

Joel Reardon

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Citizenship: Canadian

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Canada

AWARDS AND RECOGNITIONS	<ul style="list-style-type: none">◇ CNIL–Inria Data Protection Award, 2021◇ Emilio Aced Research and Personal Data Protection Award, 2021◇ Casper Bowden Award for Outstanding Research in Privacy Enhancing Technologies, 2020◇ Peak Scholar Award, Improving Mobile Privacy, 2019◇ Parex Innovations Fellowship Award, 2019
RESEARCH GRANTS	<ul style="list-style-type: none">◇ Cisco Grant, \$10,000 USD (2021)◇ Bank of Canada Model X Challenge, \$50,000 (2020, shared with four others)◇ Discovery Grant, \$140,000 (2018–2022)◇ Parex Innovations Fellowship Award, \$30,000 (2019–2021)
R&D GRANTS THROUGH APPCENSUS, INC.	<ul style="list-style-type: none">◇ Department of Homeland Security Mobile Traffic Intelligence at Scale, \$1,200,000 USD (2021)◇ Department of Homeland Security Security and Privacy Testing of COVID-19 Contact Tracing Apps, phase 2 \$200,000 USD (2021)◇ Department of Homeland Security Security and Privacy Testing of COVID-19 Contact Tracing Apps, phase 1 \$198,600 USD (2021)
COMMON VULNERABILITIES AND EXPOSURES	<ul style="list-style-type: none">◇ CVE-2022-23491 Certifi root certificates base score 7.5◇ CVE-2021-31815 Sensitive information being logged by contact tracing apps base score 3.3◇ CVE-2020-0454 Side channel to access router SSID without permission base score 5.5◇ CVE-2020-0293 Side channel to sensitive network state without permission base score 5.5
PATENTS GRANTED	<ul style="list-style-type: none">◇ Automatic Identification of Applications that Circumvent Permissions and/or Obfuscate Data Flows, Joel Reardon, Narseo Vallina- Rodriguez, Nathan Good, and Serge Egelman. Filed June 2020. Granted June 2023.
PATENTS FILED	<ul style="list-style-type: none">◇ Method and Apparatus for Dynamic Outbound Firewalling via Domain Name System (DNS), Daren Childers, Narseo Vallina-Rodriguez, Abhinav Saxena, Joel Reardon, Robert Richter, Pietro Francesco Tirenni, Nathaniel Good, and Serge Egelman. Filed August 2023.◇ Automatic, Agnostic and Hybrid Approach for Software Development Kit (SDK) Detection, Narseo Vallina-Rodriguez, Alvaro Feal, Joel Reardon, Serge Egelman, Robert Richter, and Nathaniel Good. Filed October 2022.
PEER-REVIEWED CONFERENCE PUBLICATIONS	<ul style="list-style-type: none">◇ Aniketh Girish, Tianrui Hu, Vijay Prakash, Daniel J. Dubois, Srdjan Matic, Danny Yuxing Huang, Serge Egelman, Joel Reardon, Juan Tapiador, David Choffnes, and Narseo Vallina-Rodriguez—In the Room Where It Happens: Characterizing Local Communication and Threats in Smart Homes, Proceedings of the 2023 ACM on Internet Measurement Conference, October 2023.

