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# ABRAM HINDLE

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## EDUCATION

Ph.D., University of Waterloo, David R. Cheriton School of Computer Science, 2010

Co-supervisors: Prof. Michael W. Godfrey and Prof. Richard C. Holt

Dissertation: *Evidence-based Software Process Recovery*

M.Sc., University of Victoria, Dept. of Computer Science, 2005.

Supervisor: Prof. Daniel M. Germán.

Dissertation: *SCQL: A formal model and a query language for source control repositories*

B.Sc. (Honours), University of Victoria, Faculty of Engineering, Dept. of Computer Science, 2003

Graduated with distinction.

# WORK EXPERIENCE

I have significant research and teaching experience as a professor, post-doc, and graduate student. I also have considerable experience in industrial software engineering, in roles such as contract programmer and lead programmer working on embedded systems, web-based systems, and distributed systems.

2023, Spring –	Professor of Computing Science in the Department of Computing Science at the University of Alberta, Edmonton, Alberta, Canada.
2023, Winter – 2023, Summer	Associate Chair Research in the Department of Computing Science at the University of Alberta, Edmonton, Alberta, Canada.
2017, Spring – 2023, Spring	Associate Professor of Computing Science in the Department of Computing Science at the University of Alberta, Edmonton, Alberta, Canada.
2011, Fall – 2017, Spring	Assistant Professor of Computing Science in the Department of Computing Science at the University of Alberta, Edmonton, Alberta, Canada.
2011, Spring – 2011, Fall	Visiting Scholar at Microsoft Research, Redmond, USA
2010, Fall – 2011, Spring	Postdoctoral scholar under Professor Premkumar Devanbu and Professor Zhendong Su, focusing on mining software repositories and natural language processing applied to source code, University of California: Davis (UC Davis), Davis, USA.
2008, Winter – 2008, Spring	Teaching Assistant for CSC 136, <i>Elementary Algorithm Design and Data Abstraction</i> , University of Waterloo, Waterloo, Canada.
2005, Fall	Teaching Assistant for CSC 125, <i>Introduction to Programming Principles</i> , University of Waterloo, Waterloo, Canada.
2004, Spring – 2004, Summer	Lab leader and lab instructor and Teaching Assistant for SENG265, <i>Software Development Methods</i> , and SENG 480a, <i>Hypermedia</i> , University of Victoria, Victoria, Canada.
2003, Summer	Contract programmer for Radar/HVAC, developed embedded and distributed systems for refrigeration monitoring, Victoria, Canada.
2002, Summer	Lead programmer for M2C Merchant Services, Sidney, Canada.
2001, Summer	Junior programmer at Baremetal Inc., building domain-name registration software, Victoria, Canada.
1998, Summer – 2000, Fall	Lead programmer for Indexdirect (Vince Bird), developed web-based systems, Cobble Hill, Canada.

# PUBLICATIONS

Journal papers, conference papers, workshop papers, and posters are documented below. Highly qualified personnel including masters, PhD, and undergraduate research assistant students who I supervised directly are highlighted in **bold-face**. Authors who were students at the time of writing the paper if I was already faculty at the time are under-lined. The “Role:” heading indicates my role in the research and is followed by the source of funding for that research.

