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Andrea Borio

Curriculum Vitæ

Current position

2024 – **Associate professor in Numerical Analysis**, *Politecnico di Torino*, Turin, Italy.

Previous positions

2021 – 2024 **Tenure-track assistant professor in Numerical Analysis**, *Politecnico di Torino*, Turin, Italy.

2018 – 2021 **Assistant professor in Numerical Analysis**, *Politecnico di Torino*, Turin, Italy.

2017 – 2018 **Postdoctoral fellowship on "Development and implementation of innovative numerical methods for the simulation of stresses and strains in underground basins"**, *Politecnico di Torino*, Turin, Italy.

Education

2014 – 2017 **PhD in Applied Mathematics**, *Politecnico di Torino*, Turin, Italy.
Thesis title Advanced numerical techniques for the simulation of flows in fractured media (DOI: 10.6092/polito/porto/2667805).
Supervisor Prof. Stefano Berrone (Politecnico di Torino).

2011 – 2013 **Master degree in Mathematical Modeling in Engineering**, *Politecnico di Torino*, Turin, Italy, *110/110 cum laude.*
Thesis title An adaptive approach to underground flows simulation in fractured media.
Supervisor Prof. Stefano Berrone (Politecnico di Torino).

2008 – 2011 **Bachelor degree in Mathematics for Engineering**, *Politecnico di Torino*, Turin, Italy, *110/110.*

Scientific collaborations

2019 – **Collaboration with the Subsurface Flow and Transport Group**, *Lawrence Livermore National Lab*, Livermore, CA (USA).
Collaboration on the implementation of Virtual Element Methods in GEOS (www.geos.dev), an open-source, multiphysics simulator developed cooperatively by Lawrence Livermore National Laboratory, Stanford University, TotalEnergies, and Chevron.

Research projects

21/02/2025 -	Member of the INdAM-GNCS project "Sviluppo di discretizzazioni politopali prive di stabilizzazione per equazioni alle derivate parziali", funded by Gruppo Nazional per il Calcolo Scientifico (INdAM). Coordinator: Matteo Cicuttin (Politecnico di Torino).
12/03/2024 - 11/03/2025	Member of the INdAM-GNCS project "Metodi numerici avanzati per la poromeccanica: proprieta' teoriche ed aspetti computazionali", funded by Gruppo Nazionale per il Calcolo Scientifico (INdAM). Coordinator: Michele Visinoni, Politecnico di Milano
01/01/2024 -	Member of PRIN-PNRR project "Polyhedral Galerkin methods for engineering applications to improve disaster risk forecast and management: stabilization-free operator-preserving methods and optimal stabilization methods". Principal investigator: Stefano Berrone. The project is funded by the European Union through project Next Generation EU, M4C2.
28/09/2023 -	Member of PRIN 2022 project "FREYA - Fault REactivation: a HYbrid Numerical Approach". Principal investigator: Anna Scotti.
01/09/2023 -	Member of the National Center for High Performance Computing - Spoke "Multiscale modeling & Engineering Applications". The project is funded by the European Union through project Next Generation EU, M4C2.
30/01/2023 - 30/01/2024	Member of the INdAM-GNCS project "Numerical methods for the study of complex parametrical geometric structures", funded by Gruppo Nazionale per il Calcolo Scientifico (INdAM). Coordinator: Maria Strazzullo, Politecnico di Torino
24/05/2022 - 31/05/2023	Member of the INdAM-GNCS project "Advanced numerical methods VEM e VEM-BEM for PDEs: theoretical properties and computational aspects", funded by Gruppo Nazionale per il Calcolo Scientifico (INdAM). Coordinator: Luca Desiderio, Università di Parma
12/02/2020 - 31/12/2021	Coordinator of INdAM-GNCS project "Study of advanced numerical methods for differential problems on domains characterized by high geometrical complexity", funded by Gruppo Nazionale per il Calcolo Scientifico (INdAM).
2/02/2019 - 22/02/2020	Coordinator of INdAM-GNCS project "Study of advanced numerical methods for simulations of physical phenomena, even non-linear, on domains characterized by high geometrical complexity", funded by Gruppo Nazionale per il Calcolo Scientifico (INdAM).
18/10/2017 - 18/10/2018	Young Researcher Grant "Virtual Element Method applied to simulations on fractured media", funded by Gruppo Nazionale per il Calcolo Scientifico (INdAM).
11/11/2016 - 11/11/2017	Young Researcher Grant "Virtual Element Method applied to simulations of flows in Discrete Fracture Networks", funded by Gruppo Nazionale per il Calcolo Scientifico (INdAM).
22/01/2016 - 22/01/2017	Member of the INdAM-GNCS project "Advanced numerical techniques for simulations of flows poro-fractured geological media", funded by Gruppo Nazionale per il Calcolo Scientifico (INdAM). Coordinator: prof. Stefano Berrone, Politecnico di Torino.
19/01/2015 - 19/01/2016	Member of the INdAM-GNCS project "Numerical techniques for simulations of flows in large Discrete Fracture Networks", funded by Gruppo Nazionale per il Calcolo Scientifico (INdAM). Coordinator: prof. Sandra Pieraccini, Politecnico di Torino.