- ◇ Allan Lyons, Julien Gamba, Austin Shawaga, Joel Reardon, Juan Tapiador, Serge Egelman, Narseo Vallina-Rodriguez—**Log: It’s Big, It’s Heavy, It’s Filled with Personal Data! Measuring the Logging of Sensitive Information in the Android Ecosystem**, Proceedings of the 2023 USENIX Security Symposium, August 2023.
- ◇ Paul-Olivier Dehaye and Joel Reardon—**Proximity Tracing in an Ecosystem of Surveillance Capitalism**, Workshop on Privacy in the Electronic Society, November 2020.
- ◇ Catherine Han, Irwin Reyes, Álvaro Feal, Joel Reardon, Primal Wijesekera, Narseo Vallina-Rodriguez, and Serge Egelman—**The Price is (Not) Right: Comparing Privacy in Free and Paid Apps**, Privacy Enhancing Technologies Symposium (PETS).
- ◇ Joel Reardon, Álvaro Feal, Primal Wijesekera, Amit Elazari Bar On, Narseo Vallina-Rodriguez, and Serge Egelman—**50 Ways to Leak Your Data: An Exploration of Apps’ Circumvention of the Android Permissions System** Proceedings of the 2019 USENIX Security Symposium, August 2019, *Distinguished paper award*.
- ◇ Kaihua Qin, Henryk Hadass, Arthur Gervais, and Joel Reardon—**Applying Private Information Retrieval to Lightweight Bitcoin Clients** Crypto Valley Conference, July 2018.
- ◇ Irwin Reyes, Primal Wijesekera, Joel Reardon, Amit Elazari Bar On, Abbas Razaghpanah, Narseo Vallina-Rodriguez, and Serge Egelman—**“Won’t Somebody Think of the Children?” Examining COPPA Compliance at Scale** Proceedings of the 2018 Privacy Enhancing Technologies Symposium (PETS), July 2018, *Casper Bowden Award for Outstanding Research in Privacy Enhancing Technologies*.
- ◇ Primal Wijesekera, Joel Reardon, Irwin Reyes, Lynn Tsai, Jung-Wei Chen, Nathan Good, David Wagner, Kostantin Beznosov, and Serge Egelman—**Contextualizing Privacy Decisions for Better Prediction (and Protection)** 2018 Computer Human Interaction Conference Proceedings (CHI) (received honorable mention), April 2018.
- ◇ Lynn Tsai, Primal Wijesekera, Joel Reardon, Irwin Reyes, Serge Egelman, David Wagner, Nathan Good, Jung-Wei Chen—**Turtle Guard: Helping Android Users Apply Contextual Privacy Preferences**, Proceedings of the 13th Symposium on Usable Privacy and Security (SOUPS), July 2017.
- ◇ Primal Wijesekera, Arjun Baokar, Lynn Tsai, Joel Reardon, Serge Egelman, David Wagner, Konstantin Beznosov—**The Feasibility of Dynamically Granted Permissions: Aligning Mobile Privacy with User Preferences**, Proceedings of the IEEE Symposium on Security and Privacy (S&P), May 2017.
- ◇ Joel Reardon, Hubert Ritzdorf, David Basin and Srdjan Capkun—**Secure Data Deletion from Persistent Media**, Proceedings of the ACM Conference on Computer and Communications Security, November 2013
- ◇ Joel Reardon, Srdjan Capkun, and David Basin—**SoK: Secure Data Deletion**, Proceedings of the IEEE Symposium on Security and Privacy (S&P), May 2013
- ◇ Joel Reardon, Srdjan Capkun, and David Basin—**Data Node Encrypted File System: Efficient Secure Deletion for Flash Memory**, 21st USENIX Security Symposium, August 2012.
- ◇ Joel Reardon, Claudio Marforio Srdjan Capkun, and David Basin—**User-Level Secure Deletion on Log-Structured File Systems**, 7th ACM Symposium on Information, Computer and Communications Security, May 2012.
- ◇ Joel Reardon and Ian Goldberg—**Improving Tor Using a TCP-over-DTLS Tunnel**, 18th USENIX Security Symposium, August 2009.
- ◇ Allan Lyons and Joel Reardon, **Smartphone Sensors Security and Control**, Symposium on Applications of Contextual Integrity, September 2021
- ◇ Catherine Han and Irwin Reyes and Amit Elazari Bar On and Joel Reardon and Álvaro Feal, Kenneth Bamberger, Serge Egelman, Narseo Vallina-Rodriguez—**Do You**

