

# Nathan Malkin

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PROFESSIONAL APPOINTMENTS	<b>New Jersey Institute of Technology</b> , assistant professor <i>Department of Informatics</i>	<i>January 2024 – present</i>
	<b>University of Maryland</b> , postdoctoral associate <i>Maryland Cybersecurity Center</i> Advised by Michelle Mazurek	2021 – 2023
EDUCATION	<b>University of California, Berkeley</b> PhD in Computer Science <i>Thesis: Privacy Controls for Always-Listening Devices</i> Advised by David Wagner and Serge Egelman	2015 – 2021
	<b>Brown University</b> Bachelor of Science in Computer Science & Economics <i>Honors thesis: Experiments in Nudging Users to Create Stronger Passwords</i> Advised by Shriram Krishnamurthi and David Laidlaw	2009 – 2013
RESEARCH FOCUS	<ul style="list-style-type: none"><li>– Designing <b>human-centered technologies</b> that <b>support privacy &amp; security decision-making</b></li><li>– <b>Empirically validating</b> existing and proposed solutions for their privacy and usability</li><li>– Investigating people’s <b>decisions about privacy and security</b> and the role of cognitive biases, social dynamics, cultural and environmental factors</li></ul>	
PUBLICATIONS	<ul style="list-style-type: none"><li>– <b>Optimistic Access Control for the Smart Home</b> N. Malkin, A. Luo, J. Poveda, M. Mazurek <i>IEEE S&amp;P 2023 (IEEE Symposium on Security and Privacy)</i></li><li>– <b>Is Cryptographic Deniability Sufficient? Non-Expert Perceptions of Deniability in Secure Messaging</b> N. Reitinger, N. Malkin, O. Akgul, M. Mazurek, I. Miers <i>IEEE S&amp;P 2023 (IEEE Symposium on Security and Privacy)</i></li><li>– <b>Characterizing Everyday Misuse of Smart Home Devices</b> P. Moh, P. Datta, N. Warford, A. Bates, N. Malkin, M. Mazurek <i>IEEE S&amp;P 2023 (IEEE Symposium on Security and Privacy)</i></li><li>– <b>Contextual Integrity, Explained: A More Usable Privacy Definition</b> N. Malkin <i>IEEE Security &amp; Privacy Magazine, 2023</i></li><li>– <b>Incidental Incremental In-Band Fingerprint Verification: a Novel Authentication Ceremony for End-to-End Encrypted Messaging</b> N. Malkin <i>NSPW 2022 (Proceedings of the New Security Paradigms Workshop)</i></li><li>– <b>Can Humans Detect Malicious Always-Listening Applications? A Framework for Crowdsourcing Test Drives</b> N. Malkin, D. Wagner, S. Egelman <i>CSCW 2022 (Proceedings of the ACM on Human Computer Interaction)</i></li></ul>	