## JOURNAL PAPERS

- J27** “Towards artificial intelligence-based learning health system for population-level mortality prediction using electrocardiograms”, **Wei-jie Sun** and Sunil Vasu Kalmady and Nariman Sepehrvand and **Amir Salimi** and Yousef Nademi and Kevin Baine and Justin A. Ezekowitz and Russell Greiner and Abram Hindle and Finlay A. McAlister and Roopinder K. Sandhu and Padma Kaul *npj Digital Medicine* , 2023, 12pp. Role: Researcher / Co-author. NSERC Discovery, CIHR
- J26** “Analyzing Techniques for Duplicate Question Detection on Q&A Websites for Game Developers”, Arthur V. Kamienski and Abram Hindle and Cor-Paul Bezemer *Empirical Software Engineering Journal (EMSE)* , 2022, 46pp. Role: Researcher / Co-author. NSERC Discovery
- J25** “What Causes Wrong Sentiment Classifications of Game Reviews?”, Markos Viggiano, Dayi Lin, Abram Hindle, Cor-Paul Bezemer *IEEE Transactions on Games* , 2021, 14pp. Role: Researcher / Co-author. NSERC Discovery
- J24** “How are issue reports discussed in Gitter chat rooms?”, **Hareem Sahar**, Abram Hindle, Cor-Paul Bezemer *Journal of Systems and Software* , 2020, 53pp. Role: Researcher / Co-author. NSERC Discovery
- J23** “On the Time-Based Conclusion Stability of Cross-Project Defect Prediction Models”, **Abdul Bangash**, **Hareem Sahar**, Abram Hindle, Karim Ali *Empirical Software Engineering* , 2020, 39pp. Role: Researcher / Co-author. NSERC Discovery
- J22** “Complexity: Let’s Not Make This Complicated”, Abram Hindle *IEEE Software* , 2019, 3pp. Invited, not peer reviewed.. Role: Invited Opinion. NSERC Discovery
- J21** “Preventing Duplicate Bug Reports by Continuously Querying Bug Reports”, Abram Hindle, Curtis Onuckzo *Empirical Software Engineering* , 2018, 38pp. Role: Researcher / Co-author. MITACS Accelerate and NSERC Discovery
- J20** “How does Docker affect energy consumption? Evaluating workloads in and out of Docker containers”, **Eddie Antonio Santos**, **Carson McLean**, **Christopher Solinas**, Abram Hindle *Journal of Software Systems* , 2018, 14pp. Role: Researcher / Co-author. NSERC Discovery
- J19** “GreenScaler: Training Software Energy Models With Automatic Test Generation”, **Shaiful Chowdhury**, **Stephanie Borle**, **Stephen Romansky**, Abram Hindle *Empirical Software Engineering* , 2018, 52pp. Role: Researcher / Co-author. NSERC Discovery
- J18** “An exploratory study on assessing the energy impact of logging on Android applications”, **Shaiful Alam Chowdhury**, **Silvia Di Nardo**, Abram Hindle, Zhen Ming (Jack) Jiang *Empirical Software Engineering* , 2018, 34pp. Role: Researcher / Co-author. NSERC Discovery

- J17** “An App Performance Optimization Advisor for Mobile Device App Marketplaces”, Rubén Saborido, Foutse Khomh, Abram Hindle, Enrique Alba *Sustainable Computing* , 2018, 18pp. Role: Researcher / Co-author. NSERC Discovery
- J16** “What can Android mobile app developers do about the energy consumption of machine learning?”, **Andrea McIntosh**, Safwat Hassan, Abram Hindle *Empirical Software Engineering* , 2018, 42pp. Role: Researcher / Co-author. NSERC Discovery
- J15** “Analyzing the effects of test driven development in GitHub”, Neil C. Borle, Meysam Fegghi, Eleni Stroulia, Russell Greiner, Abram Hindle *Empirical Software Engineering* , 2017, 28pp. Role: Instructor / Co-author. NSERC Discovery
- J14** “Isolated guitar transcription using a deep belief network”, **Gregory Burlet**, Abram Hindle *PeerJ Computer Science* , 2017, 30pp. Role: Researcher / Co-author. NSERC Discovery
- J13** “Detecting duplicate bug reports with software engineering domain knowledge”, **Karan Aggarwal**, and Finbarr Timbers, and Tanner Rutgers, and Abram Hindle, and Eleni Stroulia, and Russell Greiner *Journal of Software: Evolution and Process* , 2017, 15pp. Role: Researcher / Co-author. NSERC Discovery
- J12** “A contextual approach towards more accurate duplicate bug report detection and ranking”, Abram Hindle, **Anahita Alipour**, Eleni Stroulia *Empirical Software Engineering* , 2016, 42pp. Role: Primary Supervisor. NSERC Discovery
- J11** “On the Naturalness of Software”, Abram Hindle, Earl T. Barr, Zhendong Su, Premkumar T. Devanbu, and Mark Gabel *Communications of the ACM: Invited Research Highlights (CACM)* , 2016, 11pp. Invited re-print, not peer reviewed. Role: Researcher / Co-author. NSF 0964703 and NSF 0613949
- J10** “Leaders of Tomorrow on the Future of Software Engineering: A Roundtable”, Felienne Hermans, Janet Siegmund, Thomas Fritz, Gabriele Bavota, Meiyappan Nagappan, Abram Hindle, Yasutaka Kamei, Ali Mesbah, Bram Adams *IEEE Software* , 2016, 5pp. Invited, not peer reviewed.. Role: Invited Opinion. NSERC Discovery
- J9** “What do programmers know about the energy consumption of software?”, **Candy Pang**, Abram Hindle, Bram Adams, Ahmed E. Hassan *IEEE Software* , 2015, 6pp. Role: Co-author / supervisor. NSERC Discovery
- J8** “The Impact of User Choice on Energy Consumption”, **Zhang Chenlei**, Abram Hindle, and Daniel M. German *IEEE Software* , 2014, 5pp. Role: Co-author / supervisor. NSERC Discovery
- J7** “Do topics make sense to managers and developers?”, Abram Hindle, Christian Bird, Thomas Zimmermann, and Nachiappan Nagappan *Journal of Empirical Software Engineering* , 2014, 37pp. Role: primary author. Microsoft Research
- J6** “Automated Topic Naming Supporting Cross-project Analysis of Software Maintenance Activities”, Abram Hindle, Neil A. Ernst, Michael W. Godfrey, John Mylopoulos *Journal of Empirical Software Engineering* , 2013, 31pp. Role: Primary author. NSERC PGS-D and NSERC Discovery
- J5** “Roundtable: What’s Next in Software Analytics”, Ahmed E Hassan, Abram Hindle, Per Runeson, Martin Shepperd, Prem Devanbu, and Sunghun Kim *IEEE Software* , 2013, 4pp. Invited, not peer reviewed. Role: Invited Opinion.
- J4** “Green Mining: a Methodology of Relating Software Change and Configuration to Power Consumption”, Abram Hindle *Journal of Empirical Software Engineering* , 2013, 36pp. Role: Author.. NSERC Discovery

