Filippo Dell'Oro

Curriculum Vitae

Updated: February 2021

Personal Information

	Born in Lecco (Italy) on June 16, 1986
Current position	Assistant Professor in Mathematical Analysis
Affiliation	Politecnico di Milano - Dipartimento di Matematica
Work address	Via Bonardi 9, 20133 Milano, Italy
Office	319, Edificio "la Nave"
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Education

2011–2013	PhD in Mathematical Models and Methods in Engineering Politecnico di Milano, Milano, Italy Thesis defended on Feb 20, 2014 Final grade: cum laude Advisor: Prof. Vittorino Pata
2008–2010	Master of Science in Mathematics Università degli Studi di Milano, Milano, Italy Final grade: 110/110 cum laude
Aug 2009	Summer School of Mathematics SMI Università degli Studi di Perugia, Perugia, Italy Courses: functional analysis (final grade A) differential equations in mathematical physics (final grade A+)
2005–2008	Bachelor of Science in Mathematics Università degli Studi di Milano, Milano, Italy Final grade: 110/110

Academic Positions

Since Nov 29, 2019	Assistant Professor (RTDb) Politecnico di Milano, Milano, Italy
Jan 2016–Nov 2019	Assistant Professor (RTDa) Politecnico di Milano, Milano, Italy
Oct 2014–Dec 2015	Postdoctoral Fellow Institute of Mathematics of the Academy of Sciences of the Czech Republic, Prague, Czech Republic
Jan 2014–Sep 2014	Research Fellow Università degli Studi di Brescia, Brescia, Italy

Professional Qualifications

Nov 28, 2017 National Scientific Habilitation to Associate Professor
Compartment 01/A3 - Mathematical Analysis, Probability and Mathematical
Statistics (valid till Nov 28, 2023)

Professional Affiliations

Unione Matematica Italiana
Gruppo Nazionale per l'Analisi Matematica, la Probabilità e le loro Applicazioni

Grants and Projects

2020 Member of the GNAMPA project "Decadimento rapido delle soluzioni di
equazioni iperboliche con effetti di memoria" financed by INdAM

Dec 2017 "Finanziamento annuale individuale delle attività base di ricerca" awarded by
ANVUR

2017 Coordinator of the GNAMPA project "Comportamento asintotico di sistemi
dissipativi non locali" financed by INdAM

2012–2013 Member of the GNAMPA project "Analisi di modelli di tipo Navier-Stokes"
financed by INdAM

Jul 2012 "International mobility contribution" awarded by Politecnico di Milano

2011–2013 "PhD scholarship" awarded by Politecnico di Milano

Research Interests

General Partial Differential Equations

Specific Asymptotic behavior of evolution equations, stability of operator semigroups

Publications

31. F. Dell'Oro and V. Pata, *Second order linear evolution equations with general
    dissipation*, Appl. Math. Optim. (in press)

30. F. Dell'Oro and Y. Mammeri, *Benjamin-Bona-Mahony equations with memory
    and Rayleigh friction*, Appl. Math. Optim. (in press)

29. F. Dell'Oro, I. Lasiecka and V. Pata, *A note on the Moore-Gibson-Thompson
    equation with memory of type II*, J. Evol. Equ. **20** (2020), 1251–1268

28. F. Dell'Oro, O. Goubet, Y. Mammeri and V. Pata, *Global attractors for the
    Benjamin-Bona-Mahony equation with memory*, Indiana Univ. Math. J. **69**
    (2020), 749–783

27. M. Conti, F. Dell'Oro and V. Pata, *Exponential decay of a first order linear
    Volterra equation*, Math. Eng. **2** (2020), 459–471

26. M. Conti, F. Dell'Oro and V. Pata, *Nonclassical diffusion with memory lacking
    instantaneous damping*, Commun. Pure Appl. Anal. **19** (2020), 2035–2050

25. F. Dell'Oro, O. Goubet, Y. Mammeri and V. Pata, *A semidiscrete scheme
    for evolution equations with memory*, Discrete Contin. Dyn. Syst. **39** (2019),
    5637–5658

24. F. Dell'Oro, *On the spectrum of the equation of linear viscoelasticity*, Math.
    Nachr. **291** (2018), 2388-2396

23. F. Dell'Oro and V. Pata, *On a fourth-order equation of Moore-Gibson-Thompson
    type*, Milan J. Math. **85** (2017), 215–234

