

July 5, 2023

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Jeremy Clark

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Employment

Academic positions

- Associate Professor, Concordia Institute for Information Systems Engineering (CIISE), Concordia University. 1 Jun 2018 – present.
- Assistant Professor, Concordia Institute for Information Systems Engineering (CIISE), Concordia University. 1 Aug 2013 – 31 May 2018.

Professional designations

- Professional Engineer (non-practicing). Professional Engineers of Ontario (PEO). Dec 2018 — present.

Consulting work

- Subject matter expert on undisclosed digital asset subject, *Susman Godfrey LLP*. November 2022 — present.
- Subject matter expert on undisclosed cryptocurrency subject, *Williams & Connolly LLP*. January 2018 — March 2018.
- Subject matter expert on internet voting security, *City of Toronto*, RFP 3405-13-3197. November 2014 – September 2015.

Advisory boards

- Canadian Blockchain Supply Chain Association (CBSCA), Advisory Board, 2019 — present.
- 3iQ Digital Asset Management, Advisory Board, 2017 — 2021.

Academic Background

Degrees

- Ph.D., Computer Science, University of Waterloo. Graduated: Jun 2011.
- M.A.Sc., Electrical Engineering, University of Ottawa. Graduated: Oct 2007.
- B.E.Sc., Computer Engineering, University of Western Ontario. Graduated: Apr 2004.

Post-Doctorate

- Post Doctoral Fellow, School of Computer Science, Carleton University. 1 Jul 2011 – 1 Aug 2013.

Awards & honours

- Excellence in Teaching Award, Junior Faculty Member. Concordia University, 2017.
- Postdoctoral Fellowships Program (PDF). Natural Sciences and Engineering Research Council of Canada (NSERC). 2011–2013
- Alumni Gold Medal (Top Graduating PhD Student). University of Waterloo. 2011
- Alexander Graham Bell Canada Graduate Scholarship (CGS). Natural Sciences and Engineering Research Council of Canada (NSERC). 2008–2011
- David R. Cheriton Graduate Scholarship. University of Waterloo. 2008–2011
- President's Graduate Scholarship. University of Waterloo. 2008–2011
- Ontario Graduate Scholarship (OGS). Declined. 2008
- Entrance Scholarship. University of Waterloo. 2007
- Grand Prize: Best Election System. "The Punchscan Voting System." University Voting Systems Competition (VoComp). 2007
- Best Project in Department. "Real-Time Encryption using Cellular Automata." University of Western Ontario Design Day Competition. 2004
- Honorable Mention. "Cellular Automata." Ontario Engineering Competition. 2004

Publications

Summary

Unlike other fields, the most active venues for security research are **refereed conferences**, as opposed to refereed journals. Given the competitive nature of the top tier conferences, mid-tier venues are often called **workshops**. Unlike in other fields, these are also rigorously peer reviewed venues for completed technical papers and are typically competitive. In our field, the term workshop denotes a venue that is specific to a narrow domain, as opposed to conferences and symposiums, which tend to accept a broad range of papers.

As one illustrative example, our well-publicized work on the Scantegrity voting system (see media below) appeared initially at a **workshop** (USENIX EVT/WOTE which is co-located with USENIX Security; a top-4). The following year, we published a fuller version of the paper in a **journal** (IEEE Transactions on Information Forensics and Security). The workshop version has been cited 206 times, while the journal version has been cited only 114 times.

| Type | Lifetime | While employed |
|----------------------|----------|----------------|
| Journals | 10 | 8 |
| Refereed Conferences | 48 | 28 |
| Book Chapters | 5 | 2 |

Statistics

Citations, h-index and i10 index is based on Google Scholar. Google Scholar is automated and not necessarily fully accurate; however it gives representative results. Our field does not have organizations providing rigorous citation counting or metrics (e.g., impact factor).

| Updated Fall 2022 | Lifetime |
|-------------------|----------|
| Citations | 7439 |
| h-index | 27 |

Refereed conference publications

Abbreviations

*Supervised student AR = Acceptance rate Rank = Core2021
 LNCS XXXX = Volume XXXX of Springer's Lecture Notes in Computer Science

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|-----|--|
| C48 | A. Arun, J. Bonneau, J. Clark. Short-lived zero-knowledge proofs and signatures. <i>28th Annual International Conference on the Theory and Application of Cryptology and Information Security (ASIACRYPT)</i> , 2022. [Rank: A] |
| C47 | D. Demirag*, M. Namazi, E. Ayday, J. Clark. Privacy-Preserving Link Prediction. <i>17th DPM International Workshop on Data Privacy Management</i> , 2022. |
| C46 | D. Chaum, R.T. Carback, J. Clark, C. Liu, M. Nejadgholi*, B. Preneel, A.T. Sherman, M. Yaksetig, F. Zagorski, B. Zhang. VoteXX: A Solution to Improper Influence in Voter-Verifiable Elections. <i>Seventh International Joint Conference on Electronic Voting (E-VOTE-ID)</i> , 2022. |
| C45 | M. Salehi*, J. Clark, M. Mannan. Not so immutable: Upgradeability of Smart Contracts on Ethereum. <i>WTSC, Proceedings of Financial Cryptography and Data Security: FC Workshops</i> , 2022. |
| C44 | M. Moosavi*, J. Clark. Lissy: Experimenting with on-chain order books. <i>WTSC, Proceedings of Financial Cryptography and Data Security: FC Workshops</i> , 2022. |
| C43 | D. Demirag*, J. Clark. Opening sentences in academic writing: How security researchers defeat the blinking cursor. <i>ACM Technical Symposium on Computer Science Education (SIGCSE TS)</i> , 2022. [Rank: A] |
| C42 | S. Eskandari*, M. Salehi*, W. C. Gu, J. Clark. SoK: Oracles from the Ground Truth to Market Manipulation. <i>ACM Advances in Financial Technology</i> , 2021 |
| C41 | M. Salehi*, J. Clark, M. Mannan. Red-Black Coins. <i>DeFi, Proceedings of Financial Cryptography and Data Security: FC Workshops</i> , 2021. |
| C40 | D. Demirag*, J. Clark. Absentia: secure function evaluation on Ethereum. <i>WTSC, Proceedings of Financial Cryptography and Data Security: FC Workshops</i> , 2021. |
| C39 | M. Nejadgholi*, N. Yang*, J. Clark. Ballot secrecy for liquid democracy. <i>VOTING, Proceedings of Financial Cryptography and Data Security: FC Workshops</i> , 2021. |
| C38 | J. Clark, P.C. van Oorschot, S. Ruoti, K. Seamons, D. Zappala. Securing Email. <i>Proceedings of Financial Cryptography and Data Security (FC)</i> , 2021. [Rank: A] |
| C37 | M Rahimian*, S Eskandari*, J. Clark. Resolving the Multiple Withdrawal Attack in ERC20 Tokens. <i>2019 IEEE Workshop on Security & Blockchains (IEEE S&B)</i> . |
| C36 | E. Mangipudi, K. Rao, J. Clark, A. Kate. Automated Penalization of Data Leakage using Crypto-augmented Smart Contracts. <i>2019 IEEE Workshop on Security & Blockchains (IEEE S&B)</i> . |
| C35 | S. Eskandari*, M. Moosavi*, J. Clark. Transparent Dishonesty: front-running attacks on Blockchain. <i>Trusted Smart Contracts, Proceedings of Financial Cryptography and Data Security: FC Workshops</i> , 2019. LNCS 11599. |
| C34 | M. Elsheikh, J. Clark, A. Youssef. Deploying PayWord on Ethereum. <i>Trusted Smart Contracts, Proceedings of Financial Cryptography and Data Security: FC Workshops</i> , 2019. LNCS 11599. |