- **Runtime Permissions for Privacy in Proactive Intelligent Assistants**  
N. Malkin, D. Wagner, S. Egelman  
*SOUPS 2022 (Proceedings of the Symposium on Usable Privacy and Security)*
- **Effects of Privacy Permissions on User Choices in Voice Assistant App Stores**  
G. Liu and N. Malkin  
*PETS 2022 (Proceedings of the Privacy Enhancing Technologies Symposium)*
- **SoK: A Framework for Unifying At-Risk User Research**  
N. Warford, T. Matthews, K. Yang, O. Akgul, S. Consolvo, P. G. Kelley,  
N. Malkin, M. Mazurek, M. Sleeper, K. Thomas  
*IEEE S&P 2022 (IEEE Symposium on Security and Privacy)*
- **Privacy Controls for Always-Listening Devices**  
N. Malkin  
PhD thesis, 2021
- **Nudge me right: Personalizing online security nudges to people's decision-making styles**  
E. Peer, S. Egelman, M. Harbach, N. Malkin, A. Frik  
*Computers in Human Behavior, 2020*
- **Investigating Users' Preferences and Expectations for Always-Listening Voice Assistants**  
M. Tabassum, T. Kosiński, A. Frik, N. Malkin, P. Wijesekera, S. Egelman, H. Richter Lipford  
*UbiComp 2020 (Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies)*
- **Privacy Controls for Always-Listening Devices**  
N. Malkin, S. Egelman, D. Wagner  
*NSPW 2019 (Proceedings of the New Security Paradigms Workshop)*
- **Privacy Attitudes of Smart Speaker Users**  
N. Malkin, J. Deatrack, A. Tong, P. Wijesekera, S. Egelman, D. Wagner  
*PETS 2019 (Proceedings of the Privacy Enhancing Technologies Symposium)*
- **A Promise Is A Promise: The Effect of Commitment Devices on Computer Security Intentions**  
A. Frik, N. Malkin, M. Harbach, E. Peer, S. Egelman  
*CHI 2019 (Proceedings of the SIGCHI Conference on Human Factors in Computing Systems)*
- **Keepers of the Machines: Examining How System Administrators Manage Software Updates For Multiple Machines**  
F. Li, L. Rogers, A. Mathur, N. Malkin, M. Chetty  
*SOUPS 2019 (Proceedings of the Symposium on Usable Privacy and Security)*
- **Better Late(r) than Never: Increasing Cyber-Security Compliance by Reducing Present Bias**  
A. Frik, S. Egelman, M. Harbach, N. Malkin, E. Peer  
*WEIS 2018 (Workshop on the Economics of Information Security)*
- **An Experience Sampling Study of User Reactions to Browser Warnings in the Field**  
R. Reeder, A. Porter Felt, S. Consolvo, N. Malkin, C. Thompson, S. Egelman  
*CHI 2018 (Proceedings of the SIGCHI Conference on Human Factors in Computing Systems)*
- **“What Can’t Data Be Used For?” Privacy Expectations about Smart TVs in the U.S.**  
N. Malkin, J. Bernd, M. Johnson, S. Egelman  
*EuroUSEC 2018 (Proceedings of the European Workshop on Usable Security)*

- **Quantifying Users’ Beliefs about Software Updates**  
A. Mathur, N. Malkin, M. Harbach, E. Peer, S. Egelman  
*USEC 2018 (Proceedings of the NDSS Workshop on Usable Security)*
- **Personalized Security Messaging: Nudges for Compliance with Browser Warnings**  
N. Malkin, A. Mathur, M. Harbach, S. Egelman  
*EuroUSEC 2017 (Proceedings of the European Workshop on Usable Security)*
- **A Usability Evaluation of Tor Launcher**  
L. Lee, D. Fifield, N. Malkin, G. Iyer, S. Egelman, D. Wagner  
*PETS 2017 (Proceedings of the Privacy Enhancing Technologies Symposium)*
- **The Anatomy Of Smartphone Unlocking: Why and How Android Users Around the World Lock their Phones**  
N. Malkin, M. Harbach, A. De Luca, S. Egelman  
*ACM GetMobile 20(3) (2016)*
- **Keep on Lockin’ in the Free World: A Multi-National Comparison of Smartphone Locking**  
M. Harbach, A. De Luca., N. Malkin, S. Egelman  
*CHI 2016 (Proceedings of the SIGCHI Conference on Human Factors in Computing Systems)*
- **Recovering High-Value Secrets with SGX and Social Authentication**  
N. Malkin, S. Egelman, D. Wagner  
*WAY 2016: Authentication Workshop at the Symposium on Usable Privacy and Security (SOUPS)*

HONORS & DISTINCTIONS	– Distinguished paper award, IEEE S&P	2023
	– Future of Privacy Forum’s Privacy Papers for Policymakers, Student Paper Award	2020
	– UC Berkeley Cal Cybersecurity Scholarship	2020
	– Distinguished paper award, SOUPS	2019
	– Voted best presentation at USEC workshop	2018
	– Honorable Mention, CHI	2016
	– Fellow, Center for Technology, Society & Policy, UC Berkeley	2016
	– Honorable Mention, NSF Graduate Research Fellowship	2016
	– RSA Security Scholar	2016
	– Rosenberger Senior Prize for excellence in academics and service, Brown University	2013
	– Computing Research Assoc. Outstanding Undergraduate Researcher, Honorable Mention	2012
	– National Science Foundation, Research Experiences for Undergraduates (REU) grant	2011
PROFESSIONAL EXPERIENCE	<b>American Civil Liberties Union, Technology Intern</b>	2017
	– Advised organization on technical questions	
	– Researched security training solutions for legal professionals	
	– Developed prototype of account hijacking notification system for end-to-end encryption	