Prizes

2017 Quality Award of the Doctoral School of Politecnico di Torino (for the PhD program in Applied Mathematics – XXIX cycle).

2014 Premio Optime of "Unione Industriale di Torino" (for the best master graduate students of the universities of Piedmont in the academic year 2012/13).

Teaching

PhD teaching activity

2025 Holder of the course "Solving PDEs on polygonal or polyhedral meshes". PhD program in Pure and Applied Mathematics, Politecnico di Torino.

2024 Collaborator to the course "Sobolev space on non-smooth domains and applications". PhD program in Pure and Applied Mathematics, Politecnico di Torino.

2023 Holder of the course "Solving PDEs on polygonal or polyhedral meshes: Virtual Element Methods". PhD program in Pure and Applied Mathematics, Politecnico di Torino.

2021 Collaborator to the course "Recent developments of finite elements: virtual element methods on polygonal and polyhedral grids, theory and implementation". PhD program in Pure and Applied Mathematics, Politecnico di Torino.

PhD candidates supervision

2022 - Davide Fassino, PhD program in Pure and Applied Mathematics, Politecnico di Torino.

Conferences and talks

July 2025 **18th U.S. National congress on computational mechanics**, *Chicago, USA*, Invited speaker

Title of the talk: *Virtual element methods and mimetic finite differences for simulations of multiphase flow and poromechanics*

June 2025 **15th International Conference on Large-Scale Scientific Computations**, *Sozopol, Bulgaria*, Invited speaker

Title of the talk: *Virtual Element Methods and Mimetic Finite Differences for simulations of multiphase flow and poromechanics*

February 2025 **Numerical Methods and Techniques for Poroelasticity and Geomechanical Modeling**, *Milan, Italy*, Invited speaker

Title of the talk: *Virtual Element Methods and Mimetic Finite Differences for simulations of multiphase flow and poromechanics*

January 2025 **International Research Conference on Multi-Grid and Multi-Scale Methods in Computational Science**, *KAUST, Saudi Arabia*, Invited speaker

Title of the talk: *Recent advancements in polygonal methods: stabilization-free Virtual Element Methods*

November 2024 **CTAC 2024 Computational Techniques and Applications Conference**, *Melbourne, Australia*, Invited speaker

Title of the talk: *Stabilization-Free VEM Part I: primal and mixed lowest order methods*

January 2024 **Seventh Chilean Workshop on Numerical Analysis of Partial Differential Equation (WONAPDE 2024)**, *Concepción, Chile*, Invited speaker

Title of the talk: *Stabilization-Free Virtual Element Methods in primal form*

September 2023 **XII Congresso UMI**, *Pisa, Italy*, Invited speaker

Title of the talk: *Stabilization free Virtual Element methods in primal and mixed form*

August 2023 **SIMAI 2023**, *Matera, Italy*, Invited speaker

Title of the talk: *Hybrid mimetic finite difference and virtual element formulation for poromechanics*

June 2023 **SIAM Conference on Mathematical & Computational Issues in the Geosciences (GS23)**, *Bergen, Norway*, Invited speaker

Title of the talk: *Hybrid mimetic finite difference and virtual element formulation for poromechanics*

May 2023 **Math2Product 2023**, *Taormina, Italy*, Invited speaker

Title of the talk: *Hybrid mimetic finite difference and virtual element formulation for coupled poromechanics*

September 2022 **GIMC-SIMAI Young 2022 Workshop**, *Pavia, Italy*, Invited speaker