- J3** “Software Bertillonage Determining the Provenance of Software Development Artifacts”, Julius Davies, Daniel M. German, Michael W. Godfrey, Abram Hindle *Journal of Empirical Software Engineering* , 2012, 40pp. Role: Supporting author, writing, case study. NSERC PGS-D and NSERC Discovery
- J2** “Reading beside the lines: Using indentation to rank revisions by complexity”, Abram Hindle, Michael W. Godfrey, Richard C. Holt *Science of Computer Programming* , 2009, 16pp. Role: Primary author. NSERC PGS-D
- J1** “Visualizing the evolution of software using softChange”, Daniel M. Germán and Abram Hindle *International Journal of Software Engineering and Knowledge Engineering* , 2006, 7pp. Role: Supporting author, writing. NSERC CGS-M

## CONFERENCE PAPERS

- C79** “An Empirical Study to Investigate Collaboration Among Developers in Open Source Software (OSS)”, **Weijie Sun** and **Samuel Iwuchukwu** and **Abdul Ali Bangash** and Abram Hindle *2023 IEEE/ACM 20th International Conference on Mining Software Repositories (MSR): Challenge Track* , 2023, 5pp. Melbourne, Australia [Acceptance rate 50%] Role: Co-Author. NSERC Discovery
- C78** “Evolution of the Practice of Software Testing in Java Projects”, **Anisha Islam** and Nipuni Tharushika Hewage and **Abdul Ali Bangash** and Abram Hindle *2023 IEEE/ACM 20th International Conference on Mining Software Repositories (MSR): Challenge Track* , 2023, 5pp. Melbourne, Australia [Acceptance rate 50%] Role: Co-Author. NSERC Discovery
- C77** “Energy Consumption Estimation of API-usage in Smartphone Apps via Static Analysis”, **Abdul Ali Bangash** and **Kalvin Eng** and Qasim Jamal and Karim Ali and Abram Hindle *2023 IEEE/ACM 20th International Conference on Mining Software Repositories (MSR)* , 2023, 11pp. Melbourne, Australia [Acceptance rate 37%] Role: Co-Author. NSERC Discovery
- C76** “A Black Box Technique to Reduce Energy Consumption of Android Apps”, **Abdul Ali Bangash**, Karim Ali, Abram Hindle *ICSE-NIER’22* , 2022, 5pp. Pittsburgh, United States [Acceptance rate 26.8%] Role: Co-Author. NSERC Discovery
- C75** “Energy Efficient Guidelines for iOS Core Location Framework”, **Abdul Ali Bangash**, Daniil Tiganov, Karim Ali, Abram Hindle *Proceedings of the 2021 International Conference on Software Maintenance and Evolution (ICSME)* , 2021, 12pp. Luxembourg City, Luxembourg [Acceptance rate 24%] Role: Co-Author. NSERC Discovery
- C74** “Multilabel 12-Lead Electrocardiogram Classification Using Beat To Sequence Autoencoders”, **Alexander William Wong**, **Amir Salimi**, Abram Hindle, Sunil Vasu Kalmady, Padma Kaul *IEEE International Conference on Acoustics, Speech and Signal Processing* , 2021, 4pp. Toronto, Canada Role: Co-Author. NSERC Discovery
- C73** “PySStuBs: Characterizing Single-Statement Bugs in Popular Open-Source Python Projects”, Arthur Veloso Kamienski, Luisa Palechor, Abram Hindle, Cor-Paul Bezemer *Proceedings of the 2021 International Conference on Mining Software Repositories* , 2021, 5pp. Madrid, Spain Role: Co-Author. NSERC Discovery
- C72** “Revisiting Dockerfiles in Open Source Software Over Time”, **Kalvin Eng**, Abram Hindle *Proceedings of the 2021 International Conference on Mining Software Repositories* , 2021, 12pp. Madrid, Spain [Acceptance rate 34.3%] Role: Co-Author. NSERC Discovery