22. F. Dell'Oro and V. Pata, *On the Moore-Gibson-Thompson equation and its relation to linear viscoelasticity*, Appl. Math. Optim. **76** (2017), 641–655

21. V. Danese and F. Dell'Oro, *The lack of exponential stability for a class of second-order systems with memory*, Proc. Roy. Soc. Edinburgh Sect. A **147** (2017), 683–702

20. F. Dell'Oro, E. Laeng and V. Pata, *A quantitative Riemann-Lebesgue lemma with application to equations with memory*, Proc. Amer. Math. Soc. **145** (2017), 2909–2915

19. F. Dell'Oro, C. Giorgi and V. Pata, *Steady states of elastically-coupled extensible double-beam systems*, AIMS Mathematics **2** (2017), 28–69

18. V. Danese, F. Dell'Oro and V. Pata, *Stability analysis of abstract systems of Timoshenko type*, J. Evol. Equ. **16** (2016), 587–615

17. F. Dell'Oro, I. Lasiecka and V. Pata, *The Moore-Gibson-Thompson equation with memory in the critical case*, J. Differential Equations **261** (2016), 4188–4222

16. F. Dell'Oro and C. Giorgi, *Global attractors for the coupled suspension bridge system with temperature*, Math. Methods Appl. Sci. **39** (2016), 864–875

15. F. Dell'Oro and E. Feireisl, *On the energy inequality for weak solutions to the Navier-Stokes equations of compressible fluids on unbounded domains*, Nonlinear Anal. **128** (2015), 136–148

14. F. Dell'Oro, Y. Mammeri and V. Pata, *The Benjamin-Bona-Mahony equation with dissipative memory*, NoDEA Nonlinear Differential Equations Appl. **22** (2015), 899–910

13. F. Dell'Oro, C. Giorgi and V. Pata, *Asymptotic behavior of coupled linear systems modeling suspension bridges*, Z. Angew. Math. Phys. **66** (2015), 1095–1108

12. F. Dell'Oro, *Asymptotic stability of thermoelastic systems of Bresse type*, J. Differential Equations **258** (2015), 3902–3927

11. F. Dell'Oro and V. Pata, *Lack of exponential stability in Timoshenko systems with flat memory kernels*, Appl. Math. Optim. **71** (2015), 79–93

10. F. Dell'Oro and J.E. Muñoz Rivera, *Stabilization of ternary mixtures with frictional dissipation*, Asymptot. Anal. **89** (2014), 235–262

9. F. Dell'Oro and V. Pata, *On the stability of Timoshenko systems with Gurtin-Pipkin thermal law*, J. Differential Equations **257** (2014), 523–548

8. M. Conti, F. Dell'Oro and V. Pata, *Timoshenko systems with fading memory*, Dyn. Partial Differ. Equ. **10** (2013), 367–377

7. F. Dell'Oro, J.E. Muñoz Rivera and V. Pata, *Stability properties of an abstract system with applications to linear thermoelastic plates*, J. Evol. Equ. **13** (2013), 777–794

6. M. Conti, F. Dell'Oro and A. Miranville, *Asymptotic behavior of a generalization of the Caginalp phase-field system*, Asymptot. Anal. **81** (2013), 297–314

5. M. Coti Zelati, F. Dell'Oro and V. Pata, *Energy decay of type III linear thermoelastic plates with memory*, J. Math. Anal. Appl. **401** (2013), 357–366

4. F. Dell'Oro, *Global attractors for strongly damped wave equations with subcritical-critical nonlinearities*, Commun. Pure Appl. Anal. **12** (2013), 1015–1027

3. F. Dell'Oro and V. Pata, *Memory relaxation of type III thermoelastic extensible beams and Berger plates*, Evol. Equ. Control Theory **1** (2012), 251–270

2. F. Dell'Oro and V. Pata, *Strongly damped wave equations with critical nonlinearities*, Nonlinear Anal. **75** (2012), 5723–5735

1. F. Dell'Oro and V. Pata, *Long-term analysis of strongly damped nonlinear wave equations*, Nonlinearity **24** (2011), 3413–3435

Preprints

2. F. Dell'Oro, L. Paunonen and D. Seifert, *Optimal decay for a wave-heat system with Coleman-Gurtin thermal law*, submitted

