018)
- [49AR] **A.Aimi, L.Diazzi, C.Guardasoni**: “Numerical pricing of geometric asian options with barriers”, *Mathematical Methods in the Applied Sciences*, DOI: 10.1002/mma.5179, **41**, 7510-7529, (2018)
- [48AR] **A.Aimi, L.Diazzi, C.Guardasoni**: “Efficient BEM-Based Algorithm for Pricing Floating Strike Asian Barrier Options (with MATLAB Code)”, *Axioms*, **7**(2), 40, 1-17, (2018)
- [47AR] **A.Aimi, F.Calabrò, M.Diligenti, M.L.Sampoli, G.Sangalli, A.Sestini**: “Efficient assembly based on B-spline tailored quadrature rules for the IgA-SGBEM”, *Comput. Methods Appl. Mech. Engrg.*, **331**, 327–342, (2018)
- [46AR] **A.Aimi, C.Guardasoni**: “Collocation Boundary Element Method for the pricing of Geometric Asian Options”, *Engineering Analysis with Boundary Elements*, **92**, 90-100, (2018)
- [45AR] **A.Aimi, M.Diligenti, C.Guardasoni**: “Energetic BEM for the numerical analysis of 2D Dirichlet damped wave propagation exterior problems”, *Communications in Applied and Industrial Mathematics*, **8**(1), 103-127, (2017)
- [44AR] **A.Aimi, M.Diligenti, C.Guardasoni**: “Energetic BEM-FEM coupling for the numerical solution of the damped wave equation”, *Adv. Comp. Math.*, **43**, 627-651, (2017)
- [43AR] **A.Aimi, M.Diligenti, C.Guardasoni**: “Comparison between numerical methods applied to damped wave equation”, *J. Int. Eq. Appl.*, **29**(1), 5–40, (2017)

- [42AR] **A.Aimi, M.Diligenti, M.L.Sampoli, A.Sestini:** “Non-polynomial spline alternatives in Isogeometric Symmetric Galerkin BEM”, *Appl. Num. Math.*, **116**, 10–23, (2017)
- [41AR] **A.Aimi, M.Diligenti, M.L.Sampoli, A.Sestini:** “Isogeometric Analysis and Symmetric Galerkin BEM: a 2D numerical study”, *Appl. Math. Comp.*, **272**, 173–186, (2016)
- [40AR] **A.Aimi, G.Buffoni, M.Groppi:** “Decomposition of a planar vector field into irrotational and rotational components”, *Appl. Math. Comp.*, **244**, 63-90, (2014)
- [39AR] **A.Aimi, L.Desiderio, M.Diligenti, C.Guardasoni:** “A numerical study of energetic BEM-FEM applied to wave propagation in 2D multidomains”, *Publications de l'Institut Mathématique*, **96** (110), 5–22, (2014)
- [38AR] **A.Aimi, S.Panizzi:** “BEM-FEM coupling for the 1D Klein-Gordon equation”, *Numerical Methods for Partial Differential Equations* **30** (6), 2042-2082, (2014)
- [37AR] **A.Aimi, M.Diligenti, A.Frangi, C.Guardasoni:** “Energetic BEM-FEM coupling for wave propagation in 3D multidomains”, *Internat. j. Numer. Methods Engrg.*, **97**, 377–394, (2014)
- [36AR] **A.Aimi, S.Panizzi:** “On the regularization of bilinear forms with hypersingular kernel”, *Appl. Comput. Math.*, **12** (2), 184-210, (2013)
- [35AR] **A.Aimi, M.Diligenti, A.Frangi, C.Guardasoni:** “Neumann exterior wave propagation problems: computational aspects of 3D energetic Galerkin BEM”, *Comp. Mech.*, DOI: 10.1007/s00466-012-0796-5, **51**, 475-493, (2013)
- [34AR] **A.Aimi, M.Diligenti, C.Guardasoni, S. Panizzi:** “Energetic BEM-FEM coupling for wave propagation in layered media”, *Communications in Applied and Industrial Mathematics*, **3**, No. 2, 1-21, (2012)
- [33AR] **A.Aimi, M.Diligenti, A.Frangi, C.Guardasoni:** “A stable 3D energetic Galerkin BEM approach for wave propagation interior problems”, *Engineering Analysis with Boundary Elements*, **36**, 1756-1765, (2012)
- [32AR] **A.Aimi, M.Diligenti, C.Guardasoni:** “Restriction matrices in space-time energetic BEM”, *Engineering Analysis with Boundary Elements*, **36**, 1256-1271, (2012)
- [31AR] **A.Aimi, S.Gazzola, C.Guardasoni:** “Energetic boundary element method analysis of wave propagation in 2D multilayered media”, *Mathematical Methods in the Applied Sciences*, **35**, 1140-1160, (2012)
- [30AR] **A.Aimi, S.Gazzola, C.Guardasoni:** “Energetic BEM for domain decomposition in 2D wave propagation problems”, *Communications in Applied and Industrial Mathematics*, **2** No.1, 1-22, (2011)
- [29AR] **A.Aimi, M.Diligenti, C.Guardasoni:** “Numerical integration schemes for applications of energetic Galerkin BEM to wave propagation problems”, *Riv. Mat. Univ. Parma*, **2**, 147-187, (2011)
- [28AR] **A.Aimi, M.Diligenti, C.Guardasoni:** “On the energetic Galerkin boundary element method applied to interior wave propagation problems”, *J. Comp. Appl. Math.*, **235**, 1746–1754, (2011)
- [27AR] **A.Aimi, M.Diligenti, S.Panizzi:** “Energetic Galerkin BEM for wave propagation Neumann exterior problems”, *CMES*, **58**, 185–219, (2010)
- [26AR] **A.Aimi, M.Diligenti, C.Guardasoni:** “Numerical integration schemes for space-time hypersingular integrals in energetic Galerkin BEM”, *Numer. Algorithms*, **55**, 145–170, (2010)