- C71** “Make your own audience: virtual listeners can filter generated drum programs”, **Amir Salimi** and Abram Hindle *Proceedings of the 2020 AI Music Creativity Conference, 2020* , 2020, 8pp. Stockholm, Sweden Role: Co-Author. NSERC Discovery
- C70** “Multilabel 12-Lead Electrocardiogram Classification Using Gradient Boosting Tree Ensemble”, **Alexander W Wong**, Weijie Sun, Sunil V Kalmady, Padma Kaul, Abram Hindle *2020 Computing in Cardiology (CinC) PhysioNet Challenge* , 2020, 4pp. Rimini, Italy [Acceptance rate 41/300 or 13%] Role: Co-Author. NSERC Discovery
- C69** “Understanding DevOps Education with Grounded Theory”, **Candy Pang**, Abram Hindle, Denilson Barbosa *2020 IEEE International Conference on Software Engineering, Software Engineering Education and Training Track* , 2020, 12pp. Seoul, South Korea [Acceptance rate 21/84 or 25%] Role: Co-Author. NSERC Discovery
- C68** “Syntax and Stack Overflow: A Methodology for Extracting a Corpus of Syntax Errors and Fixes”, **Alexander William Wong**, **Amir Salimi**, **Shaiful Alam Chowdhury**, Abram Hindle *2019 IEEE International Conference on Software Maintenance and Evolution (ICSME)* , 2019, 5pp. Cleveland, United States [Acceptance rate 26/46 or 56%] Role: Co-Author. NSERC Discovery
- C67** “GreenBundle: An Empirical Study on the Energy Impact of Bundled Processing”, **Shaiful Alam Chowdhury**, Abram Hindle, Rick Kazman, **Takumi Shuto**, **Ken Matsui**, Yasutaka Kamei *Proceedings of the 41st ACM/IEEE International Conference on Software Engineering (ICSE)* , 2019, 12pp. Montreal, Canada [Acceptance rate 109/529 or 21%] Role: Author. NSERC Discovery, JSPS
- C66** “What do developers know about machine learning: a study of ML discussions on StackOverflow”, **Abdul Ali Bangash**, **Hareem Sahar**, **Shaiful Chowdhury**, **Alexander William Wong**, Abram Hindle, Karim Ali *Proceedings of the 6th International Conference on Mining Software Repositories (MSR19)* , 2019, 5pp. Montreal, Canada [Acceptance rate 14/27 or 52%] Role: Co-Author. NSERC Discovery
- C65** “Automatic topic classification of test cases using text mining at an Android smartphone vendor”, Junji Shimagaki, Yasutaka Kamei, Naoyasu Ubayashi, Abram Hindle *Proceedings of the 12th ACM/IEEE International Symposium on Empirical Software Engineering and Measurement (ESEM)* , 2018, 10pp. Olulu, Finland [Acceptance rate 12/28 or 43%] ESEM Best Industrial Paper Award. Role: Author. NSERC Discovery, JSPS
- C64** “Training Deep Convolutional Networks with Unlimited Synthesis of Musical Examples for Multiple Instrument Recognition”, **Rameel Sethi**, **Noah Weninger**, Abram Hindle, Vadim Bulitko, Michael Frishkopf *15th Sound and Music Computing Conference (SMC 2018)* , 2018, 10pp. Limassol, Cyprus Role: Author. KIAS, NSERC Discovery
- C63** “Syntax and Sensibility: Using language models to detect and correct syntax errors”, **Eddie Antonio Santos**, **Joshua Charles Campbell**, **Dhvani Patel**, Abram Hindle, José Nelson Amaral *25th IEEE International Conference on Software Analysis, Evolution, and Reengineering (SANER 2018)* , 2018, 11pp. Campobasso, Italy Role: Author. NSERC Discovery, MITACS Accelerate
- C62** “Deep Green: An Ensemble of Machine Learning Methods Predicting Mobile Energy Consumption”, **Stephen Romansky**, **Shaiful Alam Chowdhury**, Abram Hindle, Neil Borle, and Russell Greiner *International Conference on Software Maintenance and Evolution* , 2017, 11pp. Shanghai, China [Acceptance rate 42/151 or 27.8%] NSERC Discovery
- C61** “Performance with an Electronically Excited Didgeridoo”, Abram Hindle, and Daryl Posnett *New Interfaces for Musical Expression (NIME 2017)* , 2017, 5pp. Copenhagen, Denmark Role: Author. NSERC Discovery