- Get What You Pay For? Comparing the Privacy Behaviors of Free vs. Paid Apps**, Workshop on Technology and Consumer Protection (ConPro '19), May 2019.
- ◇ **Irwin Reyes, Primal Wijesekera, Abbas Razaghpanah, Joel Reardon, Narseo Vallina-Rodriguez, Serge Egelman, and Christian Kreibich**—“Is Our Children’s Apps Learning?” **Automatically Detecting COPPA Violations**, Workshop on Technology and Consumer Protection (ConPro '17), May 2017.
 - ◇ **Chris Alexander, Joel Reardon, and Ian Goldberg**—**Plinko: Polling with a Physical Implementation of a Noisy Channel**, Workshop on Privacy in the Electronic Society 2009, November 2009.
- PEER-REVIEWED POSTERS
- ◇ **Catherine Han, Irwin Reyes, Amit Elazaro Bar On, Joel Reardon, Alvaro Feal, Kenneth Bamberger, Serge Egelman**—**Do You Get What You Pay For? Comparing the Privacy Behaviors of Free vs. Paid Apps**, Symposium on Usable Privacy and Security 2019, August 2019
 - ◇ **Irwin Reyes, Primal Wijesekera, Joel Reardon, Amit Elazari Bar On, Abbas Razaghpanah, Narseo Vallina Rodriguez, and Serge Egelman**—**Examining COPPA Compliance at Scale**, Symposium on Usable Privacy and Security 2018, August 2018
 - ◇ **Primal Wijesekera, Joel Reardon, Irwin Reyes, and Lynn Tsai**—**Contextualizing Privacy Decisions for Better Prediction (and Protection)**, Symposium on Usable Privacy and Security 2018, August 2018
- BOOKS
- ◇ **Joel Reardon**—**Secure Data Deletion**, Information Security and Cryptography series, Springer Verlag 2016, ISBN 978-3-319-28777-5.
- BOOK CHAPTERS
- ◇ **Álvaro Feal, Julien Gamba, Narseo Vallina-Rodriguez, Primal Wijesekera, Joel Reardon, Serge Egelman, Juan Tapiador**—**Don’t accept candies from strangers: An analysis of third-party SDKs**, Computers, Privacy and Data Protection Book Series, 2020.
- INVITED PEER-REVIEWED MAGAZINE ARTICLES
- ◇ **Joel Reardon, Álvaro Feal, Primal Wijesekera, Amit Elazari Bar On, Narseo Vallina-Rodriguez, and Serge Egelman**—**50 Ways to Leak Your Data: An Exploration of Apps’ Circumvention of the Android Permissions System** USENIX ;login: magazine, Winter 2019.
 - ◇ **Primal Wijesekera, Arjun Baokar, Lynn Tsai, Joel Reardon, Serge Egelman, David Wagner, Konstantin Beznosov**—**Dynamically Regulating Mobile Application Permissions**, IEEE Security & Privacy Magazine, February 2018
- TECHNICAL REPORTS
- ◇ **Joel Reardon, David Basin and Srdjan Capkun**—**On Secure Data Deletion**, IEEE Security & Privacy Magazine, May 2014
 - ◇ **Privacy in the Age of COVID: An IDAC Investigation of COVID-19 Apps**, June 2020
 - ◇ **Joel Reardon, Nathan Good, Robert Richter, Narseo Vallina-Rodriguez, Serge Egelman, Quentin Palfrey**—**JPush Away Your Privacy: A Case Study of Jiguang’s Android SDK**, International Computer Science Institute, August 2020
 - ◇ **Paul-Olivier Dehaye and Joel Reardon**—**SwissCovid: a critical analysis of risk assessment by Swiss authorities**, arXiv, June 2020
 - ◇ **Joel Reardon, Emily Laidlaw, and Greg Hagen**—**COVID-19 and Cellphone Surveillance**, ABlawg, April 2020.
 - ◇ **Joel Reardon, Jeff Pound, and Ian Goldberg**—**Relational-Complete Private Information Retrieval**, CACR Tech Report 2007-34, November 2007.
- INVITED TALKS
- ◇ **Listening in on who’s listening in**, Invited seminar for Data, Surveillance, and Creativity, University of Calgary, November 2023.
 - ◇ **CVE-2022-23491, or Why PO boxes can’t be root certificate authorities anymore**, Concordia Invited Speaker Seminar, Montreal, October 2023.