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| C33 | V. Zhao, J. Choi, D. Demirag*, M. Mannan, K. Butler, E. Ayday, J. Clark. One-time programs made practical. <i>Proceedings of Financial Cryptography and Data Security (FC)</i> , 2019. LNCS 11598. [Rank: A] |
| C32 | S. Eskandari*, A. Leoutsarakosg, T. Mursch, J. Clark. A first look a browser-based cryptojacking. <i>2018 IEEE Workshop on Security & Blockchains (IEEE S&B)</i> . |
| C31 | C. Okoye*, J. Clark. Toward Cryptocurrency Lending. <i>Trusted Smart Contracts, Proceedings of Financial Cryptography and Data Security: FC Workshops</i> , 2018. LNCS 10958. |
| C30 | M. Moosavi*, J. Clark. Ghazal: toward truly authoritative web certificates using Ethereum. <i>Trusted Smart Contracts, Proceedings of Financial Cryptography and Data Security: FC Workshops</i> , 2018. LNCS 10958. |
| C29 | S. Eskandari*, J. Clark, M. Adham, V. Sundaresan. On the feasibility of decentralized derivatives markets. <i>Trusted Smart Contracts, Proceedings of Financial Cryptography and Data Security: FC Workshops</i> , 2017. LNCS 10323. |
| C28 | N. Yang* and J. Clark. Practical Governmental Voting with Unconditional Integrity and Privacy. <i>VOTING, Proceedings of Financial Cryptography and Data Security: FC Workshops</i> , 2017. LNCS 10323. |
| C27 | S. Eskandari*, J. Clark, A. Hamou-Lhadj. "Buy your Coffee with Bitcoin: Real-World Deployment of a Bitcoin Point of Sale Terminal." <i>Proceedings of the 13th IEEE International Conference on Advanced and Trusted Computing (Bitcoin Track)</i> , 2016. |
| C26 | G. Dagher*, B. Bünz, J. Bonneau, J. Clark, D. Boneh. Provisions: Privacy-preserving proofs of solvency for Bitcoin exchanges. <i>Proceedings of the 22nd ACM Conference on Computer and Communications Security (CCS)</i> , 2015. [Rank: A+] AR: 19% |
| C25 | J. Bonneau, A. Miller, J. Clark, A. Narayanan, J. Kroll, E. W. Felten. Research Perspectives and Challenges for Bitcoin and Cryptocurrencies. <i>Proceedings of the 34th IEEE Symposium on Security and Privacy (IEEE SSP)</i> , 2015. [Rank: A+] AR: 14%. 3rd highest cited security paper from 2015 |
| C24 | S. Eskandari*, D. Barrera, E. Stobert, J. Clark. A First Look at the Usability of Bitcoin Key Management. <i>Proceedings of the NDSS Workshop on Usable Security (USEC)</i> , 2015. |
| C23 | D. Barrera, D. McCarney, J. Clark, P. C. van Oorschot. Baton: Certificate Agility for Android's Decentralized Signing Infrastructure. <i>Proceedings of the 7th ACM Conference on Security and Privacy in Wireless and Mobile Networks (WiSec)</i> , 2014. |
| C22 | J. Bonneau, J. Clark, E. W. Felten, J A. Kroll, A. Miller, A. Narayanan. On Decentralizing Prediction Markets and Order Books. <i>Proceedings of the 13th Annual Workshop on the Economic of Information Security (WEIS)</i> , 2014. |
| C21 | M. Backes, J. Clark, P. Druschel, A. Kate, M. Simeonovski. Back-Ref: Accountability in Anonymous Communication Networks. <i>Proceedings of the 12th International Conference on Applied Cryptography and Network Security (ACNS)</i> , 2014. LNCS 8479. AR: 22%. |

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| C20 | J. Bonneau, A. Narayanan, A. Miller, J. Clark, J. A. Kroll, E. W. Felten. Mixcoin: Anonymity for Bitcoin with Accountable Mixes. <i>Proceedings of the 18th Conference on Financial Cryptography and Data Security (FC)</i> , 2014. LNCS 8437. [Rank: A] AR: 22% |
| C19 | F. Zagorski, R. Carback, D. Chaum, J. Clark, A. Essex, P. Vora. Remotegrity: Design and Use of an End-to-End Verifiable Remote Voting System. <i>Proceedings of the 11th International Conference on Applied Cryptography and Network Security (ACNS)</i> , 2013. AR: 23%. |
| C18 | J. Clark and P. C. van Oorschot. SSL and HTTPS: Revisiting past challenges and evaluating certificate trust model enhancements. <i>Proceedings of the 34th IEEE Symposium on Security and Privacy (IEEE SSP)</i> , 2013. [Rank: A+] AR: 12%. |
| C17 | D. McCarney, D. Barrera, J. Clark, S. Chiasson, and P. C. van Oorschot. Tapas: Design, implementation, and usability evaluation of a password manager. <i>Proceedings of the 2012 Annual Computer Security Applications Conference (ACSAC)</i> , 2012. AR: 19%. |
| C16 | D. Barrera, J. Clark, D. McCarney, P. C. van Oorschot. Understanding and improving app installation security mechanisms through empirical analysis of Android. <i>Proceedings of the 2nd Annual ACM CCS Workshop on Security and Privacy in Smartphones and Mobile Devices (SPSM)</i> , 2012. AR: 37%. |
| C15 | A. Essex, J. Clark, and U. Hengartner. Cobra: Toward concurrent ballot authorization for internet voting. <i>Proceedings of the 2012 USENIX Electronic Voting Technology Workshop/Workshop on Trustworthy Elections (EVT/WOTE)</i> , 2012. AR: 35%. |
| C14 | J. Clark and A. Essex. CommitCoin: Carbon dating commitments with Bit-coin. <i>Proceedings of the 16th Conference on Financial Cryptography and Data Security (FC)</i> , 2012. LNCS 7397. [Rank: A] |
| C13 | J. Clark and U. Hengartner. Selections: an internet voting system with over-the-shoulder coercion-resistance. <i>Proceedings of the 15th Conference on Financial Cryptography and Data Security (FC)</i> , 2011. LNCS 7035. [Rank: A] |
| C12 | R. Carback, D. Chaum, J. Clark, J. Conway, A. Essex, P. S. Herrnsen, T. Mayberry, S. Popoveniuc, R. L. Rivest, E. Shen, A. T. Sherman, P. L. Vora. Scantegrity II Municipal Election at Takoma Park: The First E2E Binding Governmental Election with Ballot Privacy. <i>Proceedings of the 19th USENIX Security Symposium</i> , 2010. [Rank: A+] AR: 15%. |
| C11 | A. Essex, J. Clark, U. Hengartner, C. Adams. Eperio: Mitigating Technical Complexity in Cryptographic Election Verification. <i>Proceedings of the 2010 USENIX Electronic Voting Technology Workshop/Workshop on Trustworthy Elections (EVT/WOTE)</i> , 2010. |
| C10 | J. Clark, U. Hengartner. On the Use of Financial Data as a Random Beacon. <i>Proceedings of the 2010 USENIX Electronic Voting Technology Workshop/Workshop on Trustworthy Elections (EVT/WOTE)</i> , 2010. |
| C09 | A. T. Sherman, R. Carback, D. Chaum, J. Clark, A. Essex, P. S. Herrnsen, T. Mayberry, S. Popoveniuc, R. L. Rivest, E. Shen, B. Sinha, P. L. Vora. Scantegrity Mock Election at Takoma Park. <i>Proceedings of the 4th International Conference on Electronic Voting (EVOTE)</i> , 2010. |