- C60** “Continuous Maintenance”, **Candy Pang** and Abram Hindle *International Conference on Software Maintenance and Evolution ERA-Track (ICSME-ERA 2016)* , 2016, 5pp. Raleigh, United States [Acceptance rate 14/41 or 34%] NSERC Discovery
- C59** “Visualizing Project Evolution Through Abstract Syntax Tree Analysis”, Michael D. Feist and **Eddie Antonio Santos** and Ian Watts and Abram Hindle *Software Visualization (VISOFT), 2016 IEEE 4th Working Conference on* , 2016, 11pp. Raleigh, United States [Acceptance rate 21/48 or 43%] NSERC Discovery
- C58** “Hacking NIMES”, Abram Hindle *New Interfaces for Musical Expression (NIME 2016)* , 2016, 6pp. Brisbane, Australia Role: Author. NSERC Discovery
- C57** “Judging a commit by its cover: Correlating commit message entropy with build status on Travis-CI”, **Eddie Antonio Santos** and Abram Hindle *International Working Conference on Mining Software Repositories Challenge Track (MSR 2016)* , 2016, 4pp. Austin, United States [Acceptance rate 10/24 or 42%] Mining Challenge Award. Role: Class Project / Co-author. NSERC Discovery
- C56** “Characterizing Energy-Aware Software Projects: Are They Different?”, **Shaiful Chowdhury** and Abram Hindle *International Working Conference on Mining Software Repositories (MSR 2016)* , 2016, 4pp. Austin, United States [Acceptance rate 10/24 or 42%] Role: Co-author / supervisor. NSERC Discovery
- C55** “GreenOracle: Estimating Software Energy Consumption with Energy Measurement Corpora”, **Shaiful Chowdhury** and Abram Hindle *International Working Conference on Mining Software Repositories (MSR 2016)* , 2016, 11pp. Austin, United States [Acceptance rate 36/103 or 35%] Role: Co-author / supervisor. NSERC Discovery
- C54** “Energy Profiles of Java Collections Classes”, Samir Hasan, Zachary King, Munawar Hafiz, Mohammed Sayagh, Bram Adams, Abram Hindle *International Conference on Software Engineering (ICSE 2016)* , 2016, 12pp. Austin, United States [Acceptance rate 101/530 or 19%] ACM SIGSOFT Distinguished Paper Award. Role: Co-author / infrastructure. NSERC Discovery
- C53** “The Unreasonable Effectiveness of Traditional Information Retrieval in Crash Report Deduplication”, **Joshua Charles Campbell**, **Eddie Antonio Santos** and Abram Hindle *International Working Conference on Mining Software Repositories (MSR 2016)* , 2016, 11pp. Austin, United States [Acceptance rate 36/103 or 35%] Role: Co-author / supervisor. NSERC Discovery and MITACS Accelerate
- C52** “Hadoop energy consumption reduction with hybrid HDFS”, Ivanilton Polato, Denilson Barbosa, Abram Hindle, Fabio Kon *Proceedings of the 31st Annual ACM Symposium on Applied Computing, April 4-8, 2016* , 2016, 6pp. Pisa, Italy NSERC Discovery
- C51** “Crowdsourced Bug Triaging: Leveraging Q&A Platforms for Bug Assignment”, Ali Sajedi Badashian, Abram Hindle, Eleni Stroulia *International Conference on Fundamental Approaches to Software Engineering (FASE 2016)* , 2016, 17pp. Eindhoven, The Netherlands [Acceptance rate 27%] Role: Co-author. NSERC Discovery
- C50** “Green Software Engineering: The Curse of Methodology”, Abram Hindle *23rd IEEE International Conference on Software Analysis, Evolution, and Reengineering (SANER 2016) FOSE Track: Leaders of Tomorrow: Future Of Software Engineering* , 2016, 10pp. Osaka, Japan Invited but peer-reviewed. Role: Author. NSERC Discovery
- C49** “Client-Side Energy Efficiency of HTTP/2 for Web and Mobile App Developers”, **Shaiful Chowdhury**, **Varun Sapra** and Abram Hindle *23rd IEEE International Conference on Software Analysis,*

*Evolution, and Reengineering (SANER 2016)* , 2016, 11pp. Osaka, Japan [Acceptance rate 52/140 or 37%] Role: Co-author / supervisor. NSERC Discovery