- ◇ **Privacy Considerations with Third-Party Libraries**, 2023 Federal, Provincial and Territorial Access and Privacy Subcommittee Conference, October 2023.
- ◇ **CVE-2022-23491, or Why PO boxes can't be root certificate authorities anymore**, International Computer Science Institute, Berkeley, California, August 2023.
- ◇ **Computer Security Stories**, SHAD Guest Lecture, Calgary, July 2023.
- ◇ **CVE-2022-23491, or Why PO boxes can't be root certificate authorities anymore**, ZISC Seminars, Zurich, July 2023.
- ◇ **Surveillance Capitalism**, Transdisciplinary Approaches to Data, Surveillance, and Creativity workshop, Calgary, June 2023
- ◇ **CVE-2022-23491, or Why PO boxes can't be root certificate authorities anymore**, CrySP Speaker Series on Privacy, Waterloo, June 2023.
- ◇ **A Tale of Two Data Collectors, or the Curious Case of Coulus Coelib.**, Information Security Talks, Calgary, November 2022.
- ◇ **A Tale of Two Data Collectors, or the Curious Case of Coulus Coelib.**, University of Calgary Infosec Club Speaker Series, October 2022.
- ◇ **Mobile Apps and Code Libraries**, Data Privacy Week, February 2022.
- ◇ **Keynote at BSides**, Calgary, October 2021.
- ◇ **Why Google Stopped Logging Contact Tracing Data**, CROSSING Conference, TU Darmstadt, September 2021.
- ◇ **Proximity Tracing in an Ecosystem of Surveillance Capitalism**, Privacy Seminar, Carnegie Mellon University, September 2021
- ◇ **Proximity Tracing in an Ecosystem of Surveillance Capitalism**, IEEE Southern Alberta Computer Chapter Technical Talk, Calgary, August 2021
- ◇ **CVEs from CNN**, Hot Topics in Privacy Enhancing Technologies (HotPETS), July 2021
- ◇ **Introducion to Data Privacy**, Guest Lecture for graduate course at University of Calgary, June, 2021
- ◇ **Proximity Tracing in an Ecosystem of Surveillance Capitalism**, Joint Cybersecurity and Resilience Initiative and IPSI Public Lecture Series, University of Toronto, March 2021.
- ◇ **Contact Tracing Apps & Security**, University of Calgary Infosec Club Speaker Series, February 2021.
- ◇ **Proximity Tracing in an Ecosystem of Surveillance Capitalism**, Guest Lecture for undergrad security course at University of Calgary, January 2021.
- ◇ **Proximity Tracing in an Ecosystem of Surveillance Capitalism**, Information Security Seminar, University of Calgary, January 2021.
- ◇ **Contact Tracing Apps**, Centre for Constitutional Studies at the University of Alberta, January 2021.
- ◇ **Contract Cheating and Cryptocurrency**, Taylor Institute for Teaching and Learning, University of Calgary, December 2020.
- ◇ **Contact Tracing & Giant Data Collectors: A Journey from Utopia to Dystopia?**, Technical University of Darmstadt, December 2020
- ◇ **Reference Monitors in System Security**, Guest Lecture for undergrad security course at New York University, October 2020.
- ◇ **Your Smartphone is Spying on You**, Lunch and Learn, Calgary Library, January 2020.
- ◇ **Your Smartphone is Spying on You**, Private Event for Potential University of Calgary Donors, November 26th, 2019.

- ◇ **Apps and Data Collection**, Board Meeting for the Conjoint Faculties Research Ethics Board, November 21, 2019.
- ◇ **Arrow's Theorem, or why we won't ever have a good election system**, Nerd Nite Calgary, September 19th, 2019
- ◇ **50 Ways to Leak Your Data: An Exploration of Apps' Circumvention of the Android Permissions System**, Berkeley California, August 2019
- ◇ **Blockchain and its Uses**, Guest Lecture for graduate security course at University of Calgary, March 2019.
- ◇ **Your Smartphones Apps Are Spying on You**, Calgary UNIX User Group March General Meeting, Calgary, March, 2019.
- ◇ **Calgary IT Professional Community**, Annual Meeting Keynote, Calgary, March, 2019.
- ◇ **Won't Somebody Think of the Children? Examining COPPA Compliance at Scale**, University of Calgary Computer Science Alumni Association, University of Calgary, October, 2018.
- ◇ **Won't Somebody Think of the Children? Examining COPPA Compliance at Scale**, Calgary Nerd Nite, September 15, 2018.
- ◇ **Examining COPPA Compliance at Scale**, École Polytechnique Fédérale de Lausanne, August 2018
- ◇ **Keynote Session: SecRETs 2018, University of Calgary, May, 2018**
- ◇ **Won't Somebody Think of the Children? Examining COPPA Compliance at Scale**, CrySP Speaker Series on Privacy, University of Waterloo, April, 2018.
- ◇ **Bitcoin and its Uses**, Networks Group, University of Calgary, February 2018.
- ◇ **Improving Mobile Phone Permission Systems**, iCIS Security Seminars, University of Calgary, October 2017.
- ◇ **Blockchain 101**, Computer Science Undergraduate Society, University of Calgary, October, 2017.
- ◇ **Secure Data Deletion**, NEC Laboratories Europe, Heidelberg, April, 2015.
- ◇ **Secure Data Deletion**, IBM Research Laboratory Zurich, November 2014.
- ◇ **Secure Data Deletion from Persistent Media**, Northeastern University, Boston, October 2013.
- ◇ **Efficient Secure Deletion for Flash Memory**, CrySP Speaker Series on Privacy, University of Waterloo, August 2012.
- ◇ **Improving Tor using a TCP-over-DTLS Tunnel**, Computer Laboratory Security Seminar, University of Cambridge, November 2008.
- ◇ **Web browsers drop mysterious company with ties to U.S. military contractor**, Joseph Menn, The Washington Post, November 2022.
- ◇ **Mysterious company with government ties plays key internet role**, Joseph Menn, The Washington Post, November 2022.
- ◇ **Apps With Hidden Data-Harvesting Software Are Banned by Google**, Byron Tau and Robert McMillan, The Wall Street Journal, April 2022.
- ◇ **Location Data Firm Got GPS Data From Apps Even When People Opted Out**, Joseph Cox, Vice News, October 2021.
- ◇ **Google Promised Its Contact Tracing App Was Completely Private—But It Wasn't**, Alfred Ng, The Markup, April 2021.
- ◇ **Location data collection firm admits privacy breach**, Jane Wakefield, BBC News, October 2021.
- ◇ **Dette er appene du br passe deg for**, Martin Gundersen, NRK, October 2021.

