

# Ricardo Grande

## Curriculum Vitae

Dept. of Mathematics, Office 2-334  
MIT, Cambridge, MA 02139  
☎ (+1) 210 362 0805  
✉ [rgi@mit.edu](mailto:rgi@mit.edu)  
🌐 [math.mit.edu/~rgi/](http://math.mit.edu/~rgi/)

### Research Interests

Nonlinear Dispersive PDEs, Harmonic Analysis,  
Numerics and continuum limit of discrete models.

### Education

- 2015 - Present **PhD Candidate in Mathematics**, *Massachusetts Institute of Technology*.  
◦ *Advisor*: Gigliola Staffilani.  
◦ *Expected Graduation*: June 2020, *GPA*: 5.0/5.0.
- 2014 - 2015 **Master of Advanced Study in Mathematics**, *University of Cambridge*.  
◦ *Essay*: Averaging Lemmas and the X-ray transform.  
◦ *Directed by*: Clément Mouhot, *Grade*: Merit (First-class honours).
- 2010-2014 **Licenciatura en Matemáticas**, *Universidad del País Vasco (UPV-EHU)*.  
◦ Valedictorian Award, *Final grade*: 9.69/10.

### Publications

- R. Grande, K. Kurianski, G. Staffilani, *Well-posedness of the Dysthe equation*, in preparation.
- R. Grande, *Continuum limit for discrete NLS with memory effect*, preprint available at [arxiv.org/abs/1910.05681](https://arxiv.org/abs/1910.05681).
- R. Grande, *Space-time fractional Nonlinear Schrödinger equation*, *SIAM J. Math. Anal.*, 51(5), 4172-4212.
- R. Grande, I. Kovács, K. Kutnar, A. Malnič, L. Martínez, D. Marušič, *Equisizable partial sum families*, *Journal of Algebraic Combinatorics* (2019), <https://doi.org/10.1007/s10801-019-00875-w>.
- M. Conder, R. Grande, *On embeddings of circulant graphs*, *Electronic Journal of Combinatorics* 22 (2015), # P2.28.

### Conferences and Workshops

- Jan 2020 **Winter School: Turbulence in fluids and PDEs**, Lausanne. (Speaker.)
- Nov 2019 **Brown-BU-UMass Amherst seminar in PDE and Dynamics**, Brown University. (Speaker.)
- Nov 2018 **Gran Sasso Quantum Meeting: From Many Particle Systems to Quantum Fluids**, GSSI L'Aquila.
- Oct 2018 **FRG Meeting: Long-Term Dynamics of Nonlinear Dispersive and Hyperbolic Equations**, University of Chicago.
- May 2018 **Conference on Nonlinear Waves**, Brown University.

- May 2018 **School and Conference on Nonlinear Waves: Stability vs Turbulence**, celebrating the contributions of Jalal Shatah, Georgia Tech.
- Sept 2016 **FRG Conference in Dispersive and Wave equations**, MIT.
- July 2015 **BCAM Workshop on Harmonic Analysis and PDEs**, BCAM.
- July 2014 **10th AIMS Conference on Dynamical Systems, Differential Equations and Applications**, ICMAT.
- March 2014 **IV School of Functional Analysis and Applications**, Brownian Motion and Ito's formula, Universidad de Sevilla.

## Teaching Experience

- Fall 2019 **Grader** for 18.085 - Computational Science and Engineering I, MIT.
- Spring 2019 **Grader** for 18.615 - Introduction to Stochastic Processes, MIT.
- Summer 2018 **UROP+ Research Supervisor**, MIT.
  - *Student*: Zixuan Xu.
  - *Project*: Almost Conservation Laws for KdV and Cubic NLS.
- Spring 2018 **Recitation Instructor** for 18.03 - Differential Equations, MIT.
- Fall 2017 **Recitation Instructor** for 18.02 - Multivariable Calculus, MIT.
- Fall 2016 **Grader** for 18.085 - Computational Science and Engineering I, MIT.
- Summer 2016 **UROP+ Research Supervisor**, MIT.
  - *Student*: Eli Sadovnik.
  - *Project*: A Central Limit Theorem for Fluctuations of Internal Diffusion-Limited Aggregation with Multiple Sources.

## Awards and Fellowships

- 2015 **Summer internship position**, Basque Center for Applied Mathematics (BCAM).
  - *Advisor*: Luis Vega.
  - *Project*: Probabilistic interpretation of the Hardy uncertainty principle.
- 2014-2015 **La Caixa Europe Fellowship**, La Caixa Foundation.
  - Full funding of master degree at the University of Cambridge.
- 2013-2014 **Collaboration Scholarship**, Government of the Basque Country.
  - *Advisor*: Luis Escauriaza.
  - *Project*: Harmonic Analysis and applications.
- 2012 **Summer Research Scholarship**, University of Auckland.
  - *Advisor*: Marston Conder.
  - *Project*: Embeddings of circulant graphs.

## Languages

**Basque**, Mother tongue.

*Euskararen Gaitasun Agiria [C1], 2009.*

**Spanish**, Mother tongue.

**English**, Fluent.

*Certificate of Proficiency in English [C2], 2013.*

**Italian**, Good working knowledge.

**Portuguese**, Good working knowledge.

*Portuguese I-IV at MIT, 2017-18.*