Title of the talk: *Hybrid mimetic finite difference and virtual element formulation for coupled poromechanics*

August 2022 **IMG 2022**, *Lugano, Switzerland*, Invited speaker

Title of the talk: *Hybrid mimetic finite difference and virtual element formulation for coupled poromechanics*

July 2022 **11$^{\text{th}}$ European Solid Mechanics Conference**, *Galway, Ireland*, Invited speaker

Title of the talk: *Stabilization free Virtual Element Methods*

June 2022 **Convegno del Gruppo Nazionale per il Calcolo Scientifico**, *Montecatini Terme, Italy*, Invited speaker

Title of the talk: *Virtual Element Methods with stabilization-free bilinear forms*

July 2021 **USNCCM16**, *online*, Invited speaker

Title of the talk: *Adaptive Virtual Element Methods for Simulations of Flow in Fractured Media*

June 2021 **SIAM Conference on Mathematical & Computational Issues in the Geosciences (GS21)**, *online*, Invited speaker

Title of the talk: *Hybrid Mimetic Finite-Difference and Virtual Element Formulation for Coupled Poroelasticity*

May-June 2021 **13$^{\text{th}}$ InterPore Annual Meeting (InterPore2021)**, *online*, Invited speaker

Title of the poster: *Adaptive Virtual Element Methods for simulations in Discrete Fracture Matrix models*

January 2021 **14$^{\text{th}}$ Virtual Congress WCCM & ECCOMAS 2020**, *online*, Invited speaker

Title of the talk: *Adaptivity in Geophysical Simulations Using the Virtual Element Method*

December 2020 **Computational Methods in Water Resources 2020**, *online*

Title of the talk: *Mixed Hybrid Finite-Volume and Virtual Element Formulation for Coupled Poromechanics*

August 2020 **12th InterPore Annual Meeting (InterPore2020)**, *online*, Invited speaker

Title of the talk: *Adaptive Virtual Element Method for simulations of flow in fractured media*

February 2020 **Convegno del Gruppo Nazionale per il Calcolo Scientifico**, *Montecatini Terme, Italy*, Invited speaker

Title of the talk: *Adaptive Virtual Element Method for simulations in fractured media*

June 2019 **Conference on The Mathematics of Elements and Applications (MAFELAP 2019)**, *Brunel University London, UK*, Invited speaker

Title of the talk: *The Virtual Element Method for geophysical simulations*

May 2019 **11th InterPore Annual Meeting (InterPore2019)**, *Valencia, Spain*, Invited speaker

Title of the talk: *The Virtual Element method for simulations of physical phenomena on Discrete Fracture Matrix models*

July 2018 **XIV SIMAI 2018 Biannual Congress**, *Roma, Italy*, Invited speaker

Title of the talk: *Simulation of underground phenomena in heterogeneous soils using the Virtual Element Method*

May 2018 **10th InterPore Annual Meeting (InterPore2018)**, *New Orleans, US*, Invited speaker

Title of the talk: *Applications of standard and mixed Virtual Elements to the simulation of physical phenomena in poro-fractured media*

Title of the poster: *Simulation of elasto-plastic phenomena in heterogeneous soils using the Virtual Element Method*

February 2018 **Convegno del Gruppo Nazionale per il Calcolo Scientifico**, *Montecatini Terme, Italy*, Invited speaker

Title of the talk: *The Virtual Element Method for transport simulations in Discrete Fracture Networks*

September 2017 **European Conference on Numerical Mathematics and Advanced Applications (ENUMATH 2017)**, *Voss, Norway*, Invited speaker

Title of the talk: *The Virtual Element Method for the transport of passive scalars in Discrete Fracture Networks*

September 2017 **SIAM Conference on Mathematical & Computational Issues in the Geosciences (GS17)**, *Erlangen, Germany*, Invited speaker

Title of the talk: *A general framework for DFN flow simulations with the Virtual Element Method*

July 2017 **POEMS 2017 Workshop**, *Milano, Italy*, Invited speaker

Title of the talk: *VEM for transport of passive scalars in Discrete Fracture Networks*

June 2017 **X-DMS 2017 (eXtended Discretization Methods)**, *Umeå, Sweden*, Invited speaker

Title of the talk: *Applications of Virtual Element Methods to Discrete Fracture Network flow simulations*

