

Mathieu COLIN
Institut Mathématiques de Bordeaux
mcolin@math.u-bordeaux.fr

Talence, October, 24th, 2023

Objet : Recommendation letter for Rafael Galleze

To Prof. Yoldas

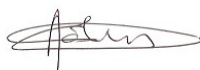
This letter is meant to support Rafael Galleze's application to a doctoral position in the Delft University of Technology in the field of mathematical analysis of PDE. It is a pleasure for me to write him a recommendation letter to support his application. I have a full professor position in Bordeaux INP and I am the head of Mathematics and Mechanics department of the engineering school Enseirb-Matmeca.

I met Rafael Galleze at the beginning of March 2023 when he asked me to do his Master 2 internship. After talking with him, I came up with a topic based on the stability of standing waves for a Schrödinger-Maxwell system posed in dimension 2 of space. The internship consisted in understanding P. L. Lions' concentration-compactness lemma and applying this lemma to solve the constrained minimization problem involved in the above-mentioned problem.

It's a difficult subject with a lot of understanding involved. In just three months, Rafael Galleze has done a remarkable job of getting to grips with the concentration-compactness method and the problems of minimization under constraints. He never gave up in the face of difficulty, proposing ways around it. He also showed an impressive capacity for work.

During this short period, I have already been able to appreciate Rafael Galleze's scientific qualities and determination, as well as his insight, working power and curiosity, which make him a remarkable student. I offered him the chance to continue working with me on this subject in the framework of a PhD. Unfortunately, he was not selected by the doctoral school for a grant (the school received many very good external applications). For all these reasons, I warmly recommend his application on your PhD's offer.

Sincerely,



Mathieu Colin



Vincent Bruneau
Professor
Vincent.Bruneau@u-bordeaux.fr

July 20, 2023

Recommendation Rafael GALLEZE
For a PhD position at TU Delft

I met Rafael Galleze in september 2019 when he joined the second year of the Bachelor's degree in Mathematics which I was in charge of. I since had the opportunity to supervise his Study and Research Project during the third year of his Bachelor's degree and I also gave the spectral analysis course during the second year of his Master's degree.

Rafael Galleze has always shown a strong interest in mathematics with great curiosity and specific knowledge on some subjects which he further studied in an autonomous way. In particular, I noticed this during his Study and Research Project on the Henstock-Kurzweil integration theory, which was not a topic covered during his past training course. Working independently and with engagement alongside two other students, he produced a very good Study and Research Project thesis.

During the Master's degree courses, Rafael Galleze has confirmed his serious and his investment in his studies. Through his knowledge acquired along the years, he has clearly shown particular interest in subjects relative to the calculus of variations, lagrangian and hamiltonian mechanics and fluid mechanics.

I am convinced that Rafael Galleze is strongly motivated to carry out a PhD program and that he has all the knowledge and ability that it takes to achieve good quality work. Therefore it is without doubt that I recommend his application.

Vincent Bruneau,