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| C08 | J. Clark, U. Hengartner, K. Larson. Not-So Hidden Information: Optimal Contracts for Undue Influence in E2E Voting Systems. <i>Proceedings of the Second IAVoSS International Conference on E-voting and Identity (Vote-ID)</i> , 2009, LNCS 5767. |
| C07 | A. Essex, J. Clark, U. Hengartner, C. Adams. How to Print a Secret. <i>Proceedings of the 4th USENIX Workshop on Hot Topics in Security (HotSec)</i> , 2009. AR: 28%. |
| C06 | D. Chaum, R. Carback, J. Clark, A. Essex, S. Popoveniuc, R. L. Rivest, P. Y. A. Ryan, E. Shen A. T. Sherman. Scantegrity II: End-to-end verifiability for optical scan election systems using invisible ink confirmation codes. <i>Proceedings of the 2008 USENIX Electronic Voting Technology Workshop (EVT)</i> , 2008. |
| C05 | J. Clark, U. Hengartner. Panic passwords: Authenticating under duress. <i>Proceedings of the 3rd USENIX Workshop on Hot Topics in Security (HotSec)</i> , 2008. AR: 32%. |
| C04 | A. Essex, J. Clark, C. Adams. Aperio: High integrity elections for developing countries. <i>Proceedings of the IAVoSS Workshop on Trustworthy Elections (WOTE)</i> , 2008. |
| C03 | J. Clark, P.C. van Oorschot, C. Adams. Usability of anonymous web browsing: An examination of Tor interfaces and deployability. <i>Proceedings of the Third Symposium On Usable Privacy and Security (SOUPS)</i> . ACM International Conference Proceedings Series, vol 229, 2007, pp. 41–51. AR: 31%. |
| C02 | J. Clark, A. Essex, C. Adams. On the security of ballot receipts in E2E voting systems. <i>Proceedings of the IAVoSS Workshop on Trustworthy Elections (WOTE)</i> , 2007. |
| C01 | A. Essex, J. Clark, R. T. Carback III, S. Popoveniuc. Punchscan in practice: An E2E election case study. <i>Proceedings of the IAVoSS Workshop on Trustworthy Elections (WOTE)</i> , 2007. |

Articles in journals & periodicals

*Supervised student

JIF = 2021 Journal Impact Factor, Journal Citation Reports, Web of Science / Clarivate

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| J10 | Raphael Auer, Rainer Böhme, Jeremy Clark, Didem Demirag*. Mapping the Privacy Landscape for Central Bank Digital Currencies. <i>ACM Queue</i> , June/July 2022. |
| J09 | E. Pimentel, E. Boulianne, S. Eskandari,* J. Clark. Systemizing the Challenges of Auditing Blockchain-Based Assets. <i>Journal of Information Systems</i> , Summer 2021. |
| J08 | J. Clark, D. Demirag*, S. Moosavi*. Demystifying Stablecoins. <i>Communications of the ACM</i> . 63(7):40-46. Jul 2020. [JIF: 14.065] |
| J07 | S. Ruoti, B. Kaiser, A. Yerukhimovich, J. Clark, R. Cunningham. Blockchain Technology: What is it good for? <i>Communications of the ACM</i> . 63(1):46-53. Jan 2020. [JIF: 14.065] |
| J06 | G. Dagher*, B. Fung, N. Mohammad, J. Clark. SecDM: Privacy-preserving Data Outsourcing Framework with Differential Privacy. <i>Knowledge and Information Systems</i> . 62:1923–1960, 2020. |
| J05 | A. Narayanan, J. Clark. Bitcoin's Academic Pedigree. <i>Communications of the ACM</i> . 60(12):36-45. 2017. [JIF: 14.065] |

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| J04 | E. Moher, J. Clark, A. Essex. Diffusion of voter responsibility: potential failings in E2E receipt checking. <i>USENIX Journal of Election Technology and Systems</i> . 3(1):1-17. 2014. |
| J03 | J. Clark. Enhancing Anonymity: Cryptographic and statistical approaches for shredding our digital dossiers. <i>ACM Computing Reviews</i> . 2014. Invited. |
| J02 | D. Chaum, R. Carback, J. Clark, A. Essex, S. Popoveniuc, R. L. Rivest, P. Y. A. Ryan, E. Shen, A. T. Sherman, P. L. Vora. Scantegrity II: End-to-End Verifiability by Voters of Optical Scan Elections Through Confirmation Codes. <i>IEEE Transactions on Information Forensics and Security</i> , 4(4):611-627, 2009. [JIF: 7.231] |
| J01 | D. Chaum, A. Essex, R. T. Carback III, J. Clark, S. Popoveniuc and A. T. Sherman, P. Vora. Scantegrity: end-to-end voter verifiable optical-scan voting. <i>IEEE Security & Privacy</i> , vol. 6, no. 3, pp. 40–46, May/June 2008. [JIF: 3.105] |

Book chapters

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|-----|---|
| B05 | J. Clark. The Long Road to Bitcoin. Foreword to: “Bitcoin and Cryptocurrency Technologies.” <i>Princeton University Press</i> , 2016. |
| B04 | R. Carback, D. Chaum, J. Clark, J. Conway, A. Essex, P. S. Herrnson, T. Mayberry, S. Popoveniuc, R. L. Rivest, E. Shen, A. T. Sherman, P. L. Vora. The Scantegrity Voting System and its Use in the Takoma Park Elections. Chapter 10 in: “Real-World Electronic Voting: Design, Analysis and Deployment.” <i>CRC Press</i> , 2016. |
| B03 | S. Popoveniuc, J. Clark, R. Carback, A. Essex, D. Chaum. Securing Optical-Scan Voting. Chapter in: “Toward Trustworthy Elections: New Directions in Electronic Voting.” State of the Art Survey Series, <i>Springer</i> , 357–369. 2010. |
| B02 | A. Essex, J. Clark, C. Adams. Aperio: High Integrity Elections for Developing Countries. Chapter in: “Toward Trustworthy Elections: New Directions in Electronic Voting.” State of the Art Survey Series, <i>Springer</i> , 388–401. 2010. |
| B01 | J. Clark, P. Gauvin, C. Adams. Exit Node Repudiation for Anonymity Networks. Chapter 22 in: “Lessons from the Identity Trail: Anonymity, Privacy and Identity in a Networked Society.” <i>Oxford University Press</i> . 399-415, 2009. |

Editorial activities

| | |
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| E03 | Bracciali, A., Clark, J., Pintore, F., Roenne, P., Sala, M. (Editors). “Financial Cryptography and Data Security: FC Workshops 2019.” Lecture Notes in Computer Science (LNCS) 11599. <i>Springer</i> , 2020. |
| E02 | A. Zohar, I. Eyal, V. Teague, J. Clark, A. Bracciali, F. Pintore, M. Sala (Editors). “Financial Cryptography and Data Security: FC Workshops 2018.” Lecture Notes in Computer Science (LNCS) 10958. <i>Springer</i> , 2019. |
| E01 | J. Clark, S. Meiklejohn, P.Y.A.Ryan, D. Wallach, M. Brenner, K. Rohloff (Editors). “Financial Cryptography and Data Security: FC Workshops 2016.” Lecture Notes in Computer Science (LNCS) 9604. <i>Springer</i> , 2016. |

