

UNIVERSITÀ DEGLI STUDI DI MILANO

Selezione pubblica per n. 1 posto di Ricercatore a tempo determinato in tenure track (RTT) per il settore concorsuale 01/A5 - Analisi Numerica, settore scientifico-disciplinare MAT/08 - Analisi Numerica, presso il Dipartimento di Matematica "Federigo Enriques", (avviso bando pubblicato sulla G.U. n. 93 del 05/12/2023), codice concorso 5439

CURRICULUM VITAE

PIETRO ZANOTTI

Personal data

Born in Milano, 27th December 1990
Email: pietro.zanotti@unipv.it

Current position

Ricercatore a tempo determinato, lettera A (fixed-term assistant professor)
Dipartimento di Matematica 'F. Casorati'
Università degli Studi di Pavia
Via Ferrata 5, 27100 Pavia (Italy)

Previous positions

01/04/2019 - 30/04/2021 Assegnista di ricerca (post-doc)
Dipartimento di Matematica, Università degli Studi di Milano
01/03/2018 - 31/03/2019 Scientific assistant (post-doc)
Fakultät für Mathematik, Technische Universität Dortmund
24/11/2017 - 23/02/2018 Marie Skłodowska-Curie Researcher
Department of Mathematics, University of Sussex
01/11/2014 - 31/10/2017 PhD Student in Mathematics
Dipartimento di Matematica, Università degli Studi di Milano

Education

Dottorato di Ricerca in Matematica (PhD in Mathematics)
Università degli Studi di Milano, 2018
Thesis: *Quasi-optimal nonconforming methods for symmetric elliptic problems*
Advisor: Prof. Andreas Veeseer
Laurea magistrale in Matematica (Master degree in Mathematics)
Università degli Studi di Milano, 2014
Thesis: *Locking and coupling in piecewise polynomial approximation*
Advisor: Prof. Andreas Veeseer
Grade: 110 e lode

Teaching

Course	Level	Role	Place	Year(s)
Pressure robust discretizations of the Stokes equations	PhD Mathematics	Lecturer	Pavia	2023
Programmazione 2	BSc Mathematics	Lecturer	Pavia	2022-
Metodi agli elementi finiti e applicazioni	MSc Bioengineering	Lecturer	Pavia	2021-
Algebra lineare numerica	BSc Mathematics	Assistant	Milano	2020-2021
Matematica I	BSc Geology	Assistant	Milano	2020
Advanced engineering mathematics	MSc Automation and Robotics	Assistant	Dortmund	2018
Finite element methods for saddle point problems	PhD Mathematics	Lecturer	Dortmund	2018
Metodi numerici per equazioni alle derivate parziali 1	MSc Mathematics	Assistant	Milano	2017
Approssimazione costruttiva	BSc Mathematics	Assistant	Milano	2016
Analisi matematica 3	BSc Physics	Tutor	Milano	2015-2016
Algebra 2	BSc Mathematics	Tutor	Milano	2013-2014

Supervision

Candidate	Level	Place	Co-Advisor(s)	Year
D. Terazzi	MSc Mathematics	Pavia	G. Sangalli	Ongoing
G. Chiantella	MSc Mathematics	Pavia	L.Dovera, L.Tamellini	Ongoing

Organization

GIMC SIMAI Young 2022

Pavia, 2022. Local organizer with S. Morganti and L. Tamellini

Finite Element Flows. Colloquium in occasion of Rüdiger Verfürth's retirement

Online, 2021. Workshop organized with C. Kreuzer and A. Veese

Structure, regularity and robustness in the approximation of PDEs

Milano, 2020. Workshop organized with A. Veese

Design and analysis of finite element methods: compatibility and robustness
MAFELAP, Brunel, 2019. Minisymposium organized with C. Kreuzer and E. Georgoulis

Recent advances in nonconforming and polygonal methods for PDEs
SIMAI congress, Roma, 2018. Minisymposium organized with P. Antonietti, S. Scialò and M. Verani

A posteriori error estimation, adaptivity and approximation
ENUMATH, Voss, 2017. Minisymposium organized with C. Kreuzer and A. Veesser

Nonconforming and DG methods
Milano, 2017. Workshop organized with A. Veesser

Research stays

17/04/2023 - 21/04/2023	SERENA team – Inria Paris
04/07/2022 - 08/07/2022	Technische Universität Dortmund
21/09/2020 - 25/09/2020	Technische Universität Dortmund
02/12/2019 - 06/12/2019	Technische Universität Dortmund
01/09/2019 - 07/09/2019	Mathematisches Forschungsinstitut Oberwolfach Workshop 1936: <i>Innovative Approaches to the Numerical Approximation of PDEs</i>
07/05/2019 - 10/05/2019	University of Oxford
20/04/2017 - 25/05/2017	Universität Heidelberg
20/01/2017 - 24/01/2017	Universität Bremen
02/10/2016 - 04/11/2016	Institut Henri Poincaré, Paris Tematic quarter: <i>Numerical Methods for PDEs</i>
04/02/2015 - 12/02/2015	Universität Bochum