- [25AR] **A.Aimi, M.Diligenti, I.Mazzieri, S.Panizzi, C.Guardasoni**: “A space-time Galerkin BEM for 2D exterior wave propagation problems”, in *Applied and Industrial Mathematics in Italy III*, Series on Advances in Mathematics for Applied Sciences, De Bernardis E., Spigler R., Valente V., (Eds.), Vol. 82, World Scientific, 13-24, (2010)
- [24AR] **A.Aimi, M.Diligenti, C.Guardasoni, I.Mazzieri, S.Panizzi**: “An energy approach to space-time Galerkin BEM for wave propagation problems”, *Internat. j. Numer. Methods Engrg.*, **80**, 1196–1240, (2009)
- [23AR] **A.Aimi, M.Diligenti**: “A new space-time energetic formulation for wave propagation analysis in layered media by BEMs”, *Internat. j. Numer. Methods Engrg.*, **75**, 1102-1132, (2008)
- [22AR] **A.Aimi, M.Diligenti, C.Guardasoni, S.Panizzi**: “A space-time energetic formulation for wave propagation analysis by BEMs”, *Riv. Mat. Univ. Parma*, (7) **8**, 171-207, (2008)
- [21AR] **A.Aimi, M.Diligenti**: “Numerical Integration Schemes for Petrov-Galerkin Infinite BEM”, *Appl. Numer. Math.*, **58**, 1084-1102, (2008)
- [20AR] **A.Aimi, M.Diligenti**: “Restriction Matrices for Numerically Exploiting Symmetry”, *Adv. Comput. Math.*, **28**, 201-235, (2008)
- [19AR] **A.Aimi, M.Diligenti, M.Groppi, C.Guardasoni**: “On the numerical solution of a BGK-type model for chemical reactions”, *European J. Mech. –B/Fluids*, **26**, 455-472, (2007)
- [18AR] **A.Aimi, M.Diligenti**: “Numerical Integration Schemes for hypersingular integrals on the real line”, *Communications to SIMAI Congress*, **2**, 1-10, (2007)
- [17AR] **A.Aimi, M.Diligenti, M.Groppi, C.Guardasoni**: “Numerical approximation of a BGK-type relaxation model for reactive mixtures”, in *Applied and Industrial Mathematics in Italy II*, Series on Advances in Mathematics for Applied Sciences, Cutello V., Fotia G., Puccio L.(Eds.), Vol. 75, World Scientific, Singapore, 1-12, (2007)
- [16AR] **A.Aimi, M.Diligenti, F.Freddi**: “Numerical aspects in the SGBEM solution of softening cohesive interface problems”, *J. Comp. Appl. Math.*, **210**, 22-33, (2007)
- [15AR] **A.Aimi, M.Diligenti, A.Salvadori**: “Restriction Matrices and Symmetric Panel Clustering Method for multi-domain SGBEM”, in M.Primicerio, R.Spigler, V.Valente (Eds.): *Applied and Industrial Mathematics in Italy*, Series on Advances in Mathematics for Applied Sciences, Vol. 69, World Scientific, London, 1-12, (2005)
- [14AR] **A.Aimi, M.Diligenti, F.Lunardini**: “Panel Clustering Method and Restriction Matrices for Symmetric Galerkin BEM”, *Numer. Algorithms*, **40**, 355-382, (2005)
- [13AR] **A.Aimi, M.Diligenti, F.Freddi, A.Salvadori**: “Restriction Matrices for SGBEM Applications”, *Comp. Mech.*, **32**, 430-444, (2003)
- [12AR] **A.Aimi, M.Diligenti, F.Lunardini, A.Salvadori**: “A New Application of the Panel Clustering Method for 3D SGBEM”, *CMES: Computer Modeling in Engineering & Sciences*, **4**, 1, 31-49, (2003)
- [11AR] **A.Aimi, L.Bassotti, M.Diligenti**: “Groups of Congruences and Restriction Matrices”, *BIT Numerical Mathematics*, **43**, 671-693, (2003)
- [10AR] **A.Aimi, M.Diligenti**: “Numerical integration in 3D Galerkin BEM solution of HBIEs”, *Comp. Mech.*, **28**, 233-249, (2002)