Funding

External Funding

| Year | Title, Program, Agency | Amount | PI | Co-Applicants |
|------|--|---|----|-------------------------------|
| 2023 | "Understanding Blockchains through Experimentation," Extension to previous project, Autorité des marchés financiers (AMF) | \$200,000 over 3 years Share: 50% | Y | Emilio Boulianne (JMSB) |
| 2021 | "Privacy Design Landscape for Central Bank Digital Currencies," Contributions Program, Office of the Privacy Commissioner of Canada (OPC) | \$26,450 once Share: 100% | Y | |
| 2021 | "Understanding Blockchains through Experimentation," Extension to previous project, Autorité des marchés financiers (AMF) | \$100,000 once Share: 50% | Y | Emilio Boulianne (JMSB) |
| 2021 | "Enhancing transparency, inclusion, and privacy for financial and democratic technologies," Discovery Grant (DG), Natural Sciences and Engineering Research Council of Canada (NSERC) | \$35,000/year for 5 years Share: 100% | Y | |
| 2020 | "The Human-Centric Cybersecurity Partnership (HC2P)," Partnership Grant, Social Sciences and Humanities Research Council (SSHRC) | \$2,434,323 over 5 years Share: TBD | N | Benoit Dupont + 32 others |
| 2020 | "Toward Scalable Systems for Securities on Blockchains," Fintech Chaire, Autorité des marchés financiers (AMF) and Finance Montreal | \$50,000 once Share: 50% | N | Kaiwen Zhang (ETS) |
| 2019 | "NSERC / Raymond Chabot Grant Thornton / Catalaxy Industrial Research Chair on Blockchain Technologies," Natural Sciences and Engineering Research Council of Canada (NSERC) | \$1,380,000 over 5 years Share: 100% | Y | |
| 2017 | "Understanding Blockchains through Experimentation," Education and Good Governance Fund (EGGF), Autorité des marchés financiers (AMF) | \$100,000/year for 2 years Share: 50% | Y | Emilio Boulianne (JMSB) |
| 2016 | "One Person, One Vote? Blockchain Technologies and Experiments in Voting and Party Governance," Seed Grant, Centre for the Study of Democratic Citizenship (CSDC) | \$6831 once Share: 50% | N | Fenwick McKelvey (Comm) |
| 2015 | "Certificate Authority Report Card: Examining the Root of Data Protection on the Web," Contributions Program, Office of the Privacy Commissioner of Canada (OPC) | \$50,000/year for 1 year Share: 50% | Y | Mohammad Mannan (CIISE) |

| Year | Title, Program, Agency | Amount | PI | Co-Applicants |
|------|---|--|----|---------------|
| 2015 | "Vote par Internet : des technologies favorisant la démocratie," Programme Établissement de nouveaux chercheurs universitaires, Fonds de recherche du Québec - Nature et technologies (FRQNT) | \$19,000/year for 2 years Share: 100% | Y | |
| 2014 | "Secure online services for private user data," Discovery Grant (DG), Natural Sciences and Engineering Research Council of Canada (NSERC) | \$24,000/year for 5 years Share: 100% | Y | |

Internal Funding

| Year | Program | Amount | PI | Co-Applicants |
|------|---|------------|----|---------------|
| 2023 | Aid to Research Related Events, Exhibition, Publication and Dissemination Activities (ARRE) Program | \$5K once | Y | |
| 2020 | Aid to Research Related Events, Exhibition, Publication and Dissemination Activities (ARRE) Program | \$5K once | Y | |
| 2015 | Aid to Research Related Events, Exhibition, Publication and Dissemination Activities (ARRE) Program | \$5K once | Y | |
| 2015 | Individual Seed Program | \$7K once | Y | |
| 2013 | Start-Up Grant | \$50K once | Y | |

Research Centres/Networks

- Human-Centric Cybersecurity Partnership (HC2P). Co-Investigator, 2020—present.
- Centre for the Study of Democratic Citizenship (CSDC). Member, 2016—present. Advisory Board, 2022—present.
- Smart Cybersecurity Network (SERENE-RISC). Knowledge Mobilization Network, Networks of Centres of Excellence of Canada (NCE). Co-Investigator, 2016—2021.

Evidence of Impact

Invited Talks and Seminars

- a16z crypto, "Fast Withdrawals from Optimistic Rollups," June 27, 2023.
- Digital Economy Taxation Network / Revenu Québec, DET 2023, "Going Digital: Tax Systems and Emerging Technology," June 18, 2023.
- C-Dem/CSDC Forum, "Roundtable: Electoral Integrity," Panel, June 4, 2023.
- CIADI/GCS Aerospace Meets Cybersecurity Forum, "Cybersecurity challenges in aerospace," Moderator, April 17, 2023.
- Financial Management Institute of Canada, PD Week. "Blockchain and DeFi: Landscape," Nov 24, 2022.
- FIC, International Cybersecurity Forum, Nov 1-2, 2022.
- MTL Connect, "MTL Inspire." Panel, October 19, 2022.
- ACT International Midterm Conference, "Policing Blockchain." Panel, October 6, 2022.
- Fintech Cadence | Fintech Drinks, "Fintech & DeFi: How is fintech DeFi-ing the traditional banking system?" Panel, July 12, 2022.
- Blockchain Technology Symposium. "Blockchain Culture, Leisure and Luxury." Panel, June 10, 2022.
- Quartier de l'innovation de Montréal. "Entre Terre et techno, ça clique ?" Panel, May 26, 2022.
- Fintech Cadence Certificate Program. "Understanding blockchain and its uses in the financial sector." February 22, 2022.
- Autorité des marchés financiers. "Finance décentralisée et crypto : état de la situation, nouveaux risques et points de vigilance." Panel, October 26, 2021.
- Smith School of Business, Queen's University. "New Frontiers in Auditing: Risk and Opportunities in the Blockchain Sector." Panel, October 7, 2021.
- Vancouver International Privacy & Security Summit (VIPSS). "Banking on the Future: How the Digital Surge Will Reshape How We Do Business." Panel, May 6, 2021.
- CyberEco Cyber Conference. "Technology & blockchain." May 5, 2021.
- Quartier de l'innovation de Montréal. "Blockchain - multiples usages." Panel, April 28, 2021.
- Holt Accelerator, "[I AM PROTECTED]." Panel, April 21, 2021.
- UMBC Cyber Defense Lab Seminar. "Transparent Dishonesty: front-running attacks on Blockchain." March 26, 2021.
- 1st Annual Lecture on Computer Science and Society. "The Blockchain and Cryptocurrency Landscape." Carleton University. March 10, 2021
- Workshop on The State of Canadian Cybersecurity Conference: Human-Centric Cybersecurity. "Decentralized Finance: Landscape and Future Directions." SERENE-RISC, February 18, 2021.

- Fintech Cadence Certificate Program. "Understanding blockchain and its uses in the financial sector." January 30, 2021.
- Montreal Lakeshore University Women's Club. "Bitcoins: What, why and how..." February 10, 2020.

Note: Parental & sabbatical leave Fall 2019—Summer 2021.

