Joao Matias

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EDUCATION

The Pennsylvania State University, State College, PA, USA
- Ph.D. in Mathematics, Aug 2012 – Aug 2018 (Expected)

Instituto Superior Técnico (IST), Technical University of Lisbon (UTL), Lisbon, Portugal
- Master in Applied Mathematics, Sep 2010 – Jul 2012
- BSc in Applied Mathematics and Computation, Sep 2007 – Jul 2010

RESEARCH AREAS

Combinatorics, Graph Theory and interactions with Number Theory.

EXPERIENCE

- **Graduate Teaching Assistant**, The Pennsylvania State University Aug 2012 – Aug 2018
  Taught courses at an undergraduate level ranging from college algebra to multivariable calculus, while conducting my own research. Also managed the associated online platform by uploading extra materials and grades.
- Participation in competitive programming websites including *Google Code Jam*, *Codeforces*, *Hackerrank*, *Leetcode* and *Kaggle*.
- **Multiple Research Fellowships** (Undergraduate Student) 2007 – 2011
  Studied various extra-curricular subjects including: knot theory, number theory, plane geometry and algebraic geometry. These projects led to two publications in peer-reviewed journals.
- **Math Olympiads** 2002 – 2009
  Represented Portugal in international competitions, and won medals multiple times.

SKILLS

- Proficiency with many algorithm and the underlying abstract structures.
- Capable of performing statistical analysis.
- **Advanced**: C++, C, Python, Mathematica, LaTeX, Git, SQL
- **Basic**: MatLab, Sage, Java, HTML, CSS

PROJECTS

CODE REPOSITORIES

github.com/joaopmatias and bitbucket.org/Matiaco .

ADDITIONAL LEARNING

Coursera
- *Machine Learning*, offered by Stanford University

Udacity
- *Deep Learning*, offered by Google

Penn State World Campus
- *Graduate Student Online Teaching Certificate*

Other: Coursera, Udacity, edX, Pocket, Inoreader, StackExchange, reddit …
- Completed many courses on programming and data science, and use multiple services to learn more.

SCIENTIFIC PUBLICATIONS

P. Lopes, J. Matias, *Minimum number of colors: the Turk's head knots case study*, Discrete Math. Theor. Comput. Sci. 17 (2015), no. 2, (arXiv:1002.4722).

P. Lopes, J. Matias, *Minimum Number of Fox Colors for Small Primes*, J. Knot Theory Ramifications, **21** (2012) no. 3, (arXiv:1001.1334).