

Paolo Falsaperla



Paolo FALSAPERLA, born in Catania (Italy) on 27/09/1965, Degree in Physics in 1992 in the University of Catania with 110/110 cum laude, PhD in Matematica per la Tecnologia in the University of Catania, presently Associate Professor SSD MAT/07 in the Department of Mathematics and Computer Science.
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Teaching

Lessons and tutoring in the course *Istituzioni di Fisica Matematica* (A.A. 2010-11 e 2011-12), Laurea Magistrale in Matematica dell'Università di Catania. Lessons in *Istituzioni di Matematica* (A.A. 2011-12), course di Laurea in Scienze Biologiche. (Bando n. 5018 del 2011). Course lecturer for *Sistemi Dinamici* del Corso di Laurea Triennale in Matematica (A.A. 2012-13 e 2013-14). Course lecturer for *Fisica Matematica* del Corso di Laurea Triennale in Ingegneria Industriale (A.A. 2013-14, 2013-14, 2014-15, 2019-20, 2020-21, 2021-22, 2022-23.). Course lecturer for *Advanced Mathematical Methods for Physics* del Corso di Laurea Magistrale in Physics (A.A. 2018-19, 2019-20). Course lecturer for *Matematica e Statistica - Informatica (modulo di Matematica e Statistica)* del Corso di Laurea Triennale in Scienze Farmaceutiche Applicate (Canale AL A.A. 2018-19, Canale MZ A.A. 2018-19, 2019-20, 2020-21, 2021-22, 2022-23). "*Corsi Zero*" di Matematica (vari A.A.). Course lecturer for *Metodi Analitici per l'Ingegneria I* del Corso di Laurea a Ciclo unico in Ingegneria Edile-Architettura (A.A. 2015-2016, 2016-2017, 2017-2018).

Other scientific activities

- Coordinator of "Progetto Giovani Ricercatori" of GNFM in 2013.
- Coordinator of a PRA (Progetto di Ricerca dell'Ateneo) of the university of Catania in the DMI, for years 2017-2018.
- Referee for international Journals "Fluid Dynamics Research", "Journal of Fluid Mechanics", "Mechanics Research Communication", "International Journal of Heat and Mass Transfer", "Special Topic and Reviews in Porous Media", "International Journal of Applied Mathematics" "Italian Journal of Pure and Applied Mathematics", "Continuum Mechanics and Thermodynamics", "Transport in Porous Media", "Proceedings of the Royal Society A", "Fluids"
- Member of the organizing committee of the international conferences: CICAM5, 27-30 Settembre 2010, Capomulini (CT), www.dmi.unict.it/cicam5/; WASCOM13, 17-21 Giugno 2013, Levico (TN), www.dmi.unict.it/wascom2013/; CICAM7, 8-11 Settembre 2014, Cinisi (PA), www.math.unipa.it/~cicam7/; Current Problems in fluid-

dynamics and non-equilibrium thermodynamics, 18-20 Dicembre 2014, Bressanone (BZ), www.dmi.unict.it/bressanone/, WASCOM21, 6-10 Giugno 2022, Catania (CT), www.dmi.unict.it/wascom2021/;

- Over 30 scientific communications to international conferences.

Selected papers

- 1) P. Falsaperla, G. Mulone, C. Perrone (2022). *Energy stability of plane Couette and Poiseuille flows: A conjecture*, European Journal of Mechanics, B/Fluids, **93**, 93-100 DOI: 10.1016/j.euromechflu.2022.01.006
- 2) P. Falsaperla, A. Giacobbe, G. Mulone (2019). *Nonlinear stability results for plane Couette and Poiseuille flows*, Physical Review E, **100** (1), 013113. DOI: 10.1103/PhysRevE.100.013113
- 3) P. Falsaperla, G. Mulone, B. Straughan (2017). *Bidispersive inclined convection*, Proceedings of the Royal Society of London A, **472** (2192), 20160480. DOI: 10.1098/rspa.2016.0480
- 4) P. Falsaperla, A. Giacobbe, G. Mulone (2012). *Does symmetry of the operator of a dynamical system help stability?* Acta Applicandae Mathematicae **122** (1), 239–253 . doi:10.1007/s10440-012-9740-0.
- 5) P. Falsaperla, A. Giacobbe, G. Mulone (2012). *Double diffusion in rotating porous media under general boundary conditions*. International Journal of Heat and Mass Transfer **55** n.9-10, 2412–2419. doi:10.1016/j.ijheatmasstransfer.2011.12.035.
- 6) P. Falsaperla, G. Mulone (2010). *Stability in the rotating Bénard problem with Newton-Robin and fixed heat flux boundary conditions*. Mechanics Research Communications **37**, 122. doi:10.1016/j.mechrescom.2009.11.002.
- 7) P. Falsaperla, G. Fonte (2003). *On the motion of a single particle near a nodal line in the de Broglie-Bohm interpretation of quantum mechanics*. Physics Letters A **316/6**, 382. doi:10.1016/j.physleta.2003.08.010.
- 8) M. Trovato, P. Falsaperla, L. Reggiani (1999). *Maximum entropy principle for nonparabolic hydrodynamic transport in semiconductors*. Journal of Applied Physics **86** n.10, 5906. doi:10.1063/1.371610.
- 9) M. Trovato, P. Falsaperla (1998). *Full nonlinear closure for a hydrodynamic model of transport in silicon*. Physical Review B **57** n.8, 4456. doi:10.1103/PhysRevB.57.4456.
- 10) G. Fonte, P. Falsaperla, G. Schiffrer, D. Stanzial (1990). *Quadratic Zeeman effect for hydrogen: A Method for rigorous bound-state error estimates*. Physical Review A **41**, 5807. doi:10.1103/PhysRevA.41.5807.

Bibliometric indices

As of December 2022 for all my publications on scientific journals: the Scopus database finds **39** documents with **360** citations and an h-index **11**; the ISI-WoK database finds **41** documents with **329** citations and an h-index **12**.

Curriculum updated on December 21, 2022