

EDUCATION

- University of Oxford**, DPhil in Cyber Security 2014 – 2019
 Dissertation: *Exploiting Hardware Imperfections*, supervised by Prof. Kasper B. Rasmussen
 Funding: Clarendon Scholarship, EPSRC Studentship, CDT in Cyber Security Award
 Kellogg College Cyber Security Scholarship
- University of Cambridge**, MPhil in Advanced Computer Science 2013 – 2014
 Marks: 87.95%, Distinction, Ranked Second in Year
 Project: *Distributed Massive Graph Triangulation*, supervised by Dr. Eiko Yoneki
 Funding: Goulandris Scholarship at Magdalene College
- Princeton University**, AB in Mathematics *with Certificate in Applications of Computing* 2009 – 2013
 GPA: 3.978/4.0, Summa Cum Laude, Phi Beta Kappa
 Thesis: *A Practical Variant of Cuckoo Hashing*, supervised by Prof. Robert Sedgewick
 Funding: Nicki M. Chandris '06 Scholarship, Anthony Groverman Blake '59 Scholarship
- Anatolia College**, IB Diploma 2007 – 2009
 GPA: 45/45 (Top 0.19% Worldwide), Valedictorian

PEER-REVIEWED PUBLICATIONS

- I. Gietchaskiel**, K. B. Rasmussen, and K. Eguro, "Leaky Wires: Information Leakage and Covert Communication Between FPGA Long Wires," 13th *ACM ASIA Conference on Computer and Communications Security (ASIACCS)*, 2018. DOI: [10.1145/3196494.3196518](https://doi.org/10.1145/3196494.3196518) 2018
- I. Gietchaskiel**, C. Cremers, and K. B. Rasmussen, "When the "Crypto" in Cryptocurrencies Breaks: Bitcoin Security Under Broken Primitives," *IEEE Security & Privacy*, vol. 16, no. 4, pp. XX-XX, July/August 2018. DOI: (to appear) 2018
- I. Gietchaskiel**, C. Cremers, and K. B. Rasmussen, "On Bitcoin Security in the Presence of Broken Cryptographic Primitives," 21st *European Symposium on Research in Computer Security (ESORICS)*, 2016. DOI: [10.1007/978-3-319-45741-3_11](https://doi.org/10.1007/978-3-319-45741-3_11) 2016
- I. Gietchaskiel**, G. Panagopoulos, and E. Yoneki, "PDTL: Parallel and Distributed Triangle Listing for Massive Graphs," 44th *International Conference on Parallel Processing (ICPP)*, 2015. DOI: [10.1109/ICPP.2015.46](https://doi.org/10.1109/ICPP.2015.46) 2015

INTERNSHIPS

- Jump Trading International Ltd.**, FPGA Intern (*FPGA Research and Development*) Summer 2017
 Auto-generated and simulated SystemVerilog and Lua parsers in Python using their XML specifications, reducing latency and improving timing
 Implemented the C++ interface between the FPGA and the host and wrote extensive Google Tests (GTests)
- Microsoft Research**, Research Intern (*Embedded Systems and Reconfig. Computing*) Summer 2016
 Discovered a novel source of information leakage on different FPGA devices based on delays of *long wires*
 Designed extensive experiments characterizing the phenomenon using Verilog, Python, and PowerShell
- Dropbox, Inc.**, Software Engineer Intern (*Product Abuse and Security*) Summer 2014
 Developed a fully automated malware detection and takedown system in Python with false positive fail-safes
 Improved other anti-abuse measures, and created dashboards to monitor the effectiveness of my tools
- Microsoft Corporation**, Software Development Engineering Intern (*Windows Security*) Summer 2012
 Built a C++ runtime analysis tool to find DLL hijacking and related security and reliability vulnerabilities
 Enhanced the existing defect analysis tools, fixing bugs, and adding capabilities in the process
- Bloomberg L.P.**, Financial Software Developer Intern (*Data License*) Summer 2011
 Created a three-tiered system in C++ and JS to aggregate data and provide time estimates for client requests
 Developed a dynamic interface and database project to show usage and revenue for Data License clients