- [9AR] **A.Aimi, M.Diligenti:** “Hypersingular kernel integration in 3D Galerkin boundary element method”, *J. Comp. Appl. Math.*, **138**, 1, 51-72, (2002)
- [8AR] **A.Aimi, L.Bassotti, M.Diligenti:** “Analisi di algoritmi per la risoluzione in parallelo di problemi al contorno di tipo ellittico”, *Riv. Mat. Univ. Parma*, (6) **3** , 219-244 , (2000)
- [7AR] **A.Aimi, M.Diligenti, G.Monegato:** “Numerical integration schemes for the BEM solution of hypersingular integral equations”, *Internat. j. Numer. Methods Engrg.*, **45**, 1807-1830, (1999)
- [6AR] **A.Aimi:** “New numerical integration schemes for the solution of (hyper)singular integral equations with Galerkin BEM”, *Bollettino U.M.I.*, (8) 2-A Suppl., 177-179, (1999)
- [5AR] **A.Aimi, A.Carini, M.Diligenti, G.Monegato:** “Numerical integration schemes for evaluation of (hyper)singular integrals in 2D BEM”, *Comp. Mech.*, **22** (1), 1-11, (1998)
- [4AR] **A.Aimi, M.Diligenti:** “Error analysis for singular integral evaluation on piecewise smooth curves in Galerkin BEM”, *Riv. Mat. Univ. Parma*, (6) **1** ,181-205, (1998)
- [3AR] **A.Aimi, M.Diligenti, G.Monegato:** “New numerical integration schemes for applications of Galerkin BEM to 2D problems”, *Internat. j. Numer. Methods Engrg.*, **40**, 1977-1999, (1997)
- [2AR] **A.Aimi, M.Diligenti:** “Stima dell’errore nel calcolo degli autovettori nel problema del Buckling di una piastra incastrata al bordo”, *Calcolo*, **30** (2), 171-187, (1993)
- [1AR] **A.Aimi, M.Diligenti:** “Difetti ed eccessi degli autovalori del classico problema di Buckling”, *Calcolo*, **29** (3-4), 313-328, (1992)

Research papers or abstracts in Conference Proceedings:

- [108AC] **A. Aimi:** “Some recent advances in space-time boundary element method for wave propagation problems”, Book of Abstracts, MACMAS 2025, 3, (2025)
- [107AC] **A.Aimi, M.A. Leoni, S. Remogna:** ”Spline quasi- and quasi²- interpolating projectors for the numerical solution of Cauchy singular Fredholm integral equations”, Book of Abstracts, SMART 2025 (2025)
- [106AC] **A.Aimi, G. Di Credico, H.Gimperlein, E. P. Stephan:** ”Energetic boundary element method on graded meshes for the numerical solution of mixed elastodynamic problems on 2D polygonal domains”, Book of Abstracts, SIMAI 2025 (2025)
- [105AC] **A.Aimi, M.A. Leoni, S. Remogna:** ”Numerical solution of Cauchy singular integral equations by spline quasi-interpolating projectors”, Book of Abstracts, SIMAI 2025 (2025)
- [104AC] **A.Aimi, C. Guardasoni:** ”Boundary Element Method for the evaluation of Asian barrier options”, Book of Abstracts, SIMAI 2025 (2025)
- [103AC] **A.Aimi, G. Di Credico, H.Gimperlein, C. Guardasoni:** ”Space-time adaptive boundary elements for the weakly singular BIE related to the wave equation”, Book of Abstracts, Conference on Mathematics of Wave Phenomena, KIT, (2025)
- [102AC] **A.Aimi, G. Di Credico, H.Gimperlein:** “Energetic BEM for frictional contact problems in elastodynamics”, Book of Abstracts, ICNAAM 2024, (2024)
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Curatele:

- [3C] **A.Aimi, M.Bisi, M.Diligenti, M.Groppi, C.Guardasoni, S.Sanfelici:** Proceedings of SIMAI 2020+21, the XV biannual congress of SIMAI", Univ. Parma, 30 August-3 September 2021, (2021)
- [2C] **A.Aimi, M.Diligenti:** Atti del Convegno "Integral Equations: recent numerical developments and new applications", Dip. Mat., Univ. Parma, 29-30 Ottobre 2009, *Riv. Mat. Univ. Parma*, **2**, (2011)
- [1C] **A.Aimi, M.Diligenti:** Atti del Convegno "Equazioni Integrali: recenti sviluppi numerici e nuove applicazioni", Dip. Mat., Univ. Parma, 27-28 Settembre 2007, *Riv. Mat. Univ. Parma*, (7) **8**, (2008)

Thesis:

[2T] **A.Aimi:** “New numerical integration schemes for the solution of (hyper)singular integral equations with Galerkin BEM”, PhD Thesis, Univ. Milano, (1998)

[1T] **A.Aimi:** ”Un’applicazione del metodo degli invarianti ortogonali all’operatore dell’elasticità in un rettangolo”, Degree Thesis, Univ. Parma, (1990)

TEACHING ACTIVITY

- **a.a. 2025/26:**
 - **course** of *Numerical Analysis (12 CFU)*, Bachelor Program in Mathematics ,Univ. Parma
 - **course** of *Numerical Mathematics (9 CFU)*, Master Degree Program in Mathematics, Univ. Parma
 - **course** of *Numerical Analysis from an advanced standpoint (3 CFU)*, Master Degree Program in Mathematics, Univ. Parma
- **a.a. 2024/25:**
 - **course** of *Numerical Analysis (12 CFU)*, Bachelor Program in Mathematics ,Univ. Parma
 - **course** of *Numerical Mathematics (9 CFU)*, Master Degree Program in Mathematics, Univ. Parma
 - **course** of *Numerical Methods for Boundary Integral Equations (6 CFU)*, PhD Program in Mathematics, Univ. Parma
- **a.a. 2023/24:**
 - **course** of *Numerical Analysis (12 CFU)*, Bachelor Program in Mathematics ,Univ. Parma
 - **course** of *Numerical Mathematics (9 CFU)*, Master Degree Program in Mathematics, Univ. Parma
 - **course** of *Informatics (1 CFU)*, English language, Master Degree Program in Veterinary Medicine, Univ. Parma
 - **course** of *Numerical Methods for Boundary Integral Equations (6 CFU)*, PhD Program in Mathematics, Univ. Parma
- **a.a. 2022/23:**
 - **course** of *Numerical Analysis (12 CFU)*, Bachelor Program in Mathematics ,Univ. Parma
 - **course** of *Numerical Mathematics (9 CFU)*, Master Degree Program in Mathematics, Univ. Parma
 - **course** of *Informatics (1 CFU)*, English language, Master Degree Program in Veterinary Medicine, Univ. Parma
- **a.a. 2021/22:**
 - **course** of *Numerical Analysis (12 CFU)*, Bachelor Program in Mathematics ,Univ. Parma
 - **course** of *Numerical Mathematics (9 CFU)*, Master Degree Program in Mathematics, Univ. Parma
 - **course** of *Informatics (1 CFU)*, English language, Master Degree Program in Veterinary Medicine, Univ. Parma
 - **course** of *Numerical Methods for Boundary Integral Equations (6 CFU)*, PhD Program in Mathematics, Univ. Parma
- **a.a. 2020/21:**
 - **intensive summer course** of *Numerical Analysis: An introduction to the Boundary Element Method (36 hours, 19 July-13 August)*, SMI (International Mathematics School), Univ. Perugia
 - **course** of *Numerical Analysis (12 CFU)*, Bachelor Program in Mathematics ,Univ. Parma
 - **course** of *Numerical Mathematics (9 CFU)*, Master Degree Program in Mathematics, Univ. Parma
 - **course** of *Informatics (1 CFU)*, English language, Master Degree Program in Veterinary Medicine, Univ. Parma

- **course** of *Numerical Methods for Boundary Integral Equations (6 CFU)*, PhD Program in Mathematics, Univ. Parma

▪ **a.a. 2019/20:**

- **course** of *Numerical Analysis (12 CFU)*, Bachelor Program in Mathematics, Univ. Parma
- **course** of *Numerical Mathematics (9 CFU)*, Master Degree Program in Mathematics, Univ. Parma
- **course** of *Basic Mathematics applied to the biomedical Sciences (5 CFU)*, Bachelor Program in Livestock Science and Animal Production Technologies, Univ. Parma

▪ **a.a. 2018/19:**

- **course** of *Numerical Mathematics (9 CFU)*, Master Degree Program in Mathematics, Univ. Parma
- **course** of *Basic Mathematics applied to the biomedical Sciences (5 CFU)*, Bachelor Program in Livestock Science and Animal Production Technologies, Univ. Parma
- **course** of *Numerical Methods for Boundary Integral Equations (3 CFU)*, PhD Program in Mathematics, Univ. Parma

▪ **a.a. 2017/18:**

- **course** of *Numerical Mathematics (9 CFU)*, Master Degree Program in Mathematics, Univ. Parma
- **course** of *Basic Mathematics applied to the biomedical Sciences (5 CFU)*, Bachelor Program in Livestock Science and Animal Production Technologies, Univ. Parma

▪ **a.a. 2016/17:**

- **course** of *Numerical Mathematics (9 CFU)*, Master Degree Program in Mathematics, Univ. Parma
- **course** of *Basic Mathematics applied to the biomedical Sciences (5 CFU)*, Bachelor Program in Livestock Science and Animal Production Technologies, Univ. Parma
- **course** of *Numerical Methods for Boundary Integral Equations (3 CFU)*, PhD Program in Mathematics, Univ. Parma

