

**Ricardo Grande**

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**Department of Applied Physics and Applied  
Mathematics**  
*Columbia University*

October 21, 2019

Dear Selection Committee,

I am writing because I would like to be considered for your advertised position of Assistant Professor, to begin in the academic year 2020-21.

I am a PhD student at the Massachusetts Institute of Technology, graduating in Spring 2020. My research is on dispersive partial differential equations and harmonic analysis. Some of my recent work has to do with the continuum limit of discrete NLS-type equations, as well as developing a local well-posedness theory for dispersive PDEs with a memory effect. A project I am currently working on concerns the modelization of oceanic rogue waves via the Dysthe equation, for which a rigorous local and global well-posedness theory on a two dimensional large box is missing, despite the promising physics literature. Given our common research interests, I am very excited about the possibility to interact with the faculty at Columbia, especially Prof. Weinstein.

During my years at MIT, I have had some teaching experience as a recitation instructor for multivariable calculus and for differential equations, I have held weekly problem sessions for a variety of other subjects, and I have mentored undergraduate students on intensive summer research projects. I have always received very positive teaching evaluations, and I am looking forward to further improving my teaching as I gain more experience.

A CV, a detailed research statement and a teaching statement are included with this application. Moreover, I have asked the following professors to submit a letter of recommendation:

- Luis Vega, Basque Center for Applied Mathematics.
- David Jerison, Massachusetts Institute of Technology.
- Gigliola Staffilani, Massachusetts Institute of Technology (thesis advisor).

Please do not hesitate to contact me should you have any questions. I look forward to hearing from you.

Sincerely,

**Ricardo Grande**