

Francisco CRIADO

EDUCATION

OCT 2017-
DEC 2020 PhD student in MATHEMATICS,
TU Berlin, Berlin Mathematical School (BMS), Berlin, Germany
Advisors: Prof. Francisco SANTOS and Prof. Michael JOSWIG
Thesis: *Tropical bisectors and diameters of simplicial complexes*
Mark: Magna cum laude

OCT 2016-
SEP 2017 MSc in MATHEMATICS AND FOUNDATIONS OF COMPUTER SCIENCE,
University of Oxford, Oxford, UK
Interests: Computational Geometry, Optimization
Dissertation: *Packing algorithms applied to linear programming*
Mark: Distinction

OCT 2015-
SEP 2016 Master's degree in MATHEMATICS AND COMPUTATION,
University of Cantabria, Santander, Spain
GPA: 9.03/10

Thesis: *Diameter of simplicial complexes, a computational approach*
Advisor: Prof. Francisco SANTOS
Mark: 9.0/10

SEP 2010-
SEP 2015 Double Degree in Mathematics and Computer Science,
Complutense University of Madrid, Madrid, Spain
GPA: 9.02/10 (Best academic record of the class)
GPA (MATHEMATICS): 9.24/10
GPA (COMPUTER SCIENCE): 8.96/10

Thesis: *Azimuth: Design and development of a non-euclidean video game*
Advisor: Dr. Marco Antonio GÓMEZ
Mark: 10.0/10

WORK EXPERIENCE

MAR 2021-
PRESENT Postdoctoral researcher at *Zuse Insitute Berlin*,
Laboratory for Interactive Optimization and Learning.

NOV 2011-
OCT 2012 Internship in *Telefónica Ingeniería de Seguridad*,
Development of Java applications for web security.

PUBLICATIONS

- OCT 2021 F.Criado, D.Martinez-Rubio, S.Pokutta.
Fast Algorithms for Packing Proportional Fairness and its Dual (preprint)
- SEP 2020 F.Criado, A.Newman. *Randomized construction of complexes with large diameter*
Published in *Discrete & Computational Geometry*
- JUL 2019 F.Criado, F.Santos. *Topological prisms and small simplicial spheres of large diameter*
Published in *Experimental Mathematics*
- JUN 2019 F.Criado, M.Joswig, F.Santos. *Tropical bisectors and Voronoi diagrams*
Published in *Foundations of Computational Mathematics*
- MAY 2016 F. Criado, F. Santos.
The maximum diameter of pure simplicial complexes and pseudo manifolds
Published in *Discrete & Computational Geometry*
- MAY 2014 Exploit in the application *Retrospect Backup Client*. Presented in:
Immunity Infiltrate 2014. Fuzzing, reversing and maths. Miami.
Hack in Paris 2014. Fuzzing, reversing and maths. Paris.
- APR 2014 F. Criado, L. Costero, P. Cabeza, M. Sánchez-Élez.
Calculator: a Hardware design. Math and software programming project-based learning
Multidisciplinary Journal for Education, Social and Technological Sciences.

AWARDS AND HONORS

- 2016 **Fundación Mutua Madrileña Scholarship** for postgraduate students
- 2016 **FPU scholarship**, Spanish scholarship for phd students (Voluntarily refused)
- 2014 SWERC (ACM-ICPC programming competition regionals) **Ranked 21**
- 2014 Iberoamerican Mathematical Olympiad **Bronze Medal** (5th of Spain)
- 2014 **Undergraduate Research Scholarship**, Complutense University of Madrid
- 2014 21st IMC, Blagoevgrad (Bulgary). **Bronze Medal**
- 2013 **Excellence Scholarship** Community of Madrid
- 2013 SWERC (ACM-ICPC programming competition regionals) **Ranked 23**
- 2011 **Excellence Scholarship** Community of Madrid
- 2010 National Spanish Mathematical Olympiad **Silver Medal**
- 2009 National Spanish Mathematical Olympiad **Bronze Medal**

LANGUAGES

- SPANISH: Native
- ENGLISH: Fluent. TOEFL iBT score 108/120
- TOKI PONA: Advanced
- GERMAN: Elementary

COMPUTER SKILLS

- Fluent: \LaTeX , C/C++, Haskell, python, Java, GNU/Linux (Arch), vim
- Basic: VHDL, sage, Matlab/Octave, SQL

INTERESTS AND HOBBIES

- Algorithm design and analysis. Mathematical optimization.
- Computational Geometry and Computational Topology.
- Amateur go player (ranked 7k in the European Go Federation).