Curriculum Vitae

GIANLUCA MOLA

Dipartimento di Matematica "F. Brioschi"
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20133 Milano
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Personal informations

Born in Abbiategrasso (Italy), April the 27^{th}, 1976

Address Via Statuto 17, 20081 Abbiategrasso (Italy)

Citizenship Italian

Phone +39 3407515253

Languages Italian, English (fluent), Japanese (basic).

Research keywords

♢ *Evolution equations* ♢ *Dynamical systems* ♢ *Inverse problems*

Academic Achievements

2002 "Laurea" diploma *summa cum laude* (advisor: prof. A. Lorenzi, title of the thesis: *Problemi diretti e inversi per equazioni di tipo parabolico con due nuclei di memoria*)

2006 Ph.D. in Mathematics *summa cum laude*, Politecnico di Milano (advisor: prof. M. Grasselli, title of the thesis: *Global and exponential attractors for a conserved phase-field system with Gurtin-Pipkin heat conduction law*)

Other research activities

March - September 2007 Japanese Society for Promotion of Sciences (JSPS) awarded fellow, University of Osaka (Japan)

November 2008 - November 2012 Postdoc researcher, Università di Milano (coordinator: prof. A. Lorenzi)

January - February 2012 visiting fellow at University of Osaka (Japan)

January - February 2013 visiting fellow at the Institut Henry Poincarè, Paris (France), as a member of the RIP project *Identification of time-dependent constant in linear parabolic equations*

2013-2014 direction of GNAMPA research group *Problemi di identificazione di coefficienti in equazioni paraboliche lineari*

April - May 2014 visiting fellow at Tokyo University of Science (Japan)

April - May 2015 visiting fellow at Tokyo University of Science (Japan)

Scientific communications

Salò, 3-5 July, 2003 *Materiali speciali e memorie: problemi modellistici e analitici*

Rimini, 17-19 March, 2005 *DIPEE 2005-Direct and inverse problems in evolution equations*

Cortona, 20-24 June, 2005 *Inverse and direct problems*

Montecatini, 29-30 September, 2005 *Modellizzazione Matematica ed analisi dei problemi a frontiera libera*

Poitiers (France), 25-28 June, 2006 *AIMS '06*

Salò, 13-15 July, 2006 *Modelli matematici e problemi analitici per materiali speciali*

Levico Terme, 14-16 September, 2006 *Recent advances in free boundary problems and related topics*

Fukuoka (Japan), 7 August, 2007 *Joint Symposium of Real Analysis and Functional Analysis organized by Mathematical Society of Japan*

Kumamoto (Japan), 11 August, 2007 *Kumamoto workshop on Nonlinear Evolution Equations*, in honor of prof. I. Tanabe on the occasion of his 80th birthday

Cortona, 22-26 September, 2008 *Direct, inverse and control problems for PDEs*

Taranto, 28 June-3 July, 2009 *Evolution equations and mathematical models in the applied sciences*

Brescia, 9-11 July 2009 *Mathematical models and analytic problems for special materials*

London (UK)-Imperial College, 9-11 July, 2009 7^{th} *ISAAC congress*

Rio de Janeiro (Brazil), 24-27 August, 2010 *IX Workshop on Partial Differential Equations*

Bologna, 1-4 September, 2010 *PDEs, Semigroup Theory and Inverse Problems*

Moskow (Russia)-PFUR, 22-27 August, 2011 *8^{th} ISAAC congress*

Bologna, 16-20 July 2012 *PDE's, Inverse Problems and Control Theory*

Marseille (France), 5 February 2013 *CMI, sminaire LATP* (seminar)

Cortona, 17-21 June 2013 *Differential Equations, Inverse Problems and Control Theory*

Knoxville (TN, USA), 21-23 March 2014 *Southeastern Spring Sectional Meeting of the American Mathematical Society*

Bologna, 15-19 September 2014 *PDE's, Control Theory and Inverse Problems*

Parma, 6-10 July 2015 *New advances in PDE's, Inverse Problems and Control Theory*

Milano, 13-16 September 2015 *SIMAI national congress.*

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Teaching

Ph. D. Courses

April - May 2014 *Direct and inverse problems for linear parabolic equations*, Tokyo University of Science;

April - May 2015 *Direct and inverse problems for linear parabolic equations*, Tokyo University of Science.

Courses

2007-2008 (I° semester) *Calculus II*, Construction Engineering, Politecnico di Milano;

2008-2009 (I° semester) *Calculus & Geometry I*, Mechanical Engineering, Politecnico di Milano;

2009-2010 (I° semester) *Calculus & Geometry I*, Mechanical Engineering, Politecnico di Milano;

2010-2011 (I° semester) *Calculus & Geometry I*, Mechanical Engineering, Politecnico di Milano;

2011-2012 (II° semester) *Calculus & Geometry II*, Mechanical Engineering, Politecnico di Milano;

2012-2013 (II° semester) *Calculus II*, Civil Engineering, Politecnico di Milano;

2013-2014 (I° semester) *Calculus & Geometry I*, Biomedical Engineering, Politecnico di Milano;

2013-2014 (I° semester) *Differential Equations*, Civil Engineering, Politecnico di Milano

2014-2015 (I° semester) *Calculus & Geometry I*, Biomedical Engineering, Politecnico di Milano;

2014-2015 (I° semester) *Calculus & Geometry I*, Mechanical Engineering, Politecnico di Milano

2015-2016 (I° semester) *Calculus & Geometry I*, Biomedical Engineering, Politecnico di Milano;

2015-2016 (I° semester) *Calculus & Geometry I*, Mechanical Engineering, Politecnico di Milano;

2016-2017 (I° semester) *Calculus & Geometry I*, Biomedical Engineering, Politecnico di Milano;

2016-2017 (I° semester) *Calculus & Geometry I*, Mechanical Engineering, Politecnico di Milano.