ACADEMIC AWARDS

University of Oxford , Clarendon Scholarship	2014
Full funding for four years awarded on academic merit to 140 Oxford graduate students across all disciplines	
Princeton University , Peter A. Greenberg '77 Memorial Prize	2013
Awarded by the Mathematics department for "outstanding accomplishments in mathematics"	
Princeton University , Student Teaching Award	2013
Awarded by the Computer Science department during graduation	
Princeton University , Early Phi Beta Kappa Election	2012
Early election to the Phi Beta Kappa academic honor society, extended to the 16/1261 best students	
Princeton University , Shapiro Prize for Academic Excellence	2011
Awarded to 42 students in the Princeton class of 2013 to recognize "outstanding academic achievement"	

COMPETITIONS

Ox002147 Capture-the-Flag Team , Ranked 95/14,000+ teams ctftime.org/team/26882	2017
Inter-ACE CTF , "Je Ne Sais Quoi" Award (with Ox002147)	2017
Deloitte CTF Final , First Place (with Ox002147)	2016
BAE Systems Varsity CTF , First Place (with Ox002147)	2016, 2018
Tripwire VERT Cyber Security CTF Contest , Second Place (individual)	2015
Dropbox Hack Week , "It's Good to Be Here" Award	2013
Microsoft Windows Princeton Hackathon , First Prize	2013
International Mathematical Competition for University Students , Second Prize	2010
International Mathematical Olympiad , 2 Honorable Mentions	2008 – 2009
Balkan Mathematical Olympiad , 2 Bronze Medals	2008 – 2009
Greek National Mathematical Olympiad , 2 Gold, 1 Silver, and 1 Bronze Medals	2006 – 2009

TEACHING POSITIONS

University of Oxford , Teaching Assistant	2016 – 2017
Marked exercises for Graph Theory (Math B8.5) and led exercises for Secure Programming (MSc in Soft. Eng.)	
University of Oxford , Tutor	2016
Demonstrated problems in class for Communications Theory (Math B8.4)	
Princeton University , Grader	2011 – 2013
Graded programming and theory assignments for Algorithms and Data Structures (COS226); Introduction to Graph Theory (MAT306/COS342); Artificial Intelligence (COS402), and Theory of Algorithms (COS423)	
Princeton University , Lab Teaching Assistant	2012 – 2013
Helped students with debugging in Operating Systems (COS318) and other courses (COS126/217/226)	

SEMINARS & SUMMER SCHOOLS

RISE Spring School , Attendee	March 2018
Funded to attend the UK Research Institute in Secure Hardware and Embedded Systems (RISE) Spring School	
SUTD Security Showdown 2017 , Finalist	June 2017
Invited and funded to attend the Singapore University of Technology and Design (SUTD) Secure Cyber-Physical (SCy-Phy) Systems week and Security Showdown 2017 (S317) after online qualifier with Ox002147	

OTHER ACTIVITIES AND AFFILIATIONS

Oxford Competitive Computer Security Club , President and Co-Founder	2017 – now
Oxford Ox002147 Security Capture-the-Flag Team , Captain and Co-Founder	2016 – now
Oxford University Greek Society , President	2016 – 2018
Princeton Alumni UK , Communications & Technology Board Chair	2015 – now
Princeton University , Volunteer Interviewer for Applicants from Greece and the UK	2014 – now
Ross Mathematics Program , Scholarship Student and Junior Counselor Alumnus	2007 – 2008
Camp Rising Sun , Alumnus	2006

TECHNICAL SKILLS

Programming Languages

Python; Verilog/SystemVerilog; C++/C; Java; Bash/Zsh; PowerShell; x86/x64 Assembly; PHP; JavaScript; SQL; Mathematica; MATLAB

Theoretical and Practical Background

Reverse Engineering and Cryptography; Embedded Systems, Microcontrollers (Atmel, Microchip), and FPGAs (Xilinx, Altera, Lattice); Mobile Applications (Android, iOS); Network and Security Protocols; Algorithms and Complexity Theory; Combinatorics and Graph Theory