September 2016 **XII SIMAI 2016 Biannual Congress**, *Milano, Italy*, Invited speaker

Title of the talk: *A Posteriori Error Estimate for the Virtual Element Method*

June 2016 **Conference on The Mathematics of Elements and Applications (MAFELAP 2016)**, *Brunel University London, UK*, Invited speaker

Title of the talk: *A Posteriori Error Estimate for the Virtual Element Method*

Organization of minisymposia at international conferences

June 2024 **9th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2024)**, *Lisbon, Portugal*, Minisymposium "Advances in numerical methods on polytopal grids for coupled problems", co-organizers: Stefano Bonetti, Francesca Marcon, Ilario Mazzieri.

June 2023 **SIAM Conference on Mathematical & Computational Issues in the Geosciences**, *Bergen, Norway*, Minisymposium "Recent Advances in Polytopal Methods for Applications in Geosciences", co-organizers: Franco Dassi, Ilario Mazzieri, Giuseppe Vacca.

May 2023 **Math2Product 2023**, *Taormina, Italy*, Minisymposium "Numerical methods for coupled problems in geometrically complex domains", co-organizers: Francesco Ballarin, Fabio Vicini.

June 2021 **SIAM Conference on Mathematical & Computational Issues in the Geosciences**, *virtual conference*, Minisymposium "Advances in Polygonal Methods for Applications in Geoscience", co-organizers: Franco Dassi, Stefano Scialò, Anna Scotti.

January 2021 **14th World Congress in Computational Mechanics (WCCM) and ECCOMAS Congress 2020**, *virtual conference*, Minisymposium "Advances in polygonal and polyhedral methods", co-organizers: Simon Lemair, Ilario Mazzieri, Giuseppe Vacca.

Publications

[1] S. Berrone, A. Borio, and F. Marcon. "Lowest Order Stabilization Free Virtual Element Method for the 2D Poisson Equation". In: *Computers and Mathematics with Applications* 177 (2025), pp. 78–99. DOI: 10.1016/j.camwa.2024.11.017.

[2] S. Berrone, A. Borio, D. Fassino, and F. Marcon. "Stabilization-Free Virtual Element Method for 2D Second Order Elliptic Equations". In: *Computer Methods in Applied Mechanics and Engineering* 438 (Apr. 2025), p. 117839. ISSN: 00457825. DOI: 10.1016/j.cma.2025.117839.

[3] A. Borio, K. L. Cascavita, M. Cicuttin, and F. Marcon. "Towards Stabilization-Free Hybrid High-Order Methods for Elliptic Problems". In: *Journal of Scientific Computing* 104.3 (Sept. 2025), p. 83. ISSN: 0885-7474, 1573-7691. DOI: 10.1007/s10915-025-02985-z.

[4] S. Berrone, A. Borio, and F. Marcon. "A Stabilization-Free Virtual Element Method Based on Divergence-Free Projections". In: *Computer Methods in Applied Mechanics and Engineering* 424 (2024). DOI: 10.1016/j.cma.2024.116885.

[5] A. Borio, M. Busetto, and F. Marcon. "SUPG-stabilized Stabilization-Free VEM: A Numerical Investigation". In: *Mathematics In Engineering* 6.1 (2024), pp. 173–191. DOI: 10.3934/mine.2024008.

[6] A. Borio, C. Lovadina, F. Marcon, and M. Visinoni. "A Lowest Order Stabilization-Free Mixed Virtual Element Method". In: *Computers & Mathematics with Applications* 160 (Apr. 2024), pp. 161–170. ISSN: 08981221. DOI: 10.1016/j.camwa.2024.02.024.

[7] R. R. Settgast, R. M. Aronson, J. R. Besset, A. Borio, Q. M. Bui, T. J. Byer, N. Castelletto, A. Citrain, B. C. Corbett, J. Corbett, P. Cordier, M. A. Cremon, C. M. Crook, M. Cusini, F. Fei, S. Frambati, J. Franc, A. Franceschini, M. Frigo, P. Fu, T. Gazzola, H. Gross, F. Hamon, B. M. Han, Y. Hao, R. Hasanzade, M. Homel, J. Huang, T. Jin, I. Ju, D. Kachuma, M. Karimi-Fard, T. Kim, S. Klevtsov, A. Lapene, V. A. P. Magri, A. Mazuyer, M. N'diaye, D. Osei-Kuffuor, S. Povolny, G. Ren, S. J. Semnani, C. S. Sherman, M. Rey, H. A. Tchelepi, W. R. Tobin, P. Tomin, L. Untereiner, A. Vargas, S. Waziri, X. Wen, J. A. White, and H. Wu. "GEOS: A Performance Portable Multi-Physics Simulationframework for Subsurface Applications". In: *Journal of Open Source Software* 9.102 (Oct. 10, 2024), p. 6973. ISSN: 2475-9066. DOI: 10.21105/joss.06973.