- C48** “Detecting duplicate bug reports with software engineering domain knowledge”, **Karan Aggarwal**, Tanner Rutgers, Finbarr Timbers, Abram Hindle, Russ Greiner, Eleni Stroulia *22nd IEEE International Conference on Software Analysis, Evolution, and Reengineering (SANER 2015)* , 2015, 10pp. Montreal, Canada [Acceptance rate 46/144 or 32% ] Role: Co-author / supervisor.. NSERC Discovery
- C47** “Hadoop branching: Architectural impacts on energy and performance”, Ivanilton Polato, Denilson Barbosa, Abram Hindle, Fabio Kon *Sixth International Green and Sustainable Computing Conference WIP track (IGSC 2015)* , 2015, 4pp. Las Vegas, United States [Acceptance rate 33/67 or 59% ] Role: Co-author. NSERC Discovery
- C46** “A system-call based model of software energy consumption without hardware instrumentation”, **Shaiful Alam Chowdhury**, Luke N. Kumar, Md. Toukir Imam, Mohomed Shazan Mohomed Jabbar, **Varun Sapra**, **Karan Aggarwal**, Abram Hindle, Russell Greiner. *Sixth International Green and Sustainable Computing Conference (IGSC 2015)* , 2015, 6pp. Las Vegas, United States [Acceptance rate 24/67 or 36% ] Role: Co-author / supervisor. NSERC Discovery
- C45** “Crowdsourced bug triaging”, Ali Sajedi Badashian, Abram Hindle, Eleni Stroulia *International Conference on Software Maintenance and Evolution ERA-Track (ICSME-ERA 2015)* , 2015, 4pp. Bremen, Germany [Acceptance rate 40/210 or 19%] Role: Co-author. NSERC Discovery
- C44** “GreenAdvisor: A Tool for Analyzing the Impact of Software Evolution on Energy Consumption”, **Karan Aggarwal**, Abram Hindle and Eleni Stroulia. *International Conference on Software Maintenance and Evolution (ICSME 2015)* , 2015, 10pp. Bremen, Germany [Acceptance rate 32/148 or 22% ] Role: Co-author / supervisor.. NSERC Discovery
- C43** “Orchestrating Your Cloud Orchestra”, Abram Hindle *New Interfaces for Musical Expression (NIME 2015)* , 2015, 4pp. Baton Rouge, United States [Acceptance rate 12%] Role: Author. NSERC Discovery
- C42** “Mining StackOverflow to Filter out Off-topic IRC Discussion”, **Shaiful Alam Chowdhury** and Abram Hindle *International Working Conference on Mining Software Repositories Challenge Track (MSR 2015)* , 2015, 4pp. Florence, Italy [Acceptance rate 14/21 or 66%] Mining challenge award. Role: Co-author / supervisor. NSERC Discovery
- C41** “An Empirical Study of End-user Programmers in the Computer Music Community”, **Gregory Burlet**, Abram Hindle *Working Conference on Mining Software Repositories (MSR 2015)* , 2015, 11pp. Florence, Italy [Acceptance rate 32/106 or 30% ] Role: Co-author / supervisor. NSERC Discovery
- C40** “On Improving Green Mining For Energy-Aware Software Analysis”, **Stephen Romansky**, and Abram Hindle *24rd Annual Conference of the Center for Advanced Studies (CASCON 2014)* , 2014, 10pp. Markham, Canada [Acceptance rate 18/56 or 32.14% ] Role: Co-author / course project. NSERC Discovery
- C39** “Involvement, Contribution and Influence in Github and Stack Overflow”, Ali Sajedi Badashian, Afsaneh Esteki, Ameneh Gholipour, Abram Hindle, and Eleni Stroulia *24rd Annual Conference of the Center for Advanced Studies (CASCON 2014)* , 2014, pp. Markham, Canada [Acceptance rate 18/56 or 32.14% ] Role: Co-author / course project. NSERC Discovery