▪ **a.a. 2015/16:**

- **course** of *Numerical Mathematics (9 CFU)*, Master Degree Program in Mathematics, Univ. Parma
- **course** of *Basic Mathematics applied to the biomedical Sciences (5 CFU)*, Bachelor Program in Livestock Science and Animal Production Technologies, Univ. Parma

▪ **a.a. 2014/15:**

- **course** of *Numerical Mathematics (9 CFU)*, Master Degree Program in Mathematics, Univ. Parma
- **course** of *Numerical Methods for Differential and Integral Equations (6 CFU)*, Master Degree Program in Mathematics, Univ. Parma
- **course** of *Basic Mathematics applied to the biomedical Sciences (5 CFU)*, Bachelor Program in Livestock Science and Animal Production Technologies, Univ. Parma

▪ **a.a. 2013/14:**

- **course** of *Numerical Models and Methods (9 CFU)*, Master Degree Program in Mathematics, Univ. Parma
- **exercise course** of *Numerical Analysis*, Bachelor Program in Mathematics and Bachelor Program in Computer Science, Univ. Parma

▪ **a.a. 2012/13:**

- **course** of *Numerical Models and Methods (9 CFU)*, Master Degree Program in Mathematics, Univ. Parma
- **exercise course** of *Numerical Analysis*, Bachelor Program in Mathematics and Bachelor Program in Computer Science, Univ. Parma

▪ **a.a. 2011/12:**

- **course** of *Numerical Models and Methods (9 CFU)*, Master Degree Program in Mathematics, Univ. Parma

- **course** of *Numerical Methods for Integral Equations (3 CFU)*, PhD Program in Pure and Applied Mathematics, Univ. Parma
- **exercise course** of *Numerical Analysis*, Bachelor Program in Mathematics and Bachelor Program in Computer Science, Univ. Parma
- **exercise course** of *Approximation Methods*, Master Degree Program in Mathematics, Univ. Parma
- **a.a. 2010/11:**
 - **exercise course** of *Numerical Analysis*, Bachelor Program in Mathematics and Bachelor Program in Computer Science, Univ. Parma
 - **exercise course** of *Numerical Mathematics*, Master Degree Program in Mathematics, Univ. Parma
 - **exercise course** of *Approximation Methods*, Master Degree Program in Mathematics, Univ. Parma
- **a.a. 2009/10:**
 - **course** of *Numerical Mathematics (9 CFU)*, Master Degree Program in Mathematics, Univ. Parma
 - **course** of *Numerical Methods for Integral Equations (6 CFU)*, Master Degree Program in Mathematics, Univ. Parma
 - **course** of *Numerical Analysis Lab (3 CFU)*, Bachelor Program in Computer Science, Univ. Parma
 - **exercise course** of *Numerical Analysis I*, Bachelor Program in Mathematics, Univ. Parma
- **a.a. 2008/09:**
 - **course** of *Approximation Methods (6 CFU)*, Master Degree Program in Pure and Applied Mathematics, Univ. Parma
 - **course** of *Numerical Methods for Integral Equations (6 CFU)*, Master Degree Program in Pure and Applied Mathematics, Univ. Parma
 - **course** of *Numerical Analysis Lab (3 CFU)*, Bachelor Program in Computer Science, Univ. Parma
 - **exercise course** of *Numerical Analysis I*, Bachelor Program in Mathematics, Univ. Parma
- **a.a. 2007/08:**
 - **course** of *Numerical Analysis 2 (6 CFU)*, Bachelor Program in Mathematics, Univ. Parma
 - **course** of *Approximation Methods (6 CFU)*, Master Degree Program in Pure and Applied Mathematics, Univ. Parma
 - **course** of *Numerical Methods for Integral Equations (6 CFU)*, Master Degree Program in Pure and Applied Mathematics, Univ. Parma
 - **course** of *Numerical Analysis A (5 CFU)*, Master Degree Program in Environmental Engineering, Univ. Parma
 - **course** of *Numerical Analysis Lab (3 CFU)*, Bachelor Program in Computer Science, Univ. Parma
 - **exercise course** of *Numerical Analysis I*, Bachelor Program in Mathematics, Univ. Parma
- **a.a. 2006/07:**
 - **course** of *Approximation Methods (6 CFU)*, Master Degree Program in Pure and Applied Mathematics, Univ. Parma
 - **course** of *Numerical Methods for Integral Equations (6 CFU)*, Master Degree Program in Pure and Applied Mathematics, Univ. Parma
 - **course** of *Elements of Numerical Analysis (5 CFU)*, Master Degree Program in TLC Engineering, Univ. Parma
 - **exercise course** of *Numerical Analysis I*, Bachelor Program in Mathematics, Univ. Parma
 - **exercise course** of *Numerical Analysis Lab*, Bachelor Program in Mathematics, Univ. Parma
- **a.a. 2005/06:**
 - **course** of *Approximation Methods (6 CFU)*, Master Degree Program in Pure and Applied Mathematics, Univ. Parma
 - **course** of *Elements of Numerical Analysis (5 CFU)*, Master Degree Program in TLC Engineering, Univ. Parma
 - **exercise course** of *Numerical Analysis I*, Bachelor Program in Mathematics, Univ. Parma
 - **exercise course** of *Numerical Analysis 2*, Bachelor Program in Mathematics, Univ. Parma