[8] F. Ballatore, G. Lucci, A. Borio, and C. Giverso. "An Imaging-Informed Mechanical Framework to Provide a Quantitative Description of Brain Tumour Growth and the Subsequent Deformation of White Matter Tracts". In: *SEMA SIMAI Springer Series*. Vol. 33. 2023, pp. 131–169. DOI: 10.1007/978-3-031-35715-2_5.

[9] S. Berrone, A. Borio, F. Marcon, and G. Teora. "A First-Order Stabilization-Free Virtual Element Method". In: *Applied Mathematics Letters* 142 (2023). DOI: 10.1016/j.aml.2023.108641.

[10] A. Raeli, C. Serazio, F. Marcon, A. Borio, N. Benlalam, S. Berrone, and F. Verga. "A VEM Application to Geomechanical Simulations for Underground Fluid Storage". In: *Geoingegneria Ambientale e Mineraria* 170 (2023), pp. 35–46. DOI: 10.19199/2023.170.1121-9041.035.

[11] P. Antonietti, S. Berrone, A. Borio, A. D'Auria, M. Verani, and S. Weisser. "Anisotropic a Posteriori Error Estimate for the Virtual Element Method". In: *IMA Journal of Numerical Analysis* 42.2 (2022), pp. 1273–1312. DOI: 10.1093/imanum/drab001.

[12] M. Benedetto, A. Borio, F. Kyburg, J. Mollica, and S. Scialò. "An Arbitrary Order Mixed Virtual Element Formulation for Coupled Multi-Dimensional Flow Problems". In: *Computer Methods in Applied Mechanics and Engineering* 391 (2022). DOI: 10.1016/j.cma.2021.114204.

[13] S. Berrone, A. Borio, and F. Marcon. "Comparison of Standard and Stabilization Free Virtual Elements on Anisotropic Elliptic Problems". In: *Applied Mathematics Letters* 129 (2022). DOI: 10.1016/j.aml.2022.107971.

[14] S. Berrone, A. Borio, and A. D'Auria. "Refinement Strategies for Polygonal Meshes Applied to Adaptive VEM Discretization". In: *Finite Elements in Analysis and Design* 186 (2021). DOI: 10.1016/j.finel.2020.103502.

[15] S. Berrone, A. Borio, A. D'Auria, S. Scialò, and F. Vicini. "A Robust VEM-based Approach for Flow Simulations in Poro-Fractured Media". In: *Mathematical Models and Methods in Applied Sciences* 31.14 (2021), pp. 2855–2885. DOI: 10.1142/S0218202521500639.

[16] A. Borio, A. Fumagalli, and S. Scialò. "Comparison of the Response to Geometrical Complexity of Methods for Unstationary Simulations in Discrete Fracture Networks with Conforming, Polygonal, and Non-Matching Grids". In: *Computational Geosciences* 25.1 (2021), pp. 143–162. DOI: 10.1007/s10596-020-09996-9.

[17] A. Borio, F. Hamon, N. Castelletto, J. White, and R. Settgast. "Hybrid Mimetic Finite-Difference and Virtual Element Formulation for Coupled Poromechanics". In: *Computer Methods in Applied Mechanics and Engineering* 383 (2021). DOI: 10.1016/j.cma.2021.113917.

[18] S. Berrone, M. Benedetto, A. Borio, S. Pieraccini, and S. Scialò. "The Virtual Element Method for the Transport of Passive Scalars in Discrete Fracture Networks". In: *Lecture Notes in Computational Science and Engineering*. Vol. 126. 2019, pp. 501–508. DOI: 10.1007/978-3-319-96415-7_45.