MEDIA
COLLABORATIVE
INVESTIGATIONS

MEDIA INTERVIEWS

- ◇ **Google Tells Specific Apps to Disclose Location Gathering or Be Removed**, Joseph Cox, Vice News, October 2021.
- ◇ **[Now Innovating] A Research to Impact Podcast**, Office of the Vice-President (Research), University of Calgary, August 2021
- ◇ **Des applications tierces peuvent accéder aux données sensibles de Swisscovid**, Rodolphe Koller, ICTJournal, April 2021
- ◇ **Next Step in Government Data Tracking Is the Internet of Things**, Wall Street Journal, November 2020
- ◇ **Traquer son ombre numérique**, Florian Delafoi and Paul Ronga, Le Temps, 2021
- ◇ **TikTok Tracked User Data Using Tactic Banned by Google**, Wall Street Journal, August 2020
- ◇ **AB Trace Together**, UToday, June 2020
- ◇ **Security, Work From Home, & Contact Tracing**, What the Tech? Podcast, June 2020
- ◇ **Covid Apps in Spain**, El Pais, April 19th, 2020.
- ◇ **Privacy and Security Issues**, 770 CHQR Global News Radio, January 22, 2020.
- ◇ **University of Calgary researcher raises awareness about smartphone data privacy**, Adam MacVicar, Global Calgary News, January 22, 2020.
- ◇ **Lunch and Learn Event Promotion**, Dallas Flexhaug, Global Calgary Morning News, January 22, 2020.
- ◇ **Phone Companies Blocking Fake Numbers**, Lucie Edwardson, CBC Evening News, December 19th, 2019.
- ◇ **Android Apps Cheating Permission System**, Rob Breakenridge Show on 770 CHQR Global News Radio, July 9th, 2019.
- ◇ **Why are all the posts in our feeds the same?**, Mike Mackinnnon, Explore UCalgary, September 24th, 2019
- ◇ **How does social media influence an election?**, Mike Mackinnnon, Explore UCalgary, September 24th, 2019
- ◇ **How do they change how you vote?**, Mike Mackinnnon, Explore UCalgary, June 26th, 2019
- ◇ **Swatting and Online Anonymity** Global News, 2019
- ◇ **Dans le ventilateur à données de l'appli Météo-France** Géraldine Delacroix, Mediapart, July 25, 2019
- ◇ **No solo FaceApp: miles de aplicaciones espían aunque se les niegue el permiso** Isabel Rubio, El País, July 19, 2019
- ◇ **Basic ways to help protect your personal data online**, Eva Voinigescu, CBC Life, April 11, 2019
- ◇ **Robocall: Bang Bang** Phia Bennin, Reply All, January 31, 2019
- ◇ **How smartphone apps track users and share data**, Aliya Ram, Financial Times, October 23, 2018
- ◇ **Thousands of apps are illegally collecting data about kids**, Nora Young, CBC Spark, April 20, 2018

OTHER MEDIA
COVERAGE

- ◇ **Google removes apps for secretly copying phone numbers**, BBC News, April 2022
- ◇ **Google Reportedly Bans Dozens Of Apps Containing Spyware**, Forbes, April 2022
- ◇ **11 Android Apps Found Secretly Harvesting Data From Millions of Users**, PC Magazine, April 2022

