

Personal data and contact information

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Education

- B.S. in Mathematics, University of Bologna (Italy), 02/1992
- Ph.D. in Mathematics, Functional Analysis and Applications, SISSA, Trieste (Italy), 11/1995

Academic appointments

- University of L'Aquila, 12/2014 – present: Associate professor
- University of L'Aquila (Italy), 10/2002 – 12/2014: Assistant professor
- University of Milan (Italy), 05/1996 – 09/2002: Assistant professor

Qualifications

- National Scientific Qualification (Italian) to full Professor, 12/2013
- Qualification to Professor, France, 2014

Research Area

- Partial Differential Equations of Hyperbolic type;
- Hyperbolic Systems of Conservation Laws;
- Relaxation Limits and Asymptotic Behavior of Conservation Laws.

12 selected publications:

- D.A., S.-Y. Ha, J. Park. *On the global well-posedness of BV weak solutions to the Kuramoto–Sakaguchi equation*, J. Differential Equations **262** (2017), 978–1022
- D.A., L. Gosse. *Stringent error estimates for one-dimensional, space-dependent 2×2 relaxation systems*, Ann. Inst. H. Poincaré Anal. Non Linéaire **33** (2016), 621–654
- (Monograph) D.A., L. Gosse. *Error Estimates for Well-Balanced Schemes on Simple Balance Laws. One-Dimensional Position-Dependent Models*. SpringerBriefs in Math., 2015
- D.A., P. Baiti, A. Corli, E. Dal Santo. *Global weak solutions for a model of two-phase flow with a single interface*, J. Evol. Equ. **15** (2015), 699–726
- D.A., L. Gosse. *Transient L^1 error estimates for well-balanced schemes on non-resonant scalar balance laws*, J. Differential Equations **255** (2013), 469–502
- D.A., W. Shen. *An Integro-Differential Conservation Law arising in a Model of Granular Flow*, J. Hyperbolic Differ. Equ. **9** (1) (2012), 1–27

- D.A., W. Shen. *The Slow Erosion Limit in a Model of Granular Flow*, Arch. Ration. Mech. Anal. **199** (2011), 1–31
- D.A., W. Shen. *Global Existence of Large BV Solutions in a Model of Granular Flow*, Comm. Partial Differential Equations **34** (2009), 1003–1040
- D.A., A. Corli. *On a model of multiphase flow*, SIAM J. Math. Anal. **40** (2008), 134–166
- D.A., L. Gosse, G. Guerra. *Global BV entropy solutions and uniqueness for hyperbolic systems of balance laws*, Archive for Rational Mechanics and Analysis **162** (2002), 327–366
- D.A., G. Guerra. *Uniqueness and continuous dependence for systems of balance laws with dissipation*, Nonlinear Analysis TMA, Ser. A: Theory and Methods **49** (2002), 987–1014
- D.A. *Initial-boundary value problems for systems of conservation laws*, NoDEA – Nonlinear Differential Equations and Applications **4** (1997), 1–42

Funded projects (as PI)

- GNAMPA 2018 research project “*Equazioni iperboliche e applicazioni*”;
- GNAMPA 2015 research project “*Sistemi iperbolici dissipativi di leggi di bilancio*”;
- GNAMPA 2005 research project “*Analisi Asintotica Per Sistemi Iperbolici Nonlineari*”.

PhD supervision

- K.A. Gyamfi (Gen. 2018–current), University of L’Aquila
- F.A. Aqel (Nov. 2016–current), University of L’Aquila
- S. Ferrari, 2002, University of Milan (with Prof. F. Saleri)

Organization of conferences and editorial activity

- Scientific committee: *HYP2014*, Rio de Janeiro, 2014
- Some organizing committee: *10th meeting on Hyperbolic Conservation Laws: Recent results and Research perspectives*, L’Aquila 07/2013; *HYP2012*, Padova, 06/2012
- Referee for the journals: *Abstr. Appl. Anal.*, *Appl. Math. Comput.*, *Chin. Ann. Math. Ser. B*, *Commun. Math. Sci.*, *Comm. Partial Differential Equations*, *Discrete Contin. Dyn. Systems*, *Electronic J. Differential Equations*, *J. Differential Equations*, *J. Evol. Equ.*, *J. Funct. Anal.*, *J. Hyper. Differ. Equ.*, *J. Math. Anal. Appl.*, *J. Math. Phys.*, *Math. Biosci. Eng.*, *Mathematical Modelling and Analysis*, *Math. Models Methods Appl. Sci.*, *Netw. Heterog. Media*, *Nonlinear Anal. TMA*, *Nonlinear Anal. Real World Appl.*, *NoDEA*, *Proc. Roy. Soc. Edinburgh Sect. A*, *Rev. Colombiana Mat.*, *Shock Waves*, *SIAM J. Appl. Math.*, *SIAM J. Math. Anal.*, *SIAM J. Num. Anal.*, *Taiwanese J. Math.*, *Trans. AMS*, *Z. Angew. Math. Phys.*

Recent invited talks at meetings

- Interactive workshop on hyperbolic equations, Ferrara, 10–12/09/2018
- CMC conference: Nonlinear dynamics of many-body systems and related topics, Seoul, 21–24/08/2017
- *HYP2016*, Aachen, 1–5/08/2016