- Elections Quebec. "Internet Voting." Nov 2, 2019.
- Blockchain at McGill. "Introduction to Blockchain for Non-Profits," Social Innovation: Int'l Development and Blockchain. 29 Mar 2019.
- Canada Mortgage and Housing Corporation (CMHC). "Blockchain Technologies: Landscape and Future Directions." 26 Feb 2019.
- CFA Montreal FinTech Rendez-vous. "Blockchain Technologies: Landscape and Future Directions." 7 Feb 2019.
- Loto-Quebec. "Lunch and learn." 22 Jan 2019.
- RISQ Colloquium. "Blockchain Technologies: Landscape and Future Directions." 29 Nov 2018.
- TriPAC Pension Advisory Committees. "Blockchain Technologies: Landscape and Future Directions." Treasury Board Secretariat. 21 Nov 2018.
- Defending Democracy: Confronting Cyber-Threats At Home And Abroad. "Liquid Democracy and Blockchains." October 26, 2018.
- Blockchain and National Security. "Blockchain Technology: National Security Use-Cases." Public Safety Canada, October 18, 2018.
- Montreal Police Pension Fund (ABRPPVM). "Blockchain Technology: Landscape & Future Directions." Invited speaker, September 22, 2018.
- BMO 13th Annual Real Estate Conference. "Blockchain Applications & Real-Estate." Panel, BMO Capital Markets. September 20, 2018.
- Blockchain Technology Symposium (BTS). "Blockchain Nuances: Lessons from Fintech use-cases." Invited talk, Fields Institute. September 18, 2018.
- GoSec. "Blockchain Technologies: Landscape and Future Directions." August 29, 2018.
- StartupFest. "Democracy Enhancing Technologies." CryptoFest. July 10, 2018.
- FintechQC. "Blockchain Nuances" Keynote, Desjardins Labs & UQAR, June 20, 2018.
- The Walrus LIVE. "The Future of Money" Panel Discussion with David Tax (TD) and Susan Prince (CBC). June 14, 2018.
- BMO ThinkSeries. "Blockchain Technologies: Landscape and Future Directions." June 12, 2018.
- Autorite des marches financiers (AMF). "Crypto Primer II." June 11, 2018.
- Canada Pension Plan Investment Board (CPPIB). "Blockchain Technologies." June 1, 2018.
- Security Revolution. "Blockchain Primer." SERENE-RISC, May 31, 2018.

- "Blockchain Technologies: Landscape and Future Directions." True North Science Bootcamp. May 25, 2018.
- Anticipating Future Trends and Managing Risks Program. "Blockchain Technologies: Landscape and Future Directions," HEC Paris and Concordia. May 10, 2018.
- Autorite des marches financiers (AMF). "Crypto Primer I." May 1, 2018.
- GC Blockchain Day. "Ledgers Past, Present and Future." Treasury Board Secretariat of Canada. April 23, 2018.
- "Workplace 2020." Management Consulting Club, Concordia. Panel. April 8, 2018.
- "Blockchain Technologies: Landscape and Future Directions." Canadian National Railway (CN). February 8, 2018.
- Kenneth Woods Portfolio Management Program. "Cryptocurrencies: An Investable Asset?" John Molson School of Business. January 23, 2018.
- "Provisions: Privacy-Preserving Proofs of Solvency." Newcastle University. December 7, 2017.
- "Democracy Enhancing Technologies: From Theory to Practice." CSDC Speaker Series. McGill, September 15, 2017.
- Hydro-Québec Symposium 3i. "Bitcoin & Blockchains: Landscape and Future Directions." Invited Speaker, Montreal,
- Privacy, Security and Trust (PST). "Bitcoin & Blockchains: Landscape and Future Directions." Keynote, Calgary, Aug 28, 2017.
- Metropolis 2017. "The Bitcoin & Blockchain Technology Landscape." June 28, 2017.
- Blockchain Meetup. "Zero Knowledge." District 3. May 4, 2017.
- Canada Music Week. "Blockchains: Smart Contracts and Media-Driven Crypto Currencies" Panel discussion, April 19, 2017.
- District 3. "The Future of Blockchain." Panel discussion, December 8, 2016.
- Symposium on Foundations & Practice of Security. "The Bitcoin & Blockchain Technology Landscape." Keynote presentation. Université Laval, October 26, 2016.
- Online Voting Roundtable: Electoral Futures in Canada. "Blockchain and Voting: Assessment & Critique." Invited Speaker, University of Ottawa. September 26, 2016.
- P2P Financial Systems Workshop. "Blockchain nuances." Keynote presentation. UCL, September 8, 2016.
- Bank of Canada. "Bitcoin & Blockchains: Part 2." July 14, 2016.
- Anti-phishing working group (APWG) eCrime 2016. "Bitcoin: an impartial assessment of its use and potential for cybercrime." May 31, 2016.
- C.D. Howe. "Blockchain Technologies and the Future of Finance." May 30, 2016.
- ASIMM Colloque RSI. "Bitcoin & Blockchains: Tutorial," May 12, 2016.
- Bank of Canada. "Bitcoin & Blockchains: Landscape and Future Directions," May 11, 2016.
- National Research Council (NRC), "Security Training Course," Mar 22, 2016.
- MIT Bitcoin Expo. "Blockchain-based voting: potential and limitations," MIT, Mar 6, 2016.

- Bitcoin and Cryptocurrency Research Conference. “Altcoins,” Center for Information Technology Policy (CITP), Princeton University, March 27, 2014.
- USENIX Summit on Hot Topics in Security (HotSec 2013). “Eroding Trust and the CA Debacle,” August 13, 2013.
- CIISE Distinguished Seminar. “How to Carbon Date Digital Information,” Concordia University, March 8, 2012.
- MITACS Digital Security Seminar Series. “Panic Passwords and their Applications,” Carleton University, January 27, 2011.
- CACR Cryptography Seminar. “The First Governmental Election with a Voter Verifiable Tally: Experiences using Scantegrity II at Takoma Park,” University of Waterloo, February 5, 2010.
- CACR Cryptography Seminar. “Selections: An Internet Voting System with Over-the-shoulder Coercion Resistance,” University of Waterloo, December 3, 2010
- Information Technology and Innovation Foundation (ITIF) Forum: Future of Voting. “Panel Discussion,” Longworth House Office Building, Washington, D.C. March 6, 2008.
- CACR Cryptography Seminar. “Combating Adverse Selection in Anonymity Networks,” University of Waterloo, October 17, 2007.

Expert Testimony & Public Interest Consultations

- Elections Quebec. “Internet Voting,” Citizen Jury. Nov 2, 2019.
- House of Commons, Standing Committee on Finance. Testimony: Statutory Review of the Proceeds of Crime and Terrorist Financing Act. March 27, 2018.
- Investissement Quebec. Bitcoin & Blockchains: Landscape and Future Directions. January 15, 2018.
- Government of Canada (GC) Digital Target State Architecture and Direction. Blockchain working group. August 2017 — April 2018.
- Karina Gould, Minister of Democratic Institutions (House of Commons, Canada). CDSC roundtable. August 30, 2017.
- Autorité des marchés financiers (AMF). “Blockchain nuances.” March 29, 2017.
- Royal Canadian Mounted Police (RCMP). Bitcoin brainstorming session (#2). Participant in roundtable. September 28, 2016.
- Royal Canadian Mounted Police (RCMP). Bitcoin brainstorming session. Participant in roundtable. July 5, 2016.
- Formation régionale de la Cour du Québec. “Bitcoin: Introduction & Implications,” May 9, 2015.
- 2013–2014 City of Toronto. Subject Matter Expert on Internet Voting Security and Cryptography (RFP No. 3405-13-3197).
- Senate of Canada, Standing Committee on Banking, Trade and Commerce. Testimony: Study on the use of digital currency. April 3, 2014.
- City of Edmonton: Citizen Jury on Internet Voting. “Security Risks Related to Internet Voting,” Centre for Public Involvement/University of Alberta, November 23–25, 2012.