- C38** “The Power of System Call Traces: Predicting the Software Energy Consumption Impact of Changes”, **Karan Aggarwal, Zhang Chenlei, Joshua Campbell**, Abram Hindle, and Eleni Stroulia *24rd Annual Conference of the Center for Advanced Studies (CASCON 2014)* , 2014, pp. Markham, Canada [Acceptance rate 18/56 or 32.14% ] Role: Co-author / supervisor. NSERC Discovery
- C37** “CloudOrch: A Portable SoundCard in the Cloud”, Abram Hindle *New Interfaces for Musical Expression (NIME 2014)* , 2014, 4pp. London, UK [Acceptance rate 26/113 or 23.01% ] Role: Author. NSERC Discovery
- C36** “Syntax Errors Just Aren’t Natural: Improving Error Reporting with Language Models”, **Joshua Campbell**, Abram Hindle, and J Nelson Amaral *Working Conference on Mining Software Repositories (MSR 2014)* , 2014, 10pp. Hyderabad, India [Acceptance rate 29/85 or 34.12% ] Role: Co-author / supervisor. NSERC Discovery
- C35** “GreenMiner: a hardware based mining software repositories software energy consumption framework”, Abram Hindle, **Alexander Wilson, Kent Rasmussen, Eric Jed Barlow, Joshua Campbell**, and **Stephen Romansky** *International Working Conference on Mining Software Repositories (MSR 2014)* , 2014, 10pp. Hyderabad, India [Acceptance rate 29/89 or 32.58% ] Role: Project Lead and Author. NSERC Discovery
- C34** “A green miner’s dataset: mining the impact of software change on energy consumption”, **Zhang Chenlei** and Abram Hindle *International Working Conference on Mining Software Data Track (MSR 2014)* , 2014, 4pp. Hyderabad, India [Acceptance rate 15/22 or 68.18% ] Role: Co-author / supervisor. NSERC Discovery
- C33** “Co-evolution of project documentation and popularity within github”, **Karan Aggarwal**, Abram Hindle, and Eleni Stroulia *International Working Conference on Mining Software Repositories Challenge Track (MSR 2014)* , 2014, 4pp. Hyderabad, India [Acceptance rate 9/19 or 47.37% ] Role: Co-author / supervisor / course project. NSERC Discovery
- C32** “A Multidimensional Empirical Study on Refactoring”, Nikolaos Tsantalis, Victor Guana, Eleni Stroulia, and Abram Hindle *23rd Annual Conference of the Center for Advanced Studies (CASCON 2013)* , 2013, 14pp. Markham, Canada [Acceptance rate 25/70 or 35.71% ] Role: Supervision and Criticism. NSERC Discovery
- C31** “On the Personality Traits of StackOverflow Users”, Blerina Bazelli, Abram Hindle, Eleni Stroulia *International Conference on Software Maintenance (ICSM-2013 ERA Track)* , 2013, 4pp. Eindhoven, The Netherlands [Acceptance rate 30/70 or 42.86%] Role: Class project / supervisor. NSERC Discovery
- C30** “SWARMED: Captive Portals, Mobile Devices, and Audience Participation in Multi-User Music Performance”, Abram Hindle *New Interfaces for Musical Expression (NIME 2013)* , 2013, 6pp. Daejeon and Seoul, Korea Republic Role: Author. NSERC Discovery
- C29** “Deficient documentation detection: a methodology to locate deficient project documentation using topic analysis”, **Joshua Campbell, Zhang Chenlei**, Zhen Xu, Abram Hindle, and James Miller *Working Conference on Mining Software Repositories Challenge Track (MSR-2013)* , 2013, 4pp. San Francisco, United States [Acceptance rate 12/30 or 40%] Role: Course project / supervisor. NSERC Discovery
- C28** “A contextual approach towards more accurate duplicate bug report detection”, **Anahita Alipour**, Abram Hindle, and Eleni Stroulia *Working Conference on Mining Software Repositories (MSR-2013)* , 2013, 10pp. San Francisco, United States [Acceptance rate 31/81 or 38.27%] Role: supervisor, author. NSERC Discovery