1. F. Dell'Oro, *On the stability of Bresse and Timoshenko systems with hyperbolic heat conduction*, submitted

Visiting Appointments

May 14–24, 2017	Université de Picardie Jules Verne, Amiens, France
Feb 27–Mar 15, 2015	Politecnico di Milano, Milano, Italy
Nov 22–29, 2013	University of Surrey, Guildford, United Kingdom
Dec 1–8, 2012	Université de Picardie Jules Verne, Amiens, France
Jun 30–Sep 29, 2012	Laboratório Nacional de Computacão Científica, Petrópolis, Rio de Janeiro, Brazil

Talks at Conferences

Sep 4, 2019	XXI Congresso dell'Unione Matematica Italiana, Pavia, Italy Title: *Dissipative linear evolution equations of second order*
May 15, 2019	7th AMARENA Days - Amiens-Milano-Poitiers Reunion on Numerical and Mathematical Analysis, Amiens, France Title: *Asymptotic behavior of Benjamin-Bona-Mahony equations with dissipative memory*
Feb 21, 2019	Decima Giornata di Studio Università di Pavia - Politecnico di Milano, Equazioni Differenziali e Calcolo delle Variazioni, Milano, Italy Title: *Second order linear evolution equations with general dissipation*
Oct 1, 2018	Semigroups of Operators: Theory and Applications, Kazimierz Dolny, Poland Title:*Decay properties of dissipative systems of linear thermoelasticity and viscoelasticity*
Jul 24, 2018	IFIP TC 7 Conference on System Modelling and Optimization, Essen, Germany Title: *On the Moore-Gibson-Thompson equation and its memory relaxation*
Jul 7, 2018	The 12th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Taipei, Taiwan Title: *A semidiscrete numerical method for the Gurtin-Pipkin equation*
Jul 6, 2018	The 12th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Taipei, Taiwan Title: *A quantitative Riemann-Lebesgue lemma with application to equations with memory*
May 4, 2018	6th AMARENA Days - Amiens-Milano-Poitiers Reunion on Numerical and Mathematical Analysis, Amiens, France Title: *Semidiscrete schemes for evolution equations with memory*
May 16, 2017	5th AMARENA Days - Amiens-Milano-Poitiers Reunion on Numerical and Mathematical Analysis, Amiens, France Title: *Longterm dynamics of Moore-Gibson-Thompson equations*

Sep 14, 2016	XIII SIMAI Biannual Congress, Milano, Italy Title: *Elastically-coupled double-beam systems: analysis of the steady states*
Sep 13, 2016	XIII SIMAI Biannual Congress, Milano, Italy Title: *The Moore-Gibson-Thompson equation with memory in the critical case*
Jul 25, 2016	14th International Conference on Integral Methods in Science and Engineering, Padova, Italy Title: *Analysis of the steady states of elastically-coupled nonlinear double-beam systems*
Jul 14, 2015	Infinite-Dimensional Dynamics, Dissipative Systems, and Attractors, Nizhny Novgorod, Russia Title: *Stability analysis of abstract systems of Timoshenko type*
Jul 1, 2015	CIME Course "Mathematical Thermodynamics of Complex Fluids", Cetraro, Italy Title: *On the energy inequality for weak solutions to the Navier-Stokes equations of compressible fluids on unbounded domains*
Jul 10, 2014	The 10th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Madrid, Spain Title: *Asymptotic behavior of a generalization of the Caginalp phase-field system*
Sep 10, 2013	XII Workshop on Partial Differential Equations, Petrópolis, Brazil Title: *Asymptotic behavior of coupled linear systems modeling suspension bridges*
Aug 28, 2012	XI Workshop on Partial Differential Equations, Rio de Janeiro, Brazil Title: *Global attractors for strongly damped nonlinear wave equations*
Jul 1, 2012	The 9th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Orlando, Florida, USA Title: *Long-term analysis of strongly damped nonlinear wave equations*
Apr 17, 2012	Mathematical Models and Analytical Problems in Special Materials, Roma, Italy Title: *Type III thermoelastic beams and plates with memory*