Press & Media (Selected)

- “What is Worldcoin and what does it mean for our privacy?” *Context.news (Thomson Reuters Foundation)*, June 7, 2023.
- “Clarity, please.” *CBA/ABC National*, Nov 14, 2022
- “Deception, exploited workers, and cash handouts: How Worldcoin recruited its first half a million test users.” *MIT Technology Review*, April 6, 2022.
- “It’s a first, Bitcoin is now legal tender in one country.” *CBC Radio*, Sep 23, 2021.
- “New kid on the blockchain: the young people using crypto for good.” *DAZED*, Jul 22, 2021.
- “Digital currencies bring new options for financial privacy.” *Hill Times*, May 5, 2021.
- “Satoshi & Company: The 10 Most Important Scientific White Papers In Development Of Cryptocurrencies.” *Forbes*, Feb 13, 2021.
- “Contact tracing segment.” *The Aaron Rand Show, CJAD 800*, May 26, 2020.
- “Are we ready for an app that trades privacy for more freedom?” *Montreal Gazette*, May 25, 2020.
- “Chaînes de blocs: dompter la décentralisation de l’informatique.” *Le Devoir*, Mar 2, 2020.
- “Academic: All Undergrads Should Learn About Bitcoin & Blockchain.” *Cryptonews*, Dec 22, 2019.
- “Why Quebec is betting big on Bitcoin.” *Pivot Magazine (CPA Canada)*, Jan 8, 2019.
- “Banks Claim They’re Building Blockchains. They’re Not.” *Investopedia*, July 13, 2018.
- “The evolution of cryptojacking.” *CryptoInsider*, March 20, 2018.
- “The Ethics Of Cryptojacking: Rampant Malware Or Ad-Free Internet?” *CoinTelegraph*, March 16, 2018.
- “One of the Biggest Coinhive Users Made \$7.69 In 3 Months.” *Motherboard*, March 14, 2018.
- “Attack Or Business Opportunity?: Academics Question Ethics Of Coinhive Cryptojacking.” *CoinTelegraph*, March 10, 2018.
- “How much should I regret not buying Bitcoin?” *Gizmodo*, January 29, 2018.
- Interview on Bitcoin regulation. *CBC Radio One*, December 5, 2017.
- “How blockchain-based payment is changing the cannabis industry,” *IBM thinkLeaders*, June 21, 2017.
- “Ottawa explores potential of ‘blockchain,’ billed as next-generation Internet tech.” *Toronto Star*, Feb 28, 2017.
- “Block the vote: Could Blockchain Technology Cybersecure Elections?” *Forbes*, Aug 30, 2016.
- “He’s Bitcoin’s Creator, He Says, but Skeptics Pounce on His Claim,” *New York Times*, May 2, 2016.
- “Logged out, but still out there,” *Globe and Mail*, Feb 19, 2016.
- “Princeton University releases first draft of bitcoin textbook,” *CoinDesk*, Feb 10, 2016.
- “The top 10 cryptocurrency research papers of 2015,” *CoinDesk*, Dec 27, 2015.

- “Canada’s Internet Voting Problem,” *SC Magazine*, Feb 2015 issue.
- “Latest Internet voting reports show failures across the board,” *Al Jazeera America*, Feb 8, 2015
- “How Block Chain Technology Could Usher in Digital Democracy,” *CoinDesk*, June 16, 2014.
- “Can Bitcoin Help Predict the Future?,” *CoinDesk*, May 24, 2014.
- “Heartbleed and sentinels of the net,” *Montreal Gazette*, Apr 21, 2014.
- “PROFESSOR: There Is A Big, Gaping Flaw In The New Satoshi Study,” *Business Insider*, Mar 28, 2014.
- “2014 Federal Budget Calls Bitcoin A Terrorist, Crime ‘Risk’,” *Huffington Post*, Feb 12, 2014.
- “Bitcoin: How its core technology will change the world,” *New Scientist*, Feb 5, 2014.
- “More than money, bitcoin’s real value lies in its algorithms,” *InfoWorld*, Jan 12, 2014.
- “U. researchers develop Bitcoin prediction market,” *Daily Princetonian*, Jan 5, 2014.
- “This Princeton professor is building a Bitcoin-inspired prediction market,” *The Verge*, Nov 29, 2013
- “Montreal’s Bitcoin Embassy bridges gap between digital currency and real world,” *Montreal Gazette*, Nov 29, 2013.
- “Bitcoin online currency gets new job in web security,” *New Scientist*, Jan 11, 2012.
- “Secure, verifiable voting: Cryptography, invisible ink, and other voting magic,” *Imprint*, Nov 6, 2009.
- “Scantegrity: Voters Test New Transparent Voting System,” *Huffington Post*, Nov 5, 2009.
- “Maryland Voters Test New Cryptographic Voting System,” *Wired News*, Nov 4, 2009.
- “Voters try out new security system,” *UW Daily Bulletin*, Nov 3, 2009.
- “E-voting system lets voters verify their ballots are counted,” *Computerworld*, Nov 3, 2009.
- “First Test for Election Cryptography,” *Technology Review*, Nov 2, 2009.
- “Mock election tests new voting system,” *Gazette.net*, April 15, 2009.
- “Geek the Vote 2012: What Election Tech Will Look like 4 Years From Now,” *Popular Mechanics*, Nov 4, 2008.
- “Canadian voting machine technology enters American political scene,” *CBC.ca*, Oct 28, 2008.
- “New Voter Counter System Uses Encrypted Codes, Invisible Ink,” *Voice of America*, Oct 24, 2008.
- “A Really Secret Ballot,” *The Economist*, Oct 22, 2008.
- “Class voting hacks prompt call for better audits,” *MSNBC*, Oct 20, 2008.
- “Clean Elections,” *Communications of the ACM*, October 2008.
- “Protecting Your Vote With Invisible Ink,” *Discover Magazine*, Oct 2008.
- “Flawless Vote Counts,” *Technology Review*, Sept/Oct 2008.
- “Shift Back to Paper Ballots Sparks Disagreement,” *Morning Edition*, Mar 7, 2008.
- “Down for the Count,” *ACM netWorker*, Mar 2008.

- “The future of voting IT,” *Government Computer News*, Mar 10, 2008.
- “A Damaging Paper Chase In Voting,” *Washington Post*, Sept 8, 2007.
- “Punchscan Wins VoComp 2007,” *As It Happens (CBC)*, August 23, 2007.
- “US/Canada Team Wins Voting Competition,” *Threat Level (Wired)*, July 19, 2007.
- “Electronic Democracy,” *Digital Planet (BBC)*, Jan 29, 2007.
- “Making Every E-vote Count,” *IEEE Spectrum*, Jan 2007.

Concordia Promotional Activities

- Thinking Out Loud. “Bitcoin & Cryptocurrency,” Podcast, Episode 14. 27 Feb 2018.
- “Back to the future — reclaiming the internet” Distinguished Alumni Speaker Series with Fay Arjomandi. September 22, 2018.
- “This is Concordia. Now. “Bitcoin and cryptocurrency.” Conversation with Alan Shepherd. April 11, 2018.
- “X EXPLAINED: What you need to know about internet cookies.” Concordia Video. March 29, 2018.
- This Is Concordia. Now. “Jeremy Clark talks Bitcoin and cryptocurrency.” Conversation with Sudha Krishnan (CBC Montreal). February 22, 2018.
- Next-Gen. Now. “The Campaign for Concordia.” Promotional video with on-screen interview. November 24, 2017.
- Capstone Magazine. “Cyberattacks: everything you need to know.” Fall 2016.
- Concordia Alumni Association. “Everyone knows your birthday: How secure is your password Hint: not very!” New York City, May 16, 2017.
- Thinking Out Loud. “One Vote,” The Futurecast podcast, Episode 4. April 12, 2017.
- Next-gen. Now. “My Name is Jeremy Clark.” Website feature. March 1, 2017.
- Concordia University Magazine. “Guardians of the IT galaxy.” February 9, 2017.
- Thinking Out Loud. “Connecting your tech future,” conversation with Nora Young (CBC), Concordia University. March 1, 2016.
- Breakfast Talk. “Heartbleed & other CIISE Research,” Concordia University. May 6, 2014.

