

EDUCATION

University of Oxford , DPhil in Cyber Security	2014–2019
Dissertation: <i>Leaky Hardware: Modeling and Exploiting Imperfections in Embedded Devices</i>	
Funding: Clarendon Fund; Kellogg College; EPSRC; CDT in Cyber Security	
Yale University , Visiting Assistant in Research	2019
Project: <i>Covert Channels on Cloud FPGAs</i>	
Funding: Prof. Jakub Szefer	
University of Cambridge , MPhil in Advanced Computer Science	2013–2014
Marks: 87.95%, Distinction, Ranked Second in Year	
Project: <i>Distributed Massive Graph Triangulation</i>	
Funding: John L. Goulandris Scholarship at Magdalene College	
Princeton University , AB in Mathematics with <i>Certificate in Applications of Computing</i>	2009–2013
GPA: 3.978/4.0, Summa Cum Laude, Phi Beta Kappa, Ranked Top 15 in Year	
Thesis: <i>A Practical Variant of Cuckoo Hashing</i>	
Funding: Nicki M. Chandris '06 Scholarship, Anthony Groverman Blake '59 Scholarship	
Anatolia College , IB Diploma	2007–2009
GPA: 45/45, Top 0.2% Worldwide, Valedictorian	
Funding: Merit Scholarship	

PEER-REVIEWED PUBLICATIONS

I. Gietchaskiel , K. B. Rasmussen, and J. Szefer. “Measuring Long Wire Leakage with Ring Oscillators in Cloud FPGAs”. In <i>29th International Conference on Field-Programmable Logic & Applications (FPL)</i> , 2019.	2019
I. Gietchaskiel , K. Eguro, and K. B. Rasmussen. “Leakier Wires: Exploiting FPGA Long Wires for Covert- and Side-Channel Attacks”. <i>ACM Transactions on Reconfigurable Technology and Systems (TRET)</i> , 2019.	2019
I. Gietchaskiel , K. B. Rasmussen, and K. Eguro. “Leaky Wires: Information Leakage and Covert Communication Between FPGA Long Wires”. In <i>13th ACM Asia Conference on Computer and Communications Security (ASIACCS)</i> , 2018. DOI: 10.1145/3196494.3196518 .	2018
I. Gietchaskiel , C. Cremers, and K. B. Rasmussen. “When the “Crypto” in Cryptocurrencies Breaks: Bitcoin Security Under Broken Primitives”. <i>IEEE Security & Privacy</i> , vol. 16, no. 4, pp. 46–56, July/August 2018. DOI: 10.1109/MSP.2018.3111253 .	2018
I. Gietchaskiel , C. Cremers, and K. B. Rasmussen. “On Bitcoin Security in the Presence of Broken Cryptographic Primitives”. In <i>21st European Symposium on Research in Computer Security (ESORICS)</i> , 2016. DOI: 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”. In <i>44th International Conference on Parallel Processing (ICPP)</i> , 2015. DOI: 10.1109/ICPP.2015.46 .	2015

INTERNSHIPS

Jump Trading International Ltd. , Hardware Intern (<i>Hardware Product Development</i>)	2018
Wrote a fixed-point math embedded C library for Black-Scholes option pricing	
Created a software model for a parallel hardware architecture, speeding up application testing	
Jump Trading International Ltd. , FPGA Intern (<i>FPGA Core Development</i>)	2017
Auto-generated SystemVerilog and Lua parsers from their XML specifications, improving latency	
Implemented the C++ interface between the FPGA and the host and wrote extensive Google Tests	
Microsoft Research , Research Intern (<i>Embedded Systems and Reconfigurable Computing</i>)	2016
Discovered a novel source of information leakage on Xilinx FPGAs based on the delays of long wires	
Characterized the phenomenon experimentally using Verilog, Python, and PowerShell	

Dropbox, Inc. , Software Engineer Intern (<i>Product Abuse and Security</i>)	2014
Developed a malware detection and takedown system in Python with false positive fail-safes Improved other anti-abuse measures, and created dashboards to monitor the tool effectiveness	
Microsoft Corporation , Software Development Engineering Intern (<i>Windows Security</i>)	2012
Built a C++ runtime analysis tool to find DLL hijacking and related vulnerabilities Enhanced the existing defect analysis tools, fixing bugs, and adding capabilities in the process	
Bloomberg L.P. , Financial Software Developer Intern (<i>Data License</i>)	2011
Created a three-tiered system in C++ and JavaScript to provide timing estimates for client requests Developed a dynamic database interface to show usage and revenue for Data License clients	

ACADEMIC AWARDS

University of Oxford , Clarendon Scholarship	2014
Four-year merit-based full funding awarded 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 top 16/1261 students	
Princeton University , Shapiro Prize for Academic Excellence	2011
Awarded to 42 rising junior students to recognize “outstanding academic achievement”	

COMPETITIONS

Ox002147 Capture-the-Flag Team , Ranked 96/14,613 teams https://ctftime.org/team/26882	2017
Inter-ACE CTF , “Je Ne Sais Quoi” Award (with Ox002147)	2017
BAE Systems Varsity CTF , First Place (with Ox002147)	2016–2018
Deloitte CTF Final , First Place (with Ox002147)	2016
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 , Tutor & Teaching Assistant	2016–2019
Demonstrated problems for <i>Communications Theory</i> (Math B8.4), marked exercises for <i>Graph Theory</i> (Math B8.5), and led exercises for MSc in Software Engineering <i>Security Principles</i> (SPR) and <i>Secure Programming</i> (SCP)	
Princeton University , Lab Teaching Assistant	2012–2013
Helped students in <i>General Computer Science</i> (COS126); <i>Introduction to Programming Systems</i> (COS217); <i>Algorithms and Data Structures</i> (COS226); and <i>Operating Systems</i> (COS318)	
Princeton University , Grader	2011–2013
Graded programming and theory assignments for <i>Algorithms and Data Structures</i> (COS226); <i>Introduction to Graph Theory</i> (MAT306/COS342); <i>Artificial Intelligence</i> (COS402); and <i>Theory of Algorithms</i> (COS423)	

SEMINARS & SCHOOLS

- AI Ethics Workshop**, Attendee 2019
Attended the inaugural Yale Workshop on AI, Ethics, and Society
- RISE Spring School**, Attendee 2018
Attended the UK Research Institute in Secure Hardware and Embedded Systems (RISE) Spring School
- SUTD Security Showdown 2017**, Finalist 2017
Invited 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

- IEEE Transactions on Mobile Computing**, Reviewer 2019
- Oxford Competitive Computer Security Club**, President and Co-Founder 2017–2018
- Oxford Ox002147 Security Capture-the-Flag Team**, Captain and Co-Founder 2016–2019
- Oxford University Greek Society**, President 2016–2018
- Princeton Alumni UK**, Communications & Technology Board Chair 2015–2019
- International Symposium on Algorithms and Data Structures (WADS)**, Reviewer 2015
- Princeton Schools Committee**, Volunteer Interviewer for Applicants from Greece and the UK 2014–2019
- 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; R

Theoretical and Practical Background

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