

Statement of Purpose

Presentation

My name is Víctor Ballester and I am currently enrolled in my last course in the Mathematics degree at the Autonomous University of Barcelona (UAB). For years I have been highly attracted to Mathematical Sciences, and more specifically in applied Mathematics and Physics. I consider myself a very determined as well as hard-working person. These qualities together with the friends relations that I have made during my last years have given me the power to become better in many aspects of my life, specially in Mathematics.

Current Studies

In high school I wanted to pursue a Double Degree in Physics and Mathematics, but finally I was admitted in the Mathematics degree at UAB.

I started my first university course with some uncertainty that soon was cleared up at the end of the first term. At that time I realized that my time to demonstrate my strength had just begun. At the end I ended up with an average mark of 8,81 (with two out of six honors).

I started my second year more encouraged and passionate and as the course progressed I realized that I was becoming better at Mathematics, with deeper critical thinking skills and an improved capacity in problem solving. I finished this year with an average mark of 9,30 (with six out of seven honors).

My third year was, in terms of marks, even better. I finished with average grade of 9,73 (with six out of eight honors).

Along these three years what I enjoyed the most is the branch of Applied Mathematics, specially the Theory of Differential Equations and the associated Numerical Analysis behind it. Because of that, in my fourth year I am taking many subjects related to both areas. A part from that, my intense curiosity for Mathematics and Physics has forced me to attend to other classes without being enrolled, such as Classical Mechanics, Electromagnetism or Linear Models, to acquire all possible knowledge, which does not appear formally in the curriculum, but I consider that they are an essential part of my university formation.

Prospective Studies

I apply to this fellowship to pursue a master degree in Applied Mathematics. My current options are to apply at University of Bonn, Dauphine University (Paris) or ENS Lyon. These three universities have in common the high reputation of professors they have

(including various Fields medalists) and therefore having the opportunity to apply for such outstanding colleges is really an honor. And the fact that I have always dreamed of studying at this high level in a foreign country makes me feel motivated and enthusiastic about it. In addition to that, the experience that someone gets by living and studying abroad is very culture-enriching. Thus, I am very looking forward to moving to European city for a while.

The subjects I want to specialize in vary from the study of numerical celestial mechanics to applied aspects of partial differential equations into fluids, materials or other aspects in Physics and Engineering. Also the study of dynamical systems really appeals to me as it can be easily applied to any of the areas previously mentioned when modeling complex problems.

Once finished the master, I would like to continue my studies in a doctoral program, ideally in the USA. The choice of this country is due to the renown of their universities and the quality of PhD programs they have. Also USA is the location of some of the best cutting-edge business related to technology. All of this encourages me to join a PhD program in the USA after the master.

Other Activities

A part from the curricular activities, I have also participated in a few Mathematics competitions having obtained notable results in some of them. The most recent one was the Simon Marais Mathematics Competitions in which we (a classmate and me) finished the best Spanish pair in the west division of the competition.

I also spent some years doing private classes to high school students. This activity helped me to acquire skills such as empathy, patience and explanatory capacity that are very useful for a possible future professor position in some university.

Conclusion

On balance, all of this academic background stands me in good stead to pursue higher studies abroad. And the granting of this fellowship would allow me to continue expanding my knowledge of Mathematics in a prestigious university.