Highly Qualified Personnel

HQP Job Placement


| Sector | Organization |
|---------------------|---|
| Blockchain Industry | ConsenSys Diligence, Offchain Labs, Trail of Bits, Quantstamp, BitAccess, Ether Capital |
| Faculty | Carleton University, Boise State University |
| PDFs | UQAM |
| Industry | KPMG, Deloitte, Morgan Stanley |
| Government | National Defence |

Post-Doctoral










| Name | State | Dates | Research Topic | Papers | Co-Supervisor |
|-------------------|----------|---------------|-----------------|--------|---------------|
| Elizabeth Stobert | PDF 🎓 | 2018/W-2018/F | Usable security | C24 | |

PhD

| Name | State | Dates | Research Topic | Papers | Co-Supervisor |
|------------------------|----------|------------------|--|--|---------------------|
| Reza Rahimian | PhD | 2018/F-Part Time | Financial technology | C37 | |
| Mahsa Moosavi | PhD | 2018/S- | Layer-2 blockchain technology | C30, C35, J08, C44 | |
| Didem Demirag | PhD 🎓 | 2018/W-2022/F | “Moving Multiparty Computation Forward for the Real World” | C33, J08, C40, C43, C47, J10 | |
| Shayan Eskandari | PhD | 2017/F- | Blockchain technology | C24, C27, C29, C32, C35, C37, C42, J09 | |
| Pratyusha Bhattacharya | PhD | 2017/S- | Smart Grid Security | | M. Debbabi (CIISE) |
| Nan Yang | PhD 🎓 | 2014/S-2020/F | “Non-Local Contamination in Cryptography” | C28, C39 | C. Crépeau (McGill) |

| Name | State | Dates | Research Topic | Papers | Co-Supervisor |
|-------------|--|-----------------|---|----------|------------------|
| Gaby Dagher | PhD  | 2013/F - 2015/F | "Toward secure and privacy-preserving data sharing and integration" | C26, J06 | B. Fung (McGill) |

MASc

| Name | State | Dates | Research Topic | Papers | Co-Supervisor |
|--------------------|---|-----------------|--|--|---|
| Youwei Deng | MASc | 2023/W- | Zero Knowledge Proofs | | |
| Sina Pilehchiha | MASc  | 2021/S-2022/F | "Improving Reproducibility in Smart Contract Research" | | A.G. Aghdam (ECE) |
| Mahdi Nejadgholi | MASc  | 2019/F-2022/S | "Nullification, a coercion-resistance add-on for e-voting protocols" | C39, C46 | |
| Mehdi Salehi | MASc  | 2020/W-2022/W | "An Analysis of Upgradeability, Oracles, and Stablecoins in the Ethereum Blockchain" | C41, C42, C45 | M. Mannan (CIISE) |
| Corentin Thomasset | MASc  | 2019/F-2020/S | "SERENIoT : Politiques de sécurité collaboratives pour maisons connectées" | | D. Barrera (Carleton), J. Fernandez (Polytechnique) |
| Chidinma Okoye | MASc  | 2016/S - 2017/F | "New applications of blockchain technology to voting and lending" | C31 | |
| Mahsa Moosavi | MASc  | 2015/F - 2018/W | "Rethinking Certificate Authorities: Understanding and decentralizing domain validation" | C30, C35, J08, C44 | |
| Michael Colburn | MASc  | 2014/F - 2018/S | "Short-Lived Signatures" | | |
| Abhimanyu Khanna | MASc  | 2014/F - 2017/S | "Towards Usable and Fine-grained Security for HTTPS with Middleboxes" | | M. Mannan (CIISE) |
| Shayan Eskandari | MASc  | 2013/F - 2016/W | "Real world deployability and usability of Bitcoin" | C24, C27, C29, C32, C35, C37, C42, J09 | W. Hamou-Lhadj (ECE) |

Supervised Graduate Projects (ENGR 6991)

| Year | Students |
|------|---|
| 2023 | Mohammad Zawad Tahmeed |
| 2019 | Abhinav Kumar |
| 2018 | Jinumol James, Laleh Alimadadi, Rupesh Gawde, Brindha Shree, Isreal Tei, Saad Ahmen (MIAE: ENGR 6971) |
| 2017 | Temitiope Adetula, Shahab Odagar |
| 2016 | Ejiro Mary, Ogor Umukoro, Omoye Obazele |
| 2015 | S. Sandisha |
| 2014 | Paemka-Ojugbana Judah Chukwuma, Manish Megnath |

Teaching

Courses Taught

| Year/Term | Course | Class Size | Evaluation* |
|-----------|--|------------|-------------|
| 2022/4 | INSE 6615: Blockchain Technology | | |
| 2022/4 | INSE 6150: Security Evaluation Methodologies | | |
| 2022/2 | INSE 6150: Security Evaluation Methodologies | 70 | 1.72 |
| 2021/4 | INSE 6630: Recent Developments in Info. Systems Security | 67 | N/A |
| 2021/4 | INSE 6150: Security Evaluation Methodologies | 68 | N/A |
| 2021/2 | INSE 6150: Security Evaluation Methodologies | 49 | N/A |
| 2020/1 | INSE 6150: Security Evaluation Methodologies | 78 | N/A |
| 2018/4 | INSE 6150: Security Evaluation Methodologies | 92 | 1.20 |
| 2018/4 | COMP 249: Object Oriented Programming II | 109 | 1.73 |
| 2018/2 | INSE 6630: Recent Developments in Info. Systems Security | 53 | 1.19 |
| 2018/2 | COMP 352: Algorithms and Data Structures | 68 | 1.57 |
| 2017/4 | INSE 6150: Security Evaluation Methodologies | 88 | 1.69 |
| 2017/2 | INSE 6110: Foundations of Cryptography | 79 | 1.22 |
| 2017/2 | INSE 6630: Recent Developments in Info. Systems Security | 35 | 1.71 |
| 2016/4 | INSE 6150: Security Evaluation Methodologies | 59 | 1.13 |
| 2016/2 | INSE 6150: Security Evaluation Methodologies | 63 | 1.09 |
| 2016/2 | INSE 6110: Foundations of Cryptography | 79 | 1.32 |
| 2015/4 | COMP 249: Object Oriented Programming II | 50 | 1.44 |
| 2015/4 | INSE 6150: Security Evaluation Methodologies | 86 | 1.15 |
| 2015/2 | INSE 6110: Foundations of Cryptography | 76 | 1.24 |
| 2014/4 | COMP 249: Object Oriented Programming II | 93 | 1.81 |
| 2014/4 | INSE 6150: Security Evaluation Methodologies | 86 | 1.41 |
| 2014/2 | INSE 6110: Foundations of Cryptography | 69 | 1.55 |
| 2013/4 | INSE 6150: Security Evaluation Methodologies | 46 | 1.73 |
| 2013/2 | INSE 6110: Foundations of Cryptography | 21 | 1.11 |

- *Evaluation is for Question 20: "Overall, the professor is an effective teacher." Score is from 1.00 (best) to 5.00 (worst).*
- *Evaluations were suspended by the university from 2020-2021 due to COVID19*

Teaching Awards

- Teaching Excellence Award, Junior Faculty, ENCS, Concordia University, 2017.

