

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.
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PROGRAMMING LANGUAGES	▪ C, C++, Java, Python, SQL, HTML, \LaTeX	
	▪ Participation in various competitive programming websites including <i>Google Code Jam</i> , <i>Codeforces</i> and <i>Hackerrank</i> .	

SCIENTIFIC SOFTWARE	Mathematica, MatLab, Sage, Git
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PROFESSIONAL DEVELOPMENT	Penn State World Campus	
	▪ <i>Graduate Student Online Teaching Certificate</i>	
	Coursera	
	▪ <i>HTML, CSS, and Javascript for Web Developers</i> , offered by the Johns Hopkins University	
	▪ <i>Python Data Structures</i> , offered by the University of Michigan	
	▪ <i>Using Databases with Python</i> , offered by the University of Michigan	
	▪ <i>Algorithms on Graphs</i> and <i>Algorithms on Strings</i> , offered by the University of California, San Diego	
	▪ <i>Machine Learning</i> , offered by Stanford University	
	Udacity	
	▪ <i>Deep Learning</i> , offered by Google	
	▪ <i>Intro to Data Analysis</i>	

TEACHING EXPERIENCE	THE PENNSYLVANIA STATE UNIVERSITY	
	Math 21 (College Algebra)	Spring 2013
	Math 110 (Business Calculus - Recitation)	Fall 2013
	Math 26 (Trigonometry)	Fall 2014, Spring 2015
	Math 230 (Calculus and Vector Analysis)	Fall 2015 – Spring 2018

SCIENTIFIC PUBLICATIONS	JOURNALS	
	P. Lopes, J. Matias, <i>Minimum number of colors: the Turk's head knots case study</i> , Discrete Math. Theor. Comput. Sci. 17 (2015), no. 2, (arXiv:1002.4722).	
	P. Lopes, J. Matias, <i>Minimum Number of Fox Colors for Small Primes</i> , J. Knot Theory Ramifications, 21 (2012) no. 3, (arXiv:1001.1334).	

OTHER EXPERIENCE	▪ Colaboration in <i>Escola Aleph (Aleph School)</i> preparing high school students for Mathematical Olympiads.	2008 – 2011
	▪ Guide in the <i>XXVI, XXVII, and XXVIII Portuguese Mathematical Olympiads</i> ,	2008 – 2010

FELLOWSHIPS	▪ Teaching Assistantship , The Pennsylvania State University	Aug 2012 – May 2018
	▪ Scientific Initiation Fellowship (BIC) , Department of Mathematics, IST, UTL, Lisbon, Portugal Project in Algebraic Geometry under the guidance of Professor Margarida Mendes Lopes	Nov 2010 – May 2011
	▪ Initiation to Research Fellowship (BII) , Center of Linear and Combinatorial Structures (CELC), FCUL, Lisbon, Portugal Project in Algebraic Number Theory under the guidance of Professor Ana Luísa Correia	Nov 2009 – May 2010
	▪ Program “Novos Talentos em Matemática” (New Talents in Mathematics) , Calouste Gulbenkian Foundation, Portugal Project in Knot Theory under the guidance of Professor Pedro Lopes	2008 – 2009
	Project in Plane Symmetries under the guidance of Professor Leonor Godinho	2007 – 2008

OTHER AWARDS	▪ Ibero-American Mathematical Olympiad for university students Bronze and Silver medals,	Sep 2008, Sep 2009
	▪ Bronze medal in the 48 th International Mathematical Olympiad	Jul 2007
	▪ Ibero-American Mathematical Olympiad Bronze and Silver medals,	Sep 2006, Sep 2007

HOBBIES	Running, reading, music and puzzle solving.
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