- **a.a. 2004/05:**
 - **course** of *Numerical Analysis 2* (6 CFU), Bachelor Program in Mathematics, Univ. Parma
 - **course** of *Elements of Numerical Analysis* (5 CFU), Master Degree Program in TLC Engineering, Univ. Parma
 - **exercise course** of *Numerical Analysis I*, Bachelor Program in Mathematics, Univ. Parma
- **a.a. 2003/04:**
 - **course** of *Numerical Analysis 1* (6 CFU), Bachelor Program in Mathematics, Bachelor Program in Computer Science, Univ. Parma
 - **course** of *Numerical Analysis Lab* (3 CFU), Bachelor Program in Mathematics, Bachelor Program in Computer Science, Univ. Parma
- **a.a. 2002/03:**
 - **course** of *Numerical Analysis 2* (6 CFU), C.L. in Mathematics, Univ. Parma
 - **course** of *Numerical Analysis Lab* (3 CFU), C.L. in Mathematics, Univ. Parma
 - **exercise course** of *Numerical Analysis I*, C.L. in Mathematics, Univ. Parma
- **a.a. 2001/02:**
 - **course** of *Numerical Analysis II*, Bachelor Program in Mathematics, Univ. Parma
 - **course** of *Numerical Analysis Lab*, Bachelor Program in Mathematics, Univ. Parma
 - **exercise course** of *Numerical Analysis I*, Bachelor Program in Mathematics, Univ. Parma
 - **exercise course** of *Approximation Methods*, Bachelor Program in Mathematics, Univ. Parma
- **a.a. 2000/01:**
 - **course** of *Approximation Methods*, Bachelor Program in Mathematics, Univ. Parma
 - **exercise and lab course** of *Numerical Analysis*, Bachelor Program in Mathematics, Univ. Parma
- **a.a. 1999/00:**
 - **exercise and lab course** of *Numerical Analysis*, Bachelor Program in Mathematics, Univ. Parma
- **a.a. 1998/99:**
 - **exercise and lab course** of *Numerical Analysis*, Bachelor Program in Mathematics, Univ. Parma
 - **exercise course** of *Approximation Methods*, Bachelor Program in Mathematics, Univ. Parma
- **a.a. 1997/98:**
 - **exercise and lab course** of *Numerical Analysis*, Bachelor Program in Mathematics, Univ. Parma
 - **exercise course** of *Approximation Methods*, Bachelor Program in Mathematics, Univ. Parma
- **a.a. 1994/95:**
 - **course** of *Numerical Analysis and Numerical Programming*, Bachelor Program in Civil Engineering, Univ. Parma
 - **exercise course** of *Numerical Analysis*, Bachelor Program in Mechanical Engineering, Univ. Brescia
 - **exercise course** of *Mathematical Analysis I*, Bachelor Program in Methods in Physics, Univ. Parma
- **a.a. 1993/94:**
 - **course** of *Numerical Analysis and Numerical Programming*, Bachelor Program in Civil Engineering, Univ. Parma
 - **exercise course** of *Numerical Analysis*, Bachelor Program in Mechanical Engineering, Univ. Brescia
 - **exercise course** of *Numerical Analysis*, Bachelor Program in Computer Science Engineering, Univ. Parma
- **a.a. 1992/93:**
 - **course** of *Numerical Analysis and Numerical Programming*, Bachelor Program in Civil Engineering, Univ. Parma
 - **exercise course** of *Numerical Analysis*, Bachelor Program in Mechanical Engineering, Univ. Brescia

- **a.a. 1991/92:**
 - **exercise course** of *Numerical Analysis*, Bachelor Program. in Mechanical Engineering, Univ. Brescia

Further:

- **2021, 19 July-13 August:** invited teacher of the online intensive summer course “Numerical Analysis: An introduction to the Boundary Element Method” (36 hours), **SMI 2021, Univ. Perugia**
- **Advisor** of Giulia Di Credico **PhD thesis** in Mathematics (XXXIV cycle)
- **Tutor** of the PhD student in Mathematics Mattia Alex Leoni (XL cycle)
- **Supervisor of 26 Degree Thesis** (Bs, Ms) in Numerical Analysis at the University of Parma
- **Co-supervisor of 12 Degree Thesis** in Numerical Analysis at the University of Parma and at the University of Brescia.
- Among my master degree or PhD supervised students:
 - Ariel Surya Boiardi, currently PhD student, SISSA, Trieste
 - Simone Dallospedale, currently PhD student in Mathematics, University of Parma
 - Ivan De Biasi, attualmente Dottorando in Matematica, University of Pisa
 - Mattia Alex Leoni, currently PhD student in Mathematics, University of Parma
 - Nicolò Curati, PhD in Engineering and Mathematics, University of Brescia
 - Giulia Di Credico, currently Assistant Professor in Numerical Analysis, University of Parma
 - Roberto Piersanti, currently Tenure Track Assistant Professor, Online University e-Campus
 - Marco Riboli, currently Assistant Professor at SUPSI, Lugano
 - Luca Desiderio, currently Associate Professor of Numerical Analysis at the University of Messina
 - Silvia Gazzola, currently Associate Professor of Numerical Analysis at the University of Pisa
 - Ilario Mazzieri, currently Associate Professor of Numerical Analysis at MOX, Politecnico di Milano

ORGANIZING ACTIVITIES

- **1-5 September 2025:** Member of the Organizing Committee of the Minisymposium: “Efficient numerical methods for direct or inverse wave propagation problems”, SIMAI 2025, Trieste
- **1-5 September 2025:** Member of the Organizing Committee of the Minisymposium: “Numerical methods for integral equations and applications”, SIMAI 2025, Trieste
- **16-20 September 2024:** Member of the Scientific Committee of NAMAS-24: “Numerical Analysis & Modelling in Applied Sciences”, Gaeta
- **16-20 September 2024:** Member of the Organizing Committee of the Minisymposium: “Numerical methods for integral equations with advanced applications”, NAMAS-24, Gaeta
- **28 August-1 September 2023:** Member of the Organizing Committee of the Minisymposium: “BEM for advanced applications”, SIMAI 2023, Matera
- **20-25 August 2023:** Member of the Organizing Committee of the Minisymposium: “BEM and related methods for advanced applications”, ICIAM 2023, Tokyo
- **29 May-1 June 2023:** Member of the Scientific Committee of MACMAS 2023, International Conference on Mathematical And Computational Modelling, Approximation and Simulation, University of Turin
- **5-9 July 2022 :** Member of the Scientific Committee of FAATNA 2020 international conference, Matera
- **5-9 July 2022 :** Member of the Organizing Committee of the Minisymposium: “*Theoretical aspects of Isogeometric Analysis and recent applications*”, FAATNA 2020 international conference, Matera
- **August 30-September 3 2021 :** Member of the Organizing Committee of SIMAI2020+2021 Conference, University of Parma
- **30 Agosto-3 Settembre 2021::** Responsible of the Organizing Committee of the Minisymposium: “*Numerical methods for integral equations and applications*”, XV SIMAI Congress, Parma.

- **July 2nd-6th, 2018:** Member of the Organizing Committee of the Minisymposium: “*Numerical methods for integral equations and applications*”, XIV SIMAI Congress, Roma.
- **October 26th-27th, 2017:** Responsible of the Organizing Committee of the *Workshop* related to Project INdAM-GNCS 2017 “*Nuove tecniche numeriche per la risoluzione di problemi evolutivi mediante il metodo degli elementi di contorno*”, DSMFI, University of Parma.
- **September 13th-16th, 2016:** Member of the Organizing Committee of the Minisymposium: “*Applications and numerical methods for Integral Equations:*”, XIII SIMAI Congress, Milano.
- **September 17th, 2015:** Responsible for the Organizing Committee of the scientific day related to Project INdAM-GNCS 2015 “*Analisi isogeometrica e metodi agli elementi di contorno*”, Parma University.
- **February 18th -19th 2013:** Member of the Organizing Committee of the *scientific days* concluding Project INdAM-GNCS 2012 “*Accoppiamento di metodi numerici per BIEs e PDEs relative a problemi evolutivi esterni e multistrato*”, Politecnico di Torino.
- **June 25th -28th, 2012:** Responsible for the Organizing Committee of the Minisymposium: “*Integral Equations: numerical methods and applications*”, XI SIMAI Congress, Torino.
- **January 31st 2011:** Responsible for the Organizing Committee of the *scientific day* concluding Project INdAM-GNCS 2011 “*Tecniche numeriche per problemi di propagazione di onde elastiche in multidomini*”, Parma University.
- **October 29th -30th, 2009:** Responsible for the Organizing Committee of the Workshop “*Integral Equations: recent numerical developments and new applications*”, Parma University
- **September 27th -28th, 2007:** Member of the Organizing Committee of the Workshop “*Equazioni Integrali: recenti sviluppi numerici e nuove applicazioni*”, Parma University
- **December 6th, 2002:** Member of the Organizing Committee of the Scientific Day in honour of Prof. Lucilla Bassotti Rizza, Parma University
- **July 4th -7th, 2000:** Member of the Local Organizing Committee of IABEM 2000: Symposium of the International Association for Boundary Element Methods, Brescia University