External Lectures (Selected)

- "Decentralized finance (DeFi)," Faculty of Law, University of Ottawa. 22 Mar 2021.
- "Improving usability and trust for moving Bitcoin adoption forward," MAS.S65 - Blockchain Technologies, Massachusetts Institute of Technology (MIT). Guest lecture, 4 Nov 2015.
- "History of cryptocurrencies," Bitcoin and Cryptocurrency Technologies, Princeton University. Guest lecture, Online: Coursera, recorded in Sep 2015.
- COMP 4109: Applied Cryptography, Carleton University. Course, Winter 2013.

Service to University

University Committees

Leaves: Parental 2019-2020; Sabbatical 2020-2021

| Year | Committee |
|-----------|--|
| 2022- | GCS Elections Committee (Chair) |
| 2022- | Concordia University Faculty Tribunal Pool |
| 2021- | GCS Faculty Council |
| 2018-2019 | Concordia University Faculty Tribunal Pool |
| 2018-2019 | ENCS Blended/Online Pedagogy Committee |
| 2017-2019 | ENCS Elections Committee |
| 2015-2019 | CIISE PR/Website [Co-Chair] |
| 2013-2019 | CIISE Seminar Committee |
| 2014–2016 | Concordia University Faculty Tribunal Pool |
| 2014–2015 | CIISE Website Committee (merged with PR above) |
| 2013–2015 | CIISE PR Committee (merged with Website above) |

Graduate Student Committees

| Year | Occurrences | | | | |
|-----------|--------------|-----------|--------------|-------------|-------------|
| | MASc Defence | PhD Comp. | PhD Proposal | PhD Seminar | PhD Defence |
| 2022 | 1 | 2 | 1 | | 1 |
| 2021 | 3 | 1 | 1 | 1 | 1 |
| 2020 | 1 | 1 | | 1 | 1 |
| 2019 | | | 2 | 3 | 3 |
| 2018 | | 3 | 1 | | 2 |
| 2013-2017 | 6 | 6 | 3 | 4 | 2 |

External PhD Examiner

- Md Mamunur Rashid Akand, University of Calgary, 2023
- Farimah Ramezan Poursafaei, McGill, 2022
- Patrick McCorry, Newcastle University, UK, 2017
- Giulia Alberini, McGill, 2015
- Jérôme Dossogne, Université libre de Bruxelles, Belgium, 2015

Service to Academia

Program Chairs

| Year | Conference |
|------|---|
| 2024 | Financial Cryptography and Data Security 2024 (FC) |
| 2022 | Blockchain Technology Symposium (BTS) |
| 2019 | Workshop on Advances in Secure Electronic Voting (VOTING) |
| 2018 | Workshop on Advances in Secure Electronic Voting (VOTING) |
| 2017 | The Smart Cybersecurity Network: Spring 2017 Workshop (SERENE-RISC) |
| 2016 | Workshop on Bitcoin and Blockchain Research (BITCOIN) |

General Chairs

| Year | Conference |
|------|---|
| 2024 | Blockchain Technology Symposium (BTS) |
| 2020 | Privacy Enhancing Technologies Symposium (PETS) |

Advisory Boards

| Year | Journal |
|-------|---|
| 2019— | Privacy Enhancing Technologies Symposium (PETS) |

Editorial Boards

| Year | Journal |
|-----------|---|
| 2013—2015 | USENIX Journal of Election Technologies (USENIX JETS) |

Program Committees (Selected)

| Year | Conference |
|------|--|
| 2023 | ACM Computer and Communications Security (CCS) |
| 2023 | Workshop on Decentralized Finance (DeFi) |
| 2023 | Financial Cryptography and Data Security (FC) |

| Year | Conference |
|------|---|
| 2022 | Workshop on Privacy in the Electronic Society (WPES) |
| 2022 | Sixth International Joint Conference on Electronic Voting (E-VOTE-ID) |
| 2022 | Workshop on Advances in Secure Electronic Voting (VOTING) |
| 2022 | Workshop on Decentralized Finance (DeFi) |
| 2022 | Financial Cryptography and Data Security (FC) |
| 2021 | IEEE Security & Privacy on the Blockchain (IEEE S&B) |
| 2021 | Financial Cryptography and Data Security (FC) |
| 2021 | Sixth International Joint Conference on Electronic Voting (E-VOTE-ID) |
| 2021 | Workshop on Advances in Secure Electronic Voting (VOTING) |
| 2020 | Financial Cryptography and Data Security (FC) |
| 2020 | IEEE Security & Privacy on the Blockchain (IEEE S&B) |
| 2019 | Financial Cryptography and Data Security (FC) |
| 2019 | IEEE Security & Privacy on the Blockchain (IEEE S&B) |
| 2018 | APWG Symposium on Electronic Crime Research (eCrime) |
| 2018 | Symposium on Usable Privacy & Security (SOUPS) |
| 2018 | IEEE Security & Privacy on the Blockchain (IEEE S&B) |
| 2018 | Workshop on Bitcoin Research (BITCOIN) |
| 2018 | Financial Cryptography and Data Security (FC) |
| 2017 | APWG Symposium on Electronic Crime Research (eCrime) |
| 2017 | Workshop on Advances in Secure Electronic Voting (VOTING) |
| 2017 | Workshop on Bitcoin Research (BITCOIN) |
| 2017 | Financial Cryptography and Data Security (FC) |
| 2016 | RSA Conference: Cryptographer's Track (CT-RSA) |
| 2016 | ACM CCS Workshop on Security and Privacy in Smartphones and Mobile Devices (SPSM) |
| 2016 | IEEE Advanced and Trusted Computing (Bitcoin track) |
| 2016 | Workshop on Advances in Secure Electronic Voting (VOTING) |
| 2016 | Workshop on Bitcoin Research (BITCOIN) |
| 2016 | Financial Cryptography and Data Security (FC) |

| Year | Conference |
|-------------|---|
| 2015 | International Conference on E-Voting and Identity (VoteID) |
| 2015 | Workshop on Bitcoin Research (BITCOIN) |
| 2014 | Annual Computer Security Applications Conference (ACSAC) |
| 2014 | Conference on Privacy, Security and Trust (PST) – Privacy Theme. |
| 2014 | Workshop on Bitcoin Research (BITCOIN) |
| 2013 | International Conference on E-Voting and Identity (VoteID) |
| 2012 | USENIX Electronic Voting Technology Workshop/Workshop on Trustworthy Elections (EVT/WOTE) |
| 2011 | USENIX Electronic Voting Technology Workshop/Workshop on Trustworthy Elections (EVT/WOTE) |

Journals (Most Recent Year / Selected)

| Most Recent Year | Journal / Conference |
|-------------------------|--|
| 2023 | IEEE Security and Privacy Magazine |
| 2022 | IEEE Transactions on Information Forensics and Security (TIFS) |
| 2021 | Bank for International Settlements (BIS) Working Paper Series |
| 2021 | IEEE Transactions on Dependable Secure Computing (TDSC) |
| 2021 | Communications of the ACM |

Reviews for Funding Agencies (Most Recent Year / Selected)

| Most Recent Year | Agency |
|-------------------------|---|
| 2023 | Israel Science Foundation (ISF) |
| 2023 | Natural Sciences and Engineering Research Council of Canada (NSERC) |
| 2022 | Social Sciences and Humanities Research Council of Canada (SSHRC) |
| 2020 | MITACS |
| 2019 | Fonds de Recherche du Québec – Nature et technologies (FRQNT) |
| 2019 | Alberta Innovates |

| Most Recent Year | Agency |
|-------------------------|------------------------------------|
| 2017 | Office of the Privacy Commissioner |