

Personal statement

Mario Román

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To whom it may concern,

As a student of two bachelor degrees in Mathematics and Computer Science, I have a great interest in how both relate at a foundational level; and in particular in the relations between constructive mathematics, functional programming and Category theory. Thanks to a collaboration grant at the Algebra department at the University of Granada, I have had the possibility of becoming involved with research at an undergraduate level and helping as a teaching assistant on a course on Logic and Programming. This experience has helped me to take the decision to pursue a research career.

During these years and apart from my courses, I have been autodidactically studying Type theory, Category theory and theory of programming languages and coordinating student-organized seminars on these topics at my university. In particular, the courses on Homotopy Type theory and proof assistants at the EUTypes summer school and the School and Workshop on Univalent Mathematics held recently at the University of Birmingham sparked my interest on particular research topics related to Univalent Type theory.

The Theory of Computation research group at the University of Birmingham is devoted precisely to the research of topics that delve in the foundations of Computer Science and Mathematics, exploring how the notion of computation relates to mathematical concepts in logic, algebra and topology. Having the possibility of pursuing a research career in the topics I have been passionate about for many years under the supervision of leading researchers in the field and in a high-quality institution would be an honor for me.

Sincerely,
Mario Román.