- ◇ **The future of money: The digital currency revolution is here, and may sweep away 5,000 years of monetary history**, Michael Doyle, The Globe and Mail, June 2021
- ◇ **BEUC submits an external alert to the CPC-Network about TikTok**, February 2021
- ◇ **UCalgary professors advise the Bank of Canada on a central bank digital currency design**, February 2021
- ◇ **A Day in the Life of Your Data**, Apple Inc., January 2021
- ◇ **Apple and Google to Stop X-Mode From Collecting Location Data From Users' Phones**, Wall Street Journal, December 2020
- ◇ **Twitter-Owned SDK Leaking Location Data of Millions of Users**, October 2020
- ◇ **Privacy Considerations as Schools and Parents Expand Utilization of Ed Tech Apps During the COVID-19 Pandemic**, September 2020
- ◇ **A popular fertility app shared data without user consent, researchers say**, Tonya Riley, Washington Post, August 20th, 2020
- ◇ **Google, Apple Struggle to Regulate Covid-19 Tracing Apps**, Khadeeja Safdar and Kevin Poulsen, The Wall Street Journal, June 5th, 2020
- ◇ **Finding out what data apps really collect**, Sergey Golubev, Kaspersky Daily, November 1, 2019
- ◇ **How Game Apps That Captivate Kids Have Been Collecting Their Data**, Jennifer Valentino-DeVries, Natasha Singer, Aaron Krolik, Michael Keller, The New York Times, September 12, 2018
- ◇ **Thousands of apps in Google Play Store may be illegally tracking children, study finds**, Hamza Shaban, The Washington Post, April 18th, 2018

INVITED PANELS

- ◇ **Information Warfare: Social Media on the Frontline**, The Centre for Military, Security and Strategic Studies, The Institute for Security, Privacy and Information Assurance, and The School for Public Policy, February 28th, 2020.
- ◇ **Digital Technology**, Idea Exchange, Calgary, October 16th, 2019.
- ◇ **Bots, Trolls and Votes: Elections in the Internet Age**, Idea Igniters, Calgary, April 16th, 2019
- ◇ **Canada's National Cyber Security Strategy: What You Should Know**, The Centre for Military, Security and Strategic Studies and the Institute for Security, Privacy and Information Assurance, November 26, 2018.
- ◇ **Securing Smart Cities**, The Centre for Military, Security and Strategic Studies and the Institute for Security, Privacy and Information Assurance, November 15, 2017.

OTHER EVENTS

- ◇ **Organizer**, Contextual Integrity for Differential Privacy, Banff International Research Station for Mathematical Innovation and Discovery (BIRS), July 2023.
- ◇ **Invited Participant**, Privacy Testing Workshop, Consumer Reports, New York City, June 6th, 2019.
- ◇ **Lecturer and Organizer**, Blockchain, Information Security & Privacy Workshop, May 16th, 2019
- ◇ **Participant**, Designing for Digital Transparency in the Public Realm, Sidewalks Labs, March 2019.
- ◇ **Lecturer and Working Group Leader**, Kovalevsky Day organized by Association for Women in Mathematics, March 2nd, 2019
- ◇ **Lecturer and Organizer**, Workshop on Privacy Compliance Tools, Banff International Research Station 2-day Workshop, August 2018

COURSE TEACHING	<ul style="list-style-type: none">◇ CPSC 601: Mobile Security and Privacy (Winter 2021)◇ CPSC 526/626: Network Systems Security (Winter 2021)◇ CPSC 313: Introduction to Computability (Fall 2020)◇ CPSC 526/626: Network Systems Security (Winter 2020)◇ CPSC 313: Introduction to Computability (Fall 2019)◇ CPSC 601: Mobile Security and Privacy (Winter 2019)◇ CPSC 526/626: Network Systems Security (Fall 2018)◇ CPSC 601: Blockchain and its Uses (Spring 2018)◇ CPSC 313: Introduction to Computability (Fall 2017)
POST-DOCTORAL SUPERVISION	<ul style="list-style-type: none">◇ Shoukat Ali (July 2019–)
GRADUATE SUPERVISION	<ul style="list-style-type: none">◇ Master’s Thesis: Zilin (Winter 2021–)◇ Master’s Thesis: Lyons (Fall 2020–)◇ Master’s Thesis: Muhtasim (Fall 2018–Fall 2020)
GRADUATE EXAMINATIONS AND COMMITTEES	<ul style="list-style-type: none">◇ Committee Member (Doctorate): Ramesh◇ Committee Member (Doctorate): Nabi◇ Committee Member (Doctorate): Khosro◇ Committee Member (Doctorate): Akand◇ Committee Member (Doctorate): Pereira◇ Committee Member (Doctorate): Mireku◇ Examination Committee Member (Doctoral candidacy): Keshvadi◇ Examination Committee Member (Doctoral defence): Nargis◇ Examination Committee Member (Doctoral defence): Rizvi◇ Examination Committee Member (Doctoral candidacy): Rizvi◇ Examination Committee Member (Master’s defence): Wright◇ Examination Committee Member (Master’s defence): Li◇ Examination Committee Member (Master’s defence): Giv◇ Examination Committee Member (Master’s defence): Pitout◇ Examination Committee Member (Master’s defence): Liu◇ Examination Committee Member (Master’s defence): Wun◇ Neutral Chair (Ph. D defense): Mostafa◇ Neutral Chair (Ph. D defense): Abad◇ Neutral Chair (Master’s defense): Yang◇ Neutral Chair (Master’s defense): Stark
UNDERGRAD SUPERVISION	<ul style="list-style-type: none">◇ 502 project: Rochon (Fall 2023–Winter 2024)◇ 503 project: Cordeiro-Zebkowitz (Fall 2023)◇ Software Engineering Capstone Project Technical Advisor (Fall 2022–Winter 2023)◇ 502 project: Xia (Fall 2022–Winter 2023)

