

Joel Reardon

Dr. Sc. Joel Reardon
Assistant Professor, University of Calgary
Founder, AppCensus, Inc.
E-Mail: joel.reardon@ucalgary.ca
Citizenship: Canadian

Joel Reardon
University of Calgary
2500 University Dr. NW
ICT Building, ICT602
Calgary, Alberta T2N 1N4
Canada

AWARDS AND RECOGNITIONS

- ◇ **Peak Scholar Award**, Improving Mobile Privacy, 2019
- ◇ **Parex Innovations Fellowship Award**, 2019

PEER-REVIEWED CONFERENCE PUBLICATIONS

- ◇ 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), July 2020 (to appear).
- ◇ 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—**“Wont Somebody Think of the Children?” Examining COPPA Compliance at Scale** Proceedings of the 2018 Privacy Enhancing Technologies Symposium (PETS), July 2018.
- ◇ 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.
- PEER-REVIEWED WORKSHOP PUBLICATIONS
 - ◇ **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**, Data Protection and Artificial Intelligence (CPDP ’20), Jan 2020.
 - ◇ **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
 - ◇ **Joel Reardon, David Basin and Srdjan Capkun—On Secure Data Deletion**, IEEE Security & Privacy Magazine, May 2014
- INVITED TALKS
 - ◇ **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.
 - ◇ **Arrows Theorem, or why we wont 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
- ◇ **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**, Calgary Nerd Nite, September 15, 2018.
- ◇ **Won't Somebody Think of the Children? Examining COPPA Compliance at Scale**, University of Calgary Computer Science Alumni Association, University of Calgary, October, 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.
- ◇ **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.

- MEDIA INTERVIEWS ◇ **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 Mackinnon, Explore UCalgary, September 24th, 2019
 - ◇ **How does social media influence an election?**, Mike Mackinnon, Explore UCalgary, September 24th, 2019
 - ◇ **How do they change how you vote?**, Mike Mackinnon, Explore UCalgary, June 26th, 2019
 - ◇ **Swatting and Online Anonymity** Global News, 2019
 - ◇ **Dans le ventilateur à données de lappli 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

- ◇ **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
- ◇ **Canadas 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

- ◇ **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

SERVICE

- ◇ 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)
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- ◇ 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

- ◇ **Founder and Chief Binary Archaeologist**, AppCensus Inc. (January 2019 – present)
- ◇ **Assistant Professor**, University of Calgary (August 2017 – present)
- ◇ **Software Engineer (Privacy Engineering and Analysis)**, International Computer Science Institute, Berkeley, United States (June 2019 – August 2019)
- ◇ **Postdoctoral Researcher**, ICSI 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))

RESEARCH
INTERESTS

Applications: Privacy, Security, File Systems, Networks
Foundations: Distributed Systems, Performance Evaluation
Humanities: Social Impact of Computing, Usability
Theoretic: Cryptography, Combinatorics, Graph Theory, Computation

SOFTWARE

- ◇ **downpour**, A C++ partial computation organizational and management tool.
Available at <https://github.com/clambassador/downpour>
- ◇ **codeine**, A C++ tool to simplify performing qualitative coding of data.
Available at <https://github.com/clambassador/codeine>
- ◇ **minibus**, A C++ framework of ncurses widgets including a HTTP frontend.
Available at <https://github.com/clambassador/minibus>
- ◇ **centipede**, A C++ web application framework.
Available at <https://github.com/clambassador/centipede>
- ◇ **logserver**, A C++ log file navigator.
Available at <https://github.com/clambassador/centipede>
- ◇ **ib**, A set of C++ library routines for frequently needed tasks.
Available at <https://github.com/clambassador/ib>