Assistantship

2003-2004 (I° semester) *Calculus I*, Construction Engineering, Politecnico di Milano;

2005-2006 (I° semester) *Calculus & Geometry I*, Mathematical Engineering, Politecnico di Milano;

2006-2007 (I° semester) *Calculus & Geometry I*, Mathematical Engineering, Politecnico di Milano;

2006-2007 (II° semester) *Calculus II*, Construction Engineering, Politecnico di Milano;

2007-2008 (II° semester) *Differential Equations*, Computer Engineering, Politecnico di Milano;

2007-2008 (II° semester) *Calculus & Geometry II*, Mechanical Engineering, Politecnico di Milano;

2008-2009 (II° semester) *Calculus & Geometry II*, Mechanical Engineering, Politecnico di Milano;

2012-2013 (I° semester) *Math. Methods in Engineering*, Mechanical Engineering, Politecnico di Milano;

2012-2013 (II° semester) *Calculus and Geometry II*, Mechanical Engineering, Politecnico di Milano;
2012-2013 (II° semester) *Calculus and Geometry II*, Management of Production, Politecnico di Milano;
2014-2015 (I° semester) *Math. Methods in Engineering*, Mechanical Engineering, Politecnico di Milano;
2014-2015 (I° semester) *Calculus and Geometry I*, Management of Production, Politecnico di Milano;
2015-2016 (I° semester) *Math. Methods in Engineering*, Mechanical Engineering, Politecnico di Milano;
2016-2017 (I° semester) *Math. Methods in Engineering*, Mechanical Engineering, Politecnico di Milano.

Tutoring

2007-2008 (I° semester) *Real & Functional Analysis*, Mathematical Engineering, Politecnico di Milano;
2008-2009 (I° semester) *Math. Analysis III*, Pure and Applied Mathematics, Universitá di Milano;
2009-2010 (I° semester) *Math. Analysis III*, Pure and Applied Mathematics, Universitá di Milano;
2010-2011 (I° semester) *Math. Analysis III*, Pure and Applied Mathematics, Universitá di Milano;
2012-2013 (I° semester) *Functional Analysis*, Pure and Applied Mathematics, Universitá di Milano;
2013-2014 (I° semester) *Math. Analysis III*, Pure and Applied Mathematics, Universitá di Milano;
2013-2014 (I° semester) *Functional Analysis*, Pure and Applied Mathematics, Universitá di Milano.

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List of publications (chronological order)

M. Conti & G. M. *Attractors for a phase field model on* $\mathbb{R}^3$, Advances in Mathematical Sciences and Applications **15**, No.2, pp.527-543 (2005)

G. M. *Global attractors for a three-dimensional conserved phase-field system with memory*, Communications on Pure and Applied Analysis **7**, No.2, pp.317-353 (2008)

G. M. *Convergence to equilibria for a three-dimensional conserved phase-field system with memory*, Electronic Journal of Differential Equations 2008, No.23, pp.1-16 (2008)

J. Cholewa, R. Czaja & G. M. *Remarks on fractal dimension of bi-spaces global and exponential attractors*, Bollettino dell'Unione Matematica Italiana **1**, No.9, pp.121-145 (2008)

M. Conti & G. M. *3-D viscous Cahn-Hilliard equation with memory*, Mathematical Methods in the Applied Sciences **32**, No.11, pp.1370-1395 (2009)

G. Mola & A. Yagi *A forest model with memory*, Funkcialaj Ekvacioj **52**, No.1, pp.19-40 (2009)

E. Mainini & G. M. *Exponential and polynomial stability for a first order linear Volterra evolution equation*, Quarterly of Applied Mathematics **67**, No.1, pp.93-111 (2009)

G. M. *Stability of global and exponential attractors for a three-dimensional conserved phase-field system with memory*, Mathematical Methods in the Applied Sciences, **32**, No.18, pp.2368 - 2404 (2009)

A. Lorenzi & G. M. *Identification of unknown terms in convolution integro-differential equations in a Banach space*, Journal of Inverse and Ill-posed Problems **18**, No.3, pp.321-355 (2010)

M. Grasselli, G. M. & A. Yagi *On the longtime behavior of solutions to a model for epitaxial growth*, Osaka University Mathematical Journal **48**, No.4 (2011)

A. Lorenzi & G. M. *Identification of a real constant in linear evolution equations in Hilbert spaces*, Inverse Problems and Imaging **5**, No.3 (2011)

G. M. *Identification of the diffusion coefficient in linear evolution equations in Hilbert spaces*, Journal of Abstract Evolution Equations and Applications **2**, No.1, pp.14-28 (2011)

A. Lorenzi & G. M. *Recovering the reaction and the diffusion coefficients in a linear parabolic equation*, Inverse Problems **28**, No.7 (2012)

G. M. *Recovering the Reaction Coefficient in a Linear Parabolic Equation*, Chapter 17 in New Prospects in Direct, Inverse and Control Problems for Evolution Equations, Springer (2014)

G. M., N. Okazawa, J. Prüss & T. Yokota *Semigroup-theoretic approach to identification of linear diffusion coefficients*, Discrete and Continuous Dynamical Systems - Series S, **9**, No.3, pp.777 - 790 (2016)

S. Azizi, G. M. & A. Yagi *Longtime convergence for epitaxial growth model under Dirichlet conditions*, Osaka University Mathematical Journal (to appair)

G. M., N. Okazawa & T. Yokota *Reconstruction of two constant coefficients in linear anisotropic diffusion model*, Inverse Problems, to appear.

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