- ◇ 502 project: Kozbiel (Fall 2022–Winter 2023)
- ◇ PURE researcher: Shawaga (Summer 2022)
- ◇ 502 project: Le (Fall 2021–Winter 2022)
- ◇ PURE researcher: Shawaga (Summer 2021)
- ◇ Undergrad Research Assistant: Leeson (Summer 2020)
- ◇ 503 project: Leeson (Winter 2020)
- ◇ 503 project: Schoepp (Fall 2019)
- ◇ 502 project: Syed (Fall 2019–Winter 2020)
- ◇ 503 project: Kachor (Winter 2019)
- ◇ 503 project: Hilmi (Winter 2019)
- ◇ 503 project: Kruger (Winter 2019)
- ◇ 503 project: Newson (Fall 2018)
- ◇ 503 project: Abdelwehab (Fall 2018)
- ◇ Undergrad Research Assistant: Abdelwehab (Summer 2018)
- ◇ Undergrad Research Assistant: Dan (Summer 2018)
- ◇ PURE researcher: Boudes (Summer 2018)
- ◇ 503 project: van der Meulen (Winter 2018)
- ◇ 503 project: Boudes (Winter 2018)

- INTERNAL SERVICE ◇ Committee Member for ISEC Limited Term Hiring Committee (2023)
- ◇ Committee Member for IT Oversight Committee (2023)
 - ◇ Committee Member for Cyber Security Advisory Committee (2023)
 - ◇ Committee Member for Graduate Admissions Review Committee (2023)
 - ◇ Committee Member for IT Oversight Committee (2022)
 - ◇ Committee Member for Cyber Security Advisory Committee (2022)
 - ◇ Committee Member for Graduate Admissions Review Committee (2022)
 - ◇ Committee Member for Research and Strategic Planning (2022)
 - ◇ Committee Member for IT Oversight Committee (2021)
 - ◇ Committee Member for Teaching and Learning Committee (2021)
 - ◇ Committee Member for Data Science Hiring Committee (2021)
 - ◇ Committee Member for Engineering Hiring Committee (2021)
 - ◇ Committee Member for Adjunct Review Committee (2021)
 - ◇ Committee Member for Graduate Admissions Review Committee (2021)
 - ◇ Committee Member for Research and Strategic Planning (2021)
 - ◇ Faculty Advisor for Computer Science Internship Program (2021)
 - ◇ Committee Member for Teaching and Learning Committee (2020)
 - ◇ Committee Member for Graduate Admissions Review Committee (2020)
 - ◇ Committee Member for Research and Strategic Planning (2020)
 - ◇ Faculty Advisor for Computer Science Internship Program (2020)
 - ◇ Committee Member for Graduate Admissions Review Committee (2019)
 - ◇ Committee Member for Research and Strategic Planning (2019)
 - ◇ Faculty Advisor for Computer Science Internship Program (2019)

- ◇ Committee Member for Graduate Admissions Review Committee (2018)
- ◇ Committee Member for Teaching Hiring Committee (2018)
- ◇ Committee Member for Research and Strategic Planning (2018)
- ◇ Faculty Advisor for Computer Science Internship Program (2018)

