

CURRICULUM VITAE

PIETRO ZANOTTI

Personal data

Born in Milano, 27th December 1990
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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 Veeger
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 Veeger
Grade: 110 e lode
Laurea triennale in Matematica (Bachelor degree in Mathematics)
Università degli Studi di Milano, 2012
Grade: 110 e lode

Schools attended

Theory and Practice of the Virtual Element Methods

Dobbiaco Summer School, Dobbiaco, 2018

Advances in Mathematics of Signal Processing

HIM Winter School, Bonn, 2016

Innovative Concepts for Complexity Reduction in Numerical PDEs:

Nonlinear Approximation, Sparsity, Adaptivity, Model Reduction

Dobbiaco Summer School, Dobbiaco, 2015

Simulation, Optimization and Identification in Solid Mechanics

Gene Golub SIAM Summer School, Linz, 2014

Research stays

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: *Innovative Approaches to the Numerical Approximation of PDEs*

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: *Numerical Methods for PDEs*

04/02/2015 - 12/02/2015 Universität Bochum

Invited talks

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
 European Finite Element Fair, Heidelberg, 2018
 European Finite Element Fair, Milano, 2017
 Workshop "Nonconforming and DG methods", Milano, 2017
 SIMAI congress, Milano, 2016
 European Finite Element Fair, Bonn, 2016
 UMI congress, Siena, 2015

Publications

A nonsymmetric approach and a quasi-optimal and robust discretization for the Biot's model., Math. Comp., to appear, with A. Khan

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

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

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 - Overconsistency and classical nonconforming elements, SIAM J. Numer. Anal., 57 (2019), pp. 266–292, with A. Veeseer

Quasi-optimal nonconforming methods for second-order problems on domains with non-Lipschitz boundary, in Numerical Mathematics and Advanced Applications ENUMATH 2017, F. A. Radu, K. Kumar, I. Berre, J. M. Nordbotten, and I. S. Pop, eds., Cham, 2019, Springer International publishing, pp. 461–469, with A. Veeseer,

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. Veeseer

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

Review

Computers and Mathematics with Applications (CAMWA)

Computer Methods in Applied Mechanics and Engineering (CMAME)

International Journal of Computer Mathematics (IJCM)

Journal of Scientific Computing (JSC/JOMP)

Mathematical Modelling and Numerical Analysis (M2AN)

Mathematics of Computation (Math. Comp.)

SIAM Journal on Numerical Analysis (SINUM)

SIAM Journal on Scientific Computing (SISC)

Organization

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
Università degli Studi di 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. Veese

Nonconforming and DG methods
Università degli Studi di Milano, 2017. Workshop organized with A. Veese

Teaching

Matematica I per Scienze Geologiche
Università degli Studi di Milano, exercises, 2020/2021

Numerical Linear Algebra
Università degli Studi di Milano, exercises, 2019/2020 and 2020/+2021

Advanced Engineering Mathematics
Technische Universität Dortmund, exercises, 2018/2019

Finite Element Methods for Saddle Point Problems
Technische Universität Dortmund, lectures and exercises, 2017/2018

Metodi Numerici per Equazioni alle Derivate Parziali 1

Università degli Studi di Milano, exercises, 2017/2018

Analisi Matematica 3

Università degli Studi di Milano, tutorials, 2015/2016 and 2016/2017

Approssimazione Costruttiva

Università degli Studi di Milano, exercises, 2015/2016

Algebra 2

Università degli Studi di Milano, tutorials, 2012/2013 and 2013/2014

Grants and awards

GNCS – Finanziamento giovani ricercatori 2019/2020 (individual grant)

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

Milano, September 15, 2021