OTHER ACTIVITIES

- **Since 2024:** Coordinator of the Quality Assurance Presidium of the Mathematical, Physical and Computer Sciences Department, University of Parma
- **2021-2024:** Member of the Scientific Committee of Area 101 of Parma University, for the evaluation of Mathematics and Computer Science Department Research
- **2019-2023:** Member of Department Quality Assurance Committee
- **2014-2021:** Secretary of the Scientific Committee of Area 101 of Parma University, for the evaluation of Mathematics and Computer Science Department Research
- **2011-2016:** Member of the Scientific Committee of the PhD School in Science and Technology of Parma University
- **2008-2010:** Secretary of the Scientific Committee of Area 101 of Parma University, for the evaluation of Mathematics Department Research
- **Since 2013:** Member of the Teachers of the PhD Course in Mathematics of Ferrara, Modena e Reggio Emilia, Parma University Consortium
- **2011-2013:** Member of the Teachers of the PhD Course in Pure and Applied Mathematics of Parma University
- **Since 2014:** Responsible for the Quality Assurance of the Master degree courses in Mathematics
- **Since 2013:** Member of the Group for the Self-Evaluation of Teaching Activities for the Master degree courses in Mathematics
- **Since 2010:** Member of the Teaching Committee for the Master degree courses in Mathematics
- **2010-2016:** Member of the Teaching Committee for the Bachelor’s degree courses in Mathematics
- **2014-2016:** Responsible for the Quality Assurance of the Bachelor’s degree courses in Mathematics

- **2013-2016:** Member of the Group for the Self-Evaluation of Teaching Activities for the Bachelor's degree courses in Mathematics
- **Since 2006:** Member of the Library Scientific Committee of Mathematics Department
- **2002-2005:** Member of Mathematics Department Advisory Committee

PARTICIPATION TO NATIONAL/INTERNATIONAL COMMITTEES

- **December 2025 - February 2026:** Member of the Judging Committee in a Competitive Examination for an Assistant Professor position RTT L.240/2010 in Numerical Analysis at the University of Pavia .
- **March-April 2025:** President of the Judging Committee in a Competitive Examination for an Assistant Professor position RTT L.240/2010 in Numerical Analysis at University of Rome Tor Vergata
- **17 December 2024:** Member of the international Committee for the assignment of Ph.D. title at Paris-Saclay University (France)
- **November-December 2023:** Member of the Judging Committee in a Competitive Examination for an Assistant Professor position RTD b) L.240/2010 in Numerical Analysis at Politecnico di Milano
- **29 June-28 November 2023:** Member of the Judging Committee in a Competitive Examination for an Assistant Professor position RTD b) L.240/2010 in Numerical Analysis at the University of Padua
- **13 February 2023:** External examiner of the international Committee for the assignment of Ph.D. title in Applied Mathematics at Heriot-Watt University, Edinburgh (UK)
- **6 December 2022:** Member of the Evaluation Committee for the prosecution of the contract of an Assistant Professor position RTD a) L.240/2010 in Numerical Analysis at the Dept. of Mathematical, Physical and Computer Sciences, University of Parma
- **September-October 2022:** Member of the Judging Committee in a Competitive Examination for an Assistant Professor position RTD a) L.240/2010 in Numerical Analysis at Politecnico di Torino
- **7 January 2022:** Member of the Judging Committee for three Research grants in Computer Sciences and Numerical Analysis at Mathematical, Physical and Computer Science Department, University of Parma
- **February-March 2021:** Member of the Judging Committee for an Associate Professor position in Numerical Analysis (L.240/2010) at Politecnico di Torino
- **25 February 2021:** Member of the international Committee for the assignment of Ph.D. title at TU Graz (Austria)
- **November-December 2019:** Member of the Judging Committee in a Competitive Examination for an Assistant Professor position RTD a) L.240/2010 in Numerical Analysis at University of Parma
- **September 2019:** Member of the Judging Committee in a Competitive Examination for an Assistant Professor position RTD b) L.240/2010 in Numerical Analysis at Politecnico di Milano
- **June 2019:** Member of the Judging Committee for the recruitment of a Technician Physician at Mathematical, Physical and Computer Science Department, University of Parma
- **28 May 2019:** President of the Committee for the assignment of Ph.D. title in Applied Mathematics at Mathematics, Computer Science and Economics Department, University of Basilicata

- **26 July 2018:** Member of the Judging Committee in a Competitive examination for an INdAM Research Fellow Position in the framework of FOE 2014 – SUNRISE Research Project – at Mathematics and Computer Science Department, University of Florence
- **27 January 2017:** Member of the international Committee for the assignment of Ph.D. title in Applied Mathematics at INRIA-UMA-ENSTA-PARISTECH, Ecole Polytechnique (Paris)
- **February-April 2008:** Member of the Judging Committee in a Competitive Examination for an Assistant Professor position in Numerical Analysis at Politecnico di Milano

Parma, 24/04/2026