[19] S. Berrone, A. Borio, S. Pieraccini, and S. Scialò. "New Strategies for the Simulationof the Flow in Three Dimensional Poro-Fractured Media". In: *Lecture Notes in Computational Science and Engineering*. Vol. 126. 2019, pp. 715–723. DOI: 10.1007/978-3-319-96415-7_66.

[20] S. Berrone, A. Borio, and F. Vicini. "Reliable a Posteriori Mesh Adaptivity in Discrete Fracture Network Flow Simulations". In: *Computer Methods in Applied Mechanics and Engineering* 354 (2019), pp. 904–931. DOI: 10.1016/j.cma.2019.06.007.

[21] S. Berrone, A. Borio, C. Fidelibus, S. Pieraccini, S. Scialò, and F. Vicini. "Advanced Computation of Steady-State Fluid Flow in Discrete Fracture-Matrix Models: FEM–BEM and VEM–VEM Fracture-Block Coupling". In: *GEM - International Journal on Geomathematics* 9.2 (2018), pp. 377–399. DOI: 10.1007/s13137-018-0105-3.

[22] S. Berrone, A. Borio, and G. Manzini. "SUPG Stabilization for the Nonconforming Virtual Element Method for Advection–Diffusion–Reaction Equations". In: *Computer Methods in Applied Mechanics and Engineering* 340 (2018), pp. 500–529. DOI: 10.1016/j.cma.2018.05.027.

[23] M. Benedetto, A. Borio, and S. Scialò. "Mixed Virtual Elements for Discrete Fracture Network Simulations". In: *Finite Elements in Analysis and Design* 134 (2017), pp. 55–67. DOI: 10.1016/j.finel.2017.05.011.

[24] S. Berrone and A. Borio. "A Residual a Posteriori Error Estimate for the Virtual Element Method". In: *Mathematical Models and Methods in Applied Sciences* 27.8 (2017), pp. 1423–1458. DOI: 10.1142/S0218202517500233.

[25] S. Berrone and A. Borio. "Orthogonal Polynomials in Badly Shaped Polygonal Elements for the Virtual Element Method". In: *Finite Elements in Analysis and Design* 129 (2017), pp. 14–31. DOI: 10.1016/j.finel.2017.01.006.

[26] M. Benedetto, S. Berrone, and A. Borio. "The Virtual Element Method for Underground Flow Simulations in Fractured Media". In: *SEMA SIMAI Springer Series*. Vol. 12. 2016, pp. 167–186. DOI: 10.1007/978-3-319-41246-7_8.

[27] M. Benedetto, S. Berrone, A. Borio, S. Pieraccini, and S. Scialo. "The Virtual Element Method for Discrete Fracture Network Flow and Transport Simulations". In: *Proceedings of the 7th European Congress on Computational Methods in Applied Sciences and Engineering*. ECCOMAS Congress 2016. Vol. 2. 2016, pp. 2953–2970. DOI: 10.7712/100016.2008.6334.

[28] M. Benedetto, S. Berrone, A. Borio, S. Pieraccini, and S. Scialò. "A Hybrid Mortar Virtual Element Method for Discrete Fracture Network Simulations". In: *Journal of Computational Physics* 306 (2016), pp. 148–166. DOI: 10.1016/j.jcp.2015.11.034.

[29] M. Benedetto, S. Berrone, A. Borio, S. Pieraccini, and S. Scialò. "Order Preserving SUPG Stabilization for the Virtual Element Formulation of Advection–Diffusion Problems". In: *Computer Methods in Applied Mechanics and Engineering* 311 (2016), pp. 18–40. DOI: 10.1016/j.cma.2016.07.043.

[30] S. Berrone, A. Borio, and S. Scialò. "A Posteriori Error Estimate for a PDE-constrained Optimization Formulation for the Flow in DFNs". In: *SIAM Journal on Numerical Analysis* 54.1 (2016), pp. 242–261. DOI: 10.1137/15M1014760.

Reviewing activity

Reviewer for Engineering Analysis with Boundary Elements, Computer and Mathematics with Applications, Finite Elements in Analysis & Design, Advances in Computational Mathematics, Mathematics in Engineering, Calcolo, Numerical Mathematics: Theory, Methods and Applications, Computational Mechanics.

In compliance with the Italian legislative Decree no. 196 dated 30/06/2003, I hereby authorize you to use and process my personal details contained in this document.