Curriculum Vitae
Stefano Marchesani

Education

2013–2017	DPhil in Mathematics, University of Oxford - OxPDE Group.
2011–2013	Master's degree in Theoretical Physics (110 cum Laude), Università di Roma Tor Vergata.
2008–2011	Bachelor's degree in Physics (110 cum Laude), Università di Roma Tor Vergata.

Languages

Italian	Native speaker
English	**TOEFL: score 105/120**
French	Good

Research Area

My research focuses on hydrodynamic limits of Hamiltonian systems inspired by physical models. In particular I am interested in finding solutions to systems of nonlinear hyperbolic PDEs in shock regime from a microscopic point of view. This not only provides a method to obtain existence of solutions for systems of PDEs, but is also used to study the Physics of macroscopic systems, with particular emphasis on their Thermodynamics.

List of Publication

- Published Articles

    (1) S Marchesani *Hydrodynamic limit for a diffusive system with boundary conditions*, ALEA, Lat. Am. J. Probab. Math. Stat. 18, 107127, DOI: 10.30757/ALEA.v18-06, 2021

    (2) S Marchesani and S Olla *On the existence of L^2-valued thermodynamic entropy solutions for a hyperbolic system with boundary conditions*, Communications in Partial Differential Equations, DOI: 10.1080/03605302.2020.1750426, 2020

    (3) L Alasio and S Marchesani *Global existence for a class of viscous systems of conservation laws*, Nonlinear Differ. Equ. Appl. 26:32. https://doi.org/10.1007/s00030-019-0577-3, 2019

    (4) S Marchesani and S Olla *Hydrodynamic Limit for an Anharmonic Chain Under Boundary Tension*, Nonlinearity, 31(11):4979, 2018

- Preprints

  (1) S Marchesani and S Olla *Hydrodynamics Limits and Clausius inequality for Isothermal Nonlinear Elastodynamics with Boundary Tension*, https://arxiv.org/abs/1911.13167, 2020

  (2) S Marchesani, S Olla and L Xu *Quasi-static limit for a hyperbolic conservation law*, https://arxiv.org/abs/2103.06753

  (3) A De Masi, S Marchesani, S Olla and L Xu *Quasi-static limit for the asymmetric simple exclusion*, https://arxiv.org/abs/2103.08019

Professional Experience

2021-present	**Data Scientist** Luxottica S.p.a., Agordo
2018-2021	**Postdoc in Mathematics** Gran Sasso Science Institute, L'Aquila
2020	**Tutorship** Università dell'Aquila Subject taught: Analisi II
2017-2018	**High School Teacher of Mathematics, Physics and Computer Science** Complesso Scolastico Seraphicum and Istituto San Gabriele, Rome
2016-2017	**College Lecturer, University of Oxford** During the Academic Year 2016/2017 I worked as College Lecturer for Worcester College. The subjects I taught were first year Linear Algebra, Analysis and Integration.
2016	**Teaching Assistant, University of Oxford** In Hilary term 2016 I worked as a Teaching Assistant for B4.2 Hilbert Spaces under the supervision of Richard Earl.
2015	**Class Tutor, University of Oxford** In Michaelmas term 2015 I worked as a Class Tutor for the graduate PDE CDT course Measure Theory and Probability.
2015	**Class Tutor, University of Oxford** In Michaelmas term 2015 I worked as a Class Tutor for C5.3 Statistical Mechanics, under the supervision of Andrew Fowler.
2015	**Teaching Assistant, University of Oxford** In Michaelmas term 2015 I worked as a Teaching Assistant for C7.2 Electromagnetism, under the supervision of Luis Fernando Alday, Pietro Benetti Genolini and Mathew Bullimore.
2015	**Class Tutor, University of Oxford** In Hilary term 2015 I worked as a Class Tutor for B7.1 Classical Mechanics, under the supervision of James Sparks.
2014	**Organising Prof. Chen's Nonlinear PDE seminars** Michaelmas term 2014.
2014	**Teaching Assistant, University of Oxford.** In Michaelmas term 2014 I worked as a Teaching Assistants for C7.2 Electromagnetism, under the supervision of Luis Fernando Alday and Agnese Bissi.
2014	**Short Course on Stochastic Dynamics** From the 28th June to the 2nd of July I attended the *Short Course in Stochastic Dynamics, Filtering and Rare Events* at the University of Warwick.
2014	**Teaching Assistant, University of Oxford.** In Hilary term 2014 I worked as Teaching Assistant for C7.6 General Relativity II, under the supervision of Xenia de la Ossa and Micheal Enciso.
2013	**Association to the Tor Vergata INFN (Italian National Institute of Nuclear Physics) Section.**

2013	**Tutorship, Università di Roma Tor Vergata.** In the second semester of the Academic year 2012/2013 I worked as a tutor for the Mathematics Master course *Analisi di Fourier - modulo 2* (Fourier Series, Fourier Transform, Tempered Distributions and DFT/FFT algorithms), under the supervision of Massimo Picardello.
2013	**Summer school, University of Crete.** During the month of April I attended the summer school *Non Perturbative Quantum Field Theories*, organised by Elias Kiritsis and Vasilis Niarchos in the University of Crete.
2012	**Tutorship, Università di Roma Tor Vergata.** In the second semester of the Academic year 2011/2012 I worked as a tutor for the Physics Bachelor courses *Fisica 2* (Electromagnetism and Special Relativity) and *Fisica 3* (Waves and Optics), under the supervision of Pietro Chiaradia.

Licences and Certifications

→ **IBM Data Science Professional Certificate** - IBM (issued by Coursera on April 2020). Completed courses:

1. What is Data Science?
2. Tools for Data Science
3. Data Science Methodology
4. Python for Data Science and AI
5. Databases and SQL for Data Science
6. Data Analysis with Python
7. Data Visualization with Python
8. Machine Learning with Python
9. Applied Data Science Capstone

→ **Machine Learning** - Stanford University (issued by Coursera on March 2020).

Fruther Skills

→ **Coding and softwares:**

- I am able to program in LaTeX, *C*, *C++* , *C#*, Python, *R*, *MATLAB* and *Mathematica*.
- I am able to write apps for iOS and MacOS machines using XCode (coding in Swift 3) and I am currently working on writing Android apps using Android Studio (coding in Java and XML).
- I am also proficient in using Word, Excel, Power Point and their MacOS equivalents.

Autorizzo il trattamento dei dati personali contenuti nel presente curriculum vitae ai sensi del D.Lgs. 196/2003 "Codice in materia di protezione dei dati personali".

Autorizzo la pubblicazione del presente curriculum vitae sul portale di Ateneo "Amministrazione trasparente" in ottemperanza al D.Lgs. 33/2013 e al D.Lgs. 97/2016.

Vasto, 07/07/2021
Stefano Marchesani