- EXTERNAL SERVICE
- ◇ Program Committee: ACM Computer and Communication Security (2023)
 - ◇ Program Committee: Usenix Security Symposium (2023)
 - ◇ Program Committee: Usenix Security Symposium (2022)
 - ◇ Program Committee: Privacy Enhancing Technology Symposium (2022)
 - ◇ Program Committee: Privacy Enhancing Technology Symposium (2021)
 - ◇ Program Committee: Financial Cryptography and Data Security (2021)
 - ◇ Program Committee: Applied Cryptography and Network Security (2021)
 - ◇ Program Committee: Workshop on Privacy in the Electronic Society (2020)
 - ◇ Program Committee: Privacy Enhancing Technology Symposium (2020)
 - ◇ Reviewer: NSERC Discovery Grant (2020)
 - ◇ Reviewer: NSERC Discovery Grant (2019)
 - ◇ Reviewer: NSERC CRD Grant (2019)
 - ◇ Reviewer: Mitacs Accelerate Grant (2019)
 - ◇ Reviewer: Alberta Innovates Grant (2019)
 - ◇ Reviewer: ACM Transactions on Privacy and Security (2019)
 - ◇ Organizing Committee: ACM Computer and Communications Security (2018)
 - ◇ Program Committee: Workshop on Usable Security (2018)
 - ◇ Program Committee: Workshop on Privacy in the Electronic Society (2018)
 - ◇ Program Committee: Privacy Enhancing Technology Symposium (2018)
 - ◇ Program Committee: Privacy Enhancing Technology Symposium (2017)
 - ◇ Program Committee: Privacy Enhancing Technology Symposium (2016)
 - ◇ Reviewer: ACM CHI Conference on Human Factors in Computing Systems (2016)
 - ◇ Reviewer: Transactions on Computational Science (2018)
 - ◇ Reviewer: Transactions on Information Forensics & Security (2016)
 - ◇ Reviewer: Network and Distributed System Security Symposium (2016)
 - ◇ Reviewer: Transactions on Information Forensics & Security (2015)
 - ◇ Reviewer: IEEE Internet Computing special issue on Cloud Storage (2015)
 - ◇ Reviewer: Communications of the ACM (2015)
 - ◇ Reviewer: Transactions on Information Forensics & Security (2014)
 - ◇ Reviewer: Transactions on Mobile Computing (2012)
 - ◇ Reviewer: Military Communications Conference (2011)

- EDUCATION
- ◇ **ETH Zurich**, Zurich, Switzerland.
Doctoral Degree in Computer Science.
May 2010—March 2015
Advisors: Prof. Dr. Srdjan Capkun and Prof. Dr. David Basin.

- ◇ **University of Waterloo**, Waterloo, Ontario.
M.Math. in Computer Science.
Convocated Spring 2009
Advisor: Prof. Dr. Ian Goldberg.
- ◇ **University of Waterloo**, Waterloo, Ontario.
B.Math. Double Honours Computer Science and Combinatorics & Optimization
Convocated Fall 2006 with Distinctions (Co-Operative Program)
- ◇ **Scholarships**
 - Ontario Graduate Scholarship in Science and Technology (Winter 2008)
 - Ontario Graduate Scholarship in Science and Technology (Winter 2007)
 - NSERC Undergraduate Student Research Award (Summer 2001)

WORK
EXPERIENCE

- ◇ **Associate Professor**, University of Calgary (August 2017–present)
- ◇ **Subject Matter Expert Consultant**, Kenway Mack Slusarchuk Stewart LLP (2021)
- ◇ **Co-founder and Forensics Lead**, AppCensus Inc. (January 2019–present)
- ◇ **Subject Matter Expert Consultant**, Terrahub, Inc. (2018)
- ◇ **Software Engineer (Privacy Engineering and Analysis)**, International Computer Science Institute, Berkeley, United States (June 2019–August 2019)
- ◇ **Postdoctoral Researcher**, International Computer Science Institute and UC Berkeley (May 2016–July 2017)
- ◇ **Instructional Assistant**, ETH Zurich (May 2010–March 2015)
- ◇ **Research Assistant**, RSA Laboratories, EMC Corporation (Internship August 2013–November 2013)
- ◇ **Software Engineer**, Google Switzerland (January 2009–April 2010)
- ◇ **Instructional Assistant**, University of Waterloo (September 2006–April 2008)
- ◇ **Research Assistant**, Centerpoint Connective Software GmbH, Villach, Austria (Summer 2004, Fall 2004, Summer 2005)
- ◇ **Research Assistant**, Geological Survey of Canada, Natural Resources, Ottawa, Ontario (Winter 2003, Fall 2003)
- ◇ **Research Assistant**, Microelectronic Heat Transfer Laboratory, University of Waterloo, Waterloo, Ontario (June 1999 to Fall 2001 (part time), Summer 2002 (full time))