Talks at Universities or Research Centers

May 22, 2017	Université de Picardie Jules Verne, Amiens, France Title: *On the stability of abstract systems arising from thermoelasticity and viscoelasticity*
Mar 29, 2017	Politecnico di Milano, Milano, Italy Title: *Asymptotic analysis of linear Moore-Gibson-Thompson equations*
Nov 3, 2015	Institute of Mathematics of the Czech Academy of Sciences, Prague, Czech Republic Title: *Energy inequality in differential form for weak solutions to the compressible Naver-Stokes equations on unbounded domains*
Mar 6, 2015	Politecnico di Milano, Milano, Italy Title: *Exponential stability for thermoelastic Bresse systems with nonclassical heat conduction*
Nov 4, 2014	Institute of Mathematics of the Czech Academy of Sciences, Prague, Czech Republic Title: *Asymptotic analysis of thermoelastic systems with Gurtin-Pipkin thermal law*
Nov 29, 2013	University of Surrey, Guildford, United Kingdom Title: *On the stability of Timoshenko systems with Gurtin-Pipkin thermal law*
Dec 6, 2012	Université de Picardie Jules Verne, Amiens, France Title: *Asymptotic behavior of nonlinear wave equations with strong damping*

Nov 16, 2012	Politecnico di Milano, Milano, Italy Title: *Exponential and polynomial stability of linear semigroups and applications*
Jan 13, 2012	Politecnico di Milano, Milano, Italy Title: *Gronwall type lemmas and applications*

Teaching Experience

Fall 2020	Mathematical Analysis 2 Politecnico di Milano, MSc in Building Engineering/Architecture
Fall 2020	Mathematical Analysis 1 and Geometry Politecnico di Milano, BSc in Chemical, Materials and Nanotechnology Engineering
Fall 2019	Mathematical Analysis 2 Politecnico di Milano, MSc in Building Engineering/Architecture
Fall 2019	Real and Functional Analysis (recitation) Politecnico di Milano, MSc in Mathematical Engineering
Spring 2019	Mathematical Analysis 2 Politecnico di Milano, BSc in Management and Production Engineering
Spring 2019	Decay Properties of Linear Evolution Equations Politecnico di Milano, PhD in Mathematical Models and Methods in Engineering
Fall 2018	Mathematical Analysis 2 Politecnico di Milano, MSc in Building Engineering/Architecture
Fall 2018	Mathematical Analysis 1 (recitation) Politecnico di Milano, BSc in Electrical, Automation, Telecommunications, Electronic and Computing Systems Engineering
Fall 2017	Mathematical Analysis 2 Politecnico di Milano, MSc in Building Engineering/Architecture
Fall 2017	Mathematical Analysis 1 (recitation) Politecnico di Milano, BSc in Electrical, Automation, Telecommunications, Electronic and Computing Systems Engineering
Fall 2016	Mathematical Analysis 2 Politecnico di Milano, MSc in Building Engineering/Architecture
Fall 2016	Mathematical Analysis 1 (recitation) Politecnico di Milano, BSc in Electrical, Automation, Telecommunications, Electronic and Computing Systems Engineering
Spring 2016	Mathematical Analysis 2 Politecnico di Milano, BSc in Management and Production Engineering
Fall 2013	Mathematical Analysis 1 and Geometry (recitation) Politecnico di Milano, BSc in Industrial Production Engineering
Fall 2012	Real and Functional Analysis (recitation) Politecnico di Milano, MSc in Mathematical Engineering
Fall 2012	Mathematical Analysis 1 and Geometry (recitation) Politecnico di Milano, BSc in Industrial Production Engineering
Fall 2011	Mathematical Analysis 1 and Geometry (recitation) Politecnico di Milano, BSc in Industrial Production Engineering

Professional Service

Aug 2016	Co-organizer of the special session "New developments in nonlinear evolutionary PDEs", 1st Joint Meeting Brazil-Italy in Mathematics, Rio de Janeiro, Brazil

Since 2013   Referee for several international journals including:
             Acta Applicandae Mathematicae, Applicable Analysis, Applied Mathematics
             and Optimization, Asymptotic Analysis, Communications on Pure and Applied
             Analysis, Discrete and Continuous Dynamical Systems Series A, Evolution
             Equations and Control Theory, Journal of Differential Equations, Journal of
             Evolution Equations, Journal of Hyperbolic Differential Equations, Journal
             of Mathematical Analysis and Applications, Mathematical Methods in the
             Applied Sciences, Mathematical Models and Methods in Applied Sciences,
             Mathematische Nachrichten, Milan Journal of Mathematics, Nonlinear Analysis,
             Proceedings of the Royal Society of Edinburgh: Section A, Transactions of the
             American Mathematical Society, Zeitschrift für angewandte Mathematik und
             Physik

Since 2013   Reviewer for "Mathematical Reviews"