	<b>Square</b> , Software Engineer on the Data Engineering Team	2013 – 2015
	– Architected and built software to collect, manage, and visualize transaction details, business statistics, and application metrics	
	– Set up and managed systems for large-scale data processing, including Hadoop, Hive, Kafka, and Vertica	
	<b>Mozilla</b> , Software Engineering Intern on the Labs Team	2012
	– Proposed and prototyped experimental tools for preserving privacy and managing online identity	
	– Designed and developed dashboard visualizing user interface metrics for Persona, Mozilla’s authentication project	
TEACHING EXPERIENCE	<b>Professor</b> , NJIT	2024 – <i>present</i>
	– IS/CS 698 – Human Factors in Security and Privacy	2024
	<b>Graduate Student Instructor</b> , UC Berkeley	2017, 2019
	– Served twice as teaching assistant for Intro to Computer Security, a course with 500+ students	
	– Taught two sections, held office hours, and developed problem sets, exams, and handouts	
	– Led review sessions	
	– Designed new project focusing on web security	
	<b>Head Teaching Assistant</b> , Brown University	2011, 2012
	– Served as teaching assistant for Models of Computation & Intro to Software Engineering	
	– Taught 200 students over the course of four semesters	
	– Coordinated staff of six TAs in developing problems and grading assignments	
	– Taught guest lecture and held help sessions for entire class	
SERVICE	– National Science Foundation, CISE panel reviewer	2024
	– CCNY Workshop on Broadening Participation in Computing, co-organizer	2024
PROGRAM COMMITTEE MEMBER	– USENIX Security	2023, 2024
	– Privacy Enhancing Technologies Symposium (PETS)	2024
	– IEEE Security & Privacy	2023
	– Network and Distributed System Security (NDSS)	2023
	– Workshop on Security for Harassment Online, Protections, and Empowerment (SecHOPE)	2023
	– WAY (authentication) workshop at SOUPS	2019
JOURNAL EDITOR	– ACM Transactions on Privacy and Security (TOPS), associate editor	2024 – <i>present</i>

EXTERNAL REVIEWER	– ACM CHI (designated Excellent Reviewer)	2017 – 2024
	– Privacy Enhancing Technologies Symposium (PETS)	2022
	– IMWUT (Journal of Interactive, Mobile, Wearable and Ubiquitous Technologies)	2017, 2020
	– SOUPS poster jury	2020
	– Digital Threats: Research and Practice	2021
	– Convergence	2021
	– The Information Society	2020
	– ACM CCS	2018
	– ACM Computing Surveys	2017, 2018
	– Journal of Information Technology & People	2018
MENTORING & SERVICE	– Mentored 10+ undergrads, including formally through <u>SUPERB program</u>	2017 – 2020
	– Co-organized lab meetings	2019 – 2020
	– Developed and maintained lab’s research computing environment	2018 – 2020
	– Participated in 1-on-1 graduate student mentoring	2018 – 2019
TALKS	– George Mason University, guest lecture	2024
	– IEEE S&P — San Francisco, CA	2023
	– NSPW — Conway, NH	2022
	– SOUPS — Boston, MA	2022
	– PETS — Sydney, Australia	2022
	– UC Berkeley MICS Immersion	2022
	– Cornell Tech Security Seminar, guest talk	2022
	– Columbia/Barnard course, <i>Privacy in a Networked World</i> (COMS BC 3420), guest lecture	2022
	– Cornell Tech course, <i>Privacy in the Digital Age</i> (CS 5436/INFO 5303), guest lecture	2022
	– UC Berkeley CLTC Research Exchange	2020, 2021
	– NSPW — San Juan, Costa Rica	2019
	– Science of Security and Privacy Quarterly Meeting — Lawrence, KS	2019
	– PETS — Stockholm, Sweden	2019
	– Hot Topics in the Science of Security Symposium — Nashville, TN	2019
	– Symposium on Applications of Contextual Integrity — Princeton, NJ	2018
	– USEC usable security workshop at NDSS — San Diego, CA	2018
	– Workshop on Security and Human Behavior — Cambridge, United Kingdom	2017
	– European Workshop on Usable Security (EuroUSEC) — Paris, France	2017
	– Freie Universitat Berlin — Berlin, Germany	2017
	– Authentication workshop at SOUPS — Ottawa, Canada	2016
	– Intel — Hillsboro, OR	2016

GRANTS	– Center for Long-Term Cybersecurity — \$15,000	2021
	– Center for Long-Term Cybersecurity — \$50,000	2020
	– Center for Long-Term Cybersecurity — \$63,570	2019