

Francesco Grotto

Curriculum Vitæ

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Italy

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Education

- Nov. 2017– **PhD student (Allievo Perfezionando)**, *Scuola Normale Superiore*.
Current student, advisor Franco Flandoli.
- 2012–2017 **Undergraduate student (Studente Ordinario)**, *Scuola Normale Superiore*.
- 2015–2017 **MSc in Mathematics (Laurea Magistrale in Matematica)**, *University of Pisa*.
Final mark 110/110 *cum laude*.
- 2012–2015 **BSc in Mathematics (Laurea Triennale in Matematica)**, *University of Pisa*.
Final mark 110/110 *cum laude*.
- 2007–2012 **High School (Liceo Scientifico)**, *Liceo G.G. Trissino*, Valdagno.
Final mark 100/100.

Publications

- preprint 2020 *Gaussian invariant measures and stationary solutions of 2D Primitive Equations*, joint work with Umberto Pappalettera, arXiv:2005.03339, submitted to Discrete and Continuous Dynamical Systems Series B
- preprint 2020 *Equilibrium Statistical Mechanics of Barotropic Quasi-Geostrophic Equations*, joint work with Umberto Pappalettera, arXiv:2002.02853, submitted to Infinite Dimensional Analysis, Quantum Probability and Related Topics
- preprint 2020 *Decay of Correlation Rate in the Mean Field Limit of Point Vortices Ensembles*, joint work with Marco Romito, arXiv:2001.04882, to appear on Stochastics and Dynamics
- paper 2019 *Essential Self-Adjointness of Liouville Operator for 2D Euler Point Vortices*, Journal of Functional Analysis, <https://doi.org/10.1016/j.jfa.2020.108635>
- paper 2019 *Fokker-Planck equation for dissipative 2D Euler equations with cylindrical noise*, joint work with Franco Flandoli and Dejun Luo, arXiv:1907.01994, to appear on Theory of Probability and Mathematical Statistics
- paper 2019 *A Central Limit Theorem for Gibbsian Invariant Measures of 2D Euler Equation*, joint work with Marco Romito, Communication Mathematical Physics, <https://doi.org/10.1007/s00220-020-03724-1>
- preprint 2019 *Stationary Solutions of Damped Stochastic 2-dimensional Euler's Equation*, arXiv:1901.06744, under revision Electronic Journal Probability

Bachelor and Master thesis

- Master thesis *Energy solutions for the stationary KPZ equation*.

supervisor Franco Flandoli
Bachelor Thesis *Probabilistic Methods in the study of Kolmogorov-Petrovsky-Piskunov equation.*
supervisors Franco Flandoli, Marco Romito

Languages

Italian Mother tongue
English Fluent
French Basic

Computer skills

OS Linux, Microsoft Windows
software Latex, Octave/Matlab, Mathematica, Microsoft Office
programming C++ (basic knowledge)
languages

Teaching

2020 Teaching assistant at Università di Pisa for *Istituzioni di Probabilità* course (Stochastic Analysis).
2019-2020 Teaching assistant at Scuola Normale Superiore for *Introduzione ai Sistemi dinamici* and course (Introduction to Dynamical Systems).
2018-2020
2017-2018 Student tutor at Scuola Normale Superiore for *Complementi di Matematica* course (Basic Set Theory, Calculus).

Talks and Conferences

Talk *CLT for Point Vortices and 2D Euler Invariant Measures*, Workshop: Stochastic Fluid Dynamics in Junior Trimester Program "Randomness, PDEs and Nonlinear Fluctuations", Hausdorff Research Institute for Mathematics, Bonn, 15th November 2019
Poster *CLT for Gibbsian Invariant Measures of 2D Euler Equation*, Summer School "New Frontiers in Singular SPDEs and Scaling Limits", Hausdorff Research Institute for Mathematics, Bonn, 24th September 2019
Talk *Poissonian Solutions of Damped Stochastic 2D Euler equation*, Recent Trends in Stochastic Analysis and SPDEs, Università di Pisa, 19th July 2019
Talk *Fluctuations of point vortices and 2D Euler invariant measures*, Second Italian Meeting on Probability and Mathematical Statistics, Vietri sul Mare, 17th June 2019
Poster *CLT for Gibbsian Invariant Measures of 2D Euler Equation*, Equilibrium and non-equilibrium statistical mechanics, Villa Finaly, Firenze, 8th April 2019

Talk *Regularisation for stationary Stochastic Burgers Equation*, Università di Pisa, 9th May 2017 (concerning topics of Master's Thesis)

Miscellaneous

- 2017 Collaborator as proofreader with *Annali della Scuola Normale Superiore, Classe di Scienze*.
- 2010 1st place in *IV Certamen Europa Latina* (translation contest in modern Latin).