

Felice Iandoli

CONTACT INFORMATION

Laboratoire Jacques Louis Lions
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RESEARCH INTERESTS

Microlocal Analysis, Dispersive Estimates, Wave and Schrödinger Equations, Dynamical Systems, Nonlinear Dispersive PDEs, Normal Forms

CAREER AND EDUCATION

Laboratoire J.L. Lions, Sorbonne Université

Post-doctoral researcher funded by ERC ANADEL, *starting from October 1-st, 2019.*

Laboratoire J.A. Dieudonné, Université de Nice

Post-doctoral researcher funded by ERC ANADEL, *November 1-st, 2018-30 September, 2019.*

SISSA

Ph.D. in Mathematical analysis, models and applications.

The thesis has been defended on 26/09/2018, the examination has been passed *cum laude*.

- Title of the thesis: Local and almost global solutions for fully-nonlinear Schrödinger equations on the circle
- Advisors: Prof. Massimiliano Berti and Dr. Roberto Feola

University of Pisa

Master degree in mathematics, grade: 110/110 *cum laude*

- Title of dissertation: Teoria di scattering per NLS (eng: Scattering theory for NLS)
- Advisor: Prof. Nicola Visciglia

PUBLICATIONS

- 1) F. IANDOLI, R. Scandone, *Dispersive estimates for Schrödinger operators with point interactions in \mathbb{R}^3* , **Advances in Quantum Mechanics: Contemporary Trends and Open Problems**, A. Michelangeli and G. Dell'Antonio, eds., Springer INdAM Series, vol. 18, Springer International Publishing, (2017).
- 2) R. Feola, F. IANDOLI, *Local well-posedness for quasi-linear NLS with large Cauchy data on the circle*, **Annales de l'Institut Henri Poincaré (C) Non Linear Analysis**, (1) Vol 36: 119-164, (2019).
- 3) R. Feola, F. IANDOLI, *Long time existence for fully nonlinear NLS with small Cauchy data on the circle*, **Ann. Sc Norm. Pisa Cl. Sci.** (5), Vol XXII, 109-182, (2021).
- 4) J., Bernier, R. Feola, B. Grébert, F. IANDOLI, *Long-time existence for semi-linear beam equations on irrational tori*, **J. Dyn. Diff. Equat.** (3), Vol 33, 1363-1398, (2021).
- 5) R. Feola, F. IANDOLI, *A non-linear Egorov theorem and Poincaré-Birkhoff normal forms for quasi-linear pdes on the circle*, preprint: arxiv.org/abs/2002.12448, (2020).
- 6) R. Feola, F. IANDOLI, *Local well-posedness for the quasi-linear Hamiltonian Schrödinger equation on tori*, **Journal de Mathématiques pures et appliquées**, Vol 157, 243-281
- 7) R. Feola, B. Grébert, F. IANDOLI, *Long time solutions for quasi-linear Hamiltonian perturbations of Schrödinger and Klein-Gordon equations on tori*, (**Accepted on Analysis and PDES**), preprint: arxiv.org/abs/2009.07553, (2022).
- 8) R. Feola, F. IANDOLI, F. Murgante, *Long-time stability of the quantum hydrodynamical system on irrational tori*, **Math. in Engineering**, (3), Vol 4, 1-24, (2022).

- 9) F. IANDOLI, O. Ivanovici, *Dispersive estimates for the wave equation outside of a cylinder in \mathbb{R}^3*
- 10) F. Iandoli, *On the Cauchy problem for quasi-linear Hamiltonian KdV-type equations*, preprint.

INVITED CONFERENCES

Invited speaker at:

- *Dynamics of nonlinear dispersive PDE's*, February 2018, La Thuile, Italy, Invited by Prof. Nicola Visciglia.
- *Nonlinear Dispersive PDE's*, October 2018, Università Sapienza, Rome, Italy, Invited by Prof. Oana Ivanovici.
- *Hamiltonian PDEs and nonlinear waves*, February 2019, La Thuile, Italy, Invited by Dr. David Lafontaine.
- *Nonlinear waves and Hamiltonian PDEs*, February 2022, La Thuile, Italy, Invited by Dr. David Lafontaine.
- *Journées jeunes EDPistes 2022*, March 2022, Lyon, France, Invited by Dragos Iftmie.

SEMINARS

- *Existence en temps grand pour l'équation de Klein-Gordon sur les tores*, 2021, Séminaire à l'Université de Cergy Paris.
- *Existence en temps grand pour l'équation de Klein-Gordon sur les tores*, 2022, Séminaire à l'Université de Besançon. (cancelled)
- *Local and almost global solutions for quasi-linear Schrödinger equations*, 2020, Séminaire Enriques-Lebesgue, Milano-Nantes, via ZOOM.
- *Long time existence for small solutions of Hamiltonian or reversible quasilinear equations on the circle*, 2020, Séminaire de l'équipe EDP, IECL, Nancy, France.
- *Long time solutions for the fully-nonlinear NLS on the circle*, 2020, Séminaire du LAGA, Paris 13, Paris, France.
- *Local and almost global solutions for fully non-linear Schrödinger equations on the circle*, 2018, Laboratoire J.A. Dieudonné, Nice, France.
- *On the quasi-linear Schrödinger equations on the circle*, 2018, Università di Pisa, Pisa, Italy.

VISITING RESEARCHER

From October 1-st, to 31 October, 2018, Laboratoire J.A. Dieudonné, Nice, France, Invited by Prof. Oana Ivanovici.

ATTENDED CONFERENCES

- *Normal forms and large time behavior for nonlinear PDE*, 2015, IHES, Bures-sur-Yvette, France.
- *Nonlinear Waves 2016: Summer School*, 2016, Centre Henri Lebesgue, Nantes, France.
- *Hamiltonian Dynamics, PDE's and Waves on the Amalfi coast*, 2016, Maiori, Italy.
- *Winter School "Dynamics and PDE's"*, 2017, Saint-Etienne de Tinée, France.
- *Linear and Nonlinear Wave Phenomena: Stability, Propagation of Regularity and Turbulence*, 2018, Cortona, Italy.
- *Quantum Resonances and Related Topics (conference in honor of André Martinez)*, 2019, Paris, France.
- *Dispersive Waves and Related Topics (conference in honor of Gilles Lebeau)*, 2019, Bergen, Norway.
- *New Trends in Propagation of Linear and Nonlinear Wave Phenomena*, 2019, Erice, Italy.
- *Journées équations aux dérivées partielles*, 2021, Obernai, France.
- *Qualitative properties of dispersive PDEs*, 2021, Rome, Italy.

EXPERIENCE AS A PEER-REVIEWER	Discrete and continuous dynamical systems, Mathematics in Engineering, MDPI Mathematics
TEACHING (IN FRENCH)	36h (exercises): <i>Séries et Séries de fonctions</i> , 2020-2021, (Sorbonne U.), L2 36h (exercises): <i>Équations différentielles</i> , 2020-2021, (Sorbonne U.), L2 36h (exercises): <i>Topologie et calcul différentiel</i> , 2021-2022, (Sorbonne U.), L2 36h (exercises): <i>Math. pour les études scientifiques II</i> , 2021-2022, (Sorbonne U.), L1
ADMINISTRATIVE RESPONSABILITIES	Postdoctoral representative 2020-2021 and 2021-2022 at the Laboratoire Jacques Louis Lions
SPOKEN LANGUAGES	<ul style="list-style-type: none"> • Italian: mother tongue • English: Full professional proficiency • French: Bilingual proficiency