Invited talks

SIMAI congress, Matera, 2023	
INRIA-LJLL Rencontres, Paris, 2023	FOCM conference, Paris, 2023
CMAM conference, Vienna, 2022	Humboldt Universität zu Berlin, 2022
BI.discrete22, Bielefeld, 2022	LYNUM-IV, Como, 2022
SIMAI congress, Parma, 2021	Technische Universität Dortmund, 2019
DMV-Jahrestagung, Karlsruhe, 2019	ICIAM, Valencia, 2019
University of Oxford, 2019	Universität Münster, 2018
IFIP TC 7, Essen, 2018	ENUMATH, Voss, 2017
Politecnico di Milano, 2017	Universität Bremen, 2017
MAFELAP, Brunel, 2016	Ruhr-Universität Bochum, 2015

Contributed talks

Workshop 1936, Oberwolfach, 2019	MAFELAP, Brunel, 2019
EFEF, Heidelberg, 2018	Workshop ‘Nonconforming and DG methods’, Milano, 2017
EFEF, Milano, 2017	SIMAI congress, Milano, 2016
EFEF, Bonn, 2016	UMI congress, Siena, 2015

Grants and awards

PRIN PNRR 2022 – *Uncertainty quantification of coupled models for water flow and contaminant transport*, (participant, PI: Lorenzo Tamellini)

GNCS – Progetti di ricerca 2016, 2018, 2019 and 2023 (participant)

GNCS – Finanziamento giovani ricercatori 2020 and 2022 (individual grant)

INdAM – Borsa di studio per l’avviamento alla ricerca 2012/2013 (scholarship)

Habilitation

Italian habilitation in numerical analysis (01/A5) as associate professor,
08/06/2023 – 08/06/2034

Review

Advances in Applied Mathematics and Mechanics (AAMM)

Advances in Computational Mathematics (ACOM)

Calcolo

Computers and Mathematics with Applications (CAMWA)

Computer Methods in Applied Mechanics and Engineering (CMAME)

Electronic Transactions on Numerical Analysis (ETNA)

IMA Journal of Numerical Analysis (IMAJNA)

International Journal of Computer Mathematics (IJCM)

Journal of Scientific Computing (JSC/JOMP)

Mathematical Modelling and Numerical Analysis (M2AN)

Mathematics of Computation (Math. Comp.)

Numerische Mathematik (Numer. Math.)

SIAM Journal on Numerical Analysis (SINUM)

SIAM Journal on Scientific Computing (SISC)

Publications

A nonsymmetric approach and a quasi-optimal and robust discretization for the Biot's model, Math. Comp., 91 (2022), pp. 1143–1170, with A. Khan

Quasi-Optimal and Pressure Robust Discretizations of the Stokes Equations by Moment- and Divergence-Preserving Operators, Comput. Methods Appl. Math., 21 (2021), pp. 423–443, with C. Kreuzer and R. Verfürth

Construction of DPG Fortin operators revisited, Comput. Math. Appl., 80 (2020), pp. 2261–2271, with L. Demkowicz

A quasi-optimal variant of the hybrid high-order method for elliptic partial differential equations with H^{-1} loads, IMA J. Numer. Anal., 40 (2020), pp. 2163–2188, with A. Ern

Quasi-optimal and pressure-robust discretizations of the Stokes equations by new augmented Lagrangian formulations, IMA J. Numer. Anal., 40 (2020), pp. 2553–2583, with C. Kreuzer

A quasi-optimal Crouzeix-Raviart discretization of the Stokes equations, SIAM J. Numer. Anal., 57 (2019), pp. 1082–1099, with R. Verfürth

Quasi-optimal nonconforming methods for symmetric elliptic problems. II - Over-consistency and classical nonconforming elements, SIAM J. Numer. Anal., 57 (2019), pp. 266–292, with A. Veiser

Quasi-optimal nonconforming methods for second-order problems on domains with non-Lipschitz boundary, in Numerical Mathematics and Advanced Applications ENUMATH 2017, Cham, 2019, pp. 461–469, with A. Veiser,

Quasi-optimal nonconforming methods for symmetric elliptic problems. III - Discontinuous Galerkin and interior penalty methods, SIAM J. Numer. Anal., 56 (2018), pp. 2871–2894, with A. Veiser

Quasi-optimal nonconforming methods for symmetric elliptic problems. I - Abstract theory, SIAM J. Numer. Anal., 56 (2018), pp. 1621–1642, with A. Veiser

Milano, January 2, 2024