- C27** “Understanding Android Fragmentation with Topic Analysis of Vendor-Specific Bugs”, Dan Han, Zhang Chenlei, Xiachao Fan, Abram Hindle, Kenny Wong, and Eleni Stroulia *Working Conference on Reverse Engineering (WCRE-2012)* , 2012, 10pp. Kingston, Canada [Acceptance rate 43/138 or 31.16%] Role: Course project / supervisor. NSERC Discovery
- C26** “Relating Requirements to Implementation via Topic Analysis: Do Topics Extracted from Requirements Make Sense to Managers and Developers?”, Abram Hindle, Christian Bird, Thomas Zimmermann, and Nachiappan Nagappan *International Conference on Software Maintenance (ICSM 2012)* , 2012, 10pp. Riva Del Garda, Italy [Acceptance rate 46/181 or 25.41%] Role: Primary Investigator. Microsoft Research
- C25** “Green Mining: A Methodology of Relating Software Change to Power Consumption”, Abram Hindle *Working Conference on Mining Software Repositories (MSR-2012)* , 2012, 10pp. Zurich, Switzerland [Acceptance rate 18/64 or 28.13%] MSR Distinguished/Best Paper Award. Role: Author. NSERC Discovery
- C24** “Do the stars align? Multidimensional analysis of Android’s Layered Architecture”, Victor Guana, Fabio De Pinho Rocha, Abram Hindle, and Eleni Stroulia *Working Conference on Mining Software Repositories: Challenge Track (MSR-2012)* , 2012, 4pp. Zurich, Switzerland [Acceptance rate 6/17 or 35.29%] Mining Challenge Award. Role: Course project supervisor / author. NSERC Discovery
- C23** “Green Mining: Investigating Power Consumption across Versions”, Abram Hindle *International Conference on Software Engineering - NIER Track. (ICSE-NIER 2012)* , 2012, 4pp. Zurich, Switzerland [Acceptance rate 26/147 or 17.69%] Role: Author. NSERC Discovery
- C22** “On the Naturalness of Software”, Abram Hindle, Earl T. Barr, Zhendong Su, Premkumar T. Devanbu, and Mark Gabel *International Conference on Software Engineering (ICSE-2012)* , 2012, 10pp. Zurich, Switzerland [Acceptance rate 87/408 or 21.32%] Role: Researcher / author. NSF 0964703 and NSF 0613949
- C21** “The Build Dependency Perspective of Android’s Concrete Architecture”, Wei Hu, Dan Han, Abram Hindle, and Kenny Wong *Working Conference on Mining Software Repositories Challenge Track (MSR 2012)* , 2012, 4pp. Zurich, Switzerland [Acceptance rate 6/17 or 35.29%] Role: course project supervisor / author. NSERC Discovery
- C20** “Cohesive and Isolated Development with Branches”, Earl T. Barr, Christian Bird, Peter C. Rigby, Abram Hindle, Daniel M. German, and Premkumar T. Devanbu *Fundamental Approaches to Software Engineering (FASE 2012)* , 2012, 10pp. Tallinn, Estonia [Acceptance rate 33/134 or 24.63% ] Role: Editing and some experiments. NSF
- C19** “On the Effectiveness of Simhashing in Clone Detection on Large Scale Software System”, Sharif Uddin, Chanchal K. Roy, Kevin A. Schneider and Abram Hindle *Proc. of 2011 Working Conference on Reverse Engineering (WCRE-11)* , 2011, 10pp. Limerick, Ireland [Acceptance rate 22/104 or 21%] Role: Initial idea, editing. NSERC PGS-D and NSERC Discovery
- C18** “Got Issues? Do New Features and Code Improvements Affect Defects?”, Daryl Posnett, Abram Hindle, Premkumar Devanbu *Proc. of 2011 Working Conference on Reverse Engineering (WCRE-11)* , 2011, 5pp. Limerick, Ireland [Acceptance rate 22+27/104 or 48%] Role: Co-author. NSF
- C17** “BugCache for Inspections : Hit or Miss?”, Foyzur Rahman, Daryl Posnett, Abram Hindle, Earl Barr, Premkumar Devanbu *Proceedings of FSE 2011 (FSE-11)* , 2011, 10pp. Szeged, Hungary [Acceptance rate 34/203 or 16.7% ] Role: Co-author, editing, some programming.. NSF
- C16** “Multifractal Aspects of Software Development”, Abram Hindle, Michael M. Godfrey, Richard C. Holt *33rd International Conference on Software Engineering ICSE Companion, ICSE-11 special*

*track on New Ideas and Emerging Results (NIER)* , 2011, 4pp. Waikiki, United States [Acceptance rate 46/196 or 23%] Role: Co-author. NSERC PGS-D

- C15** “A Simpler Model of Software Readability”, Daryl Posnett, Abram Hindle and Premkumar Devanbu *Proc. of 2011 Working Conference on Mining Software Repositories (MSR-11)* , 2011, 10pp. Waikiki, United States [Acceptance rate 20/61 or 33%] Role: Co-author. NSF
- C14** “Software Bertillonage: Finding the provenance of an entity”, Julius Davies, Michael Godfrey and Daniel Germán, Abram Hindle *Proc. of 2011 Working Conference on Mining Software Repositories (MSR-11)* , 2011, 10pp. Waikiki, United States [Acceptance rate 20/61 or 33% ] Role: Editing, Co-author. NSERC PGS-D
- C13** “Automated topic naming to support cross-project analysis of software maintenance activities”, Abram Hindle, Neil Ernst, Michael M. Godfrey, John Mylopoulos *Proc. of 2011 Working Conference on Mining Software Repositories (MSR-11)* , 2011, 10pp. Waikiki, United States [Acceptance rate 20/61 or 33% ] Role: Co-author. NSERC
- C12** “Software Process Recovery using Recovered Unified Process Views”, Abram Hindle, Michael M. Godfrey, Richard C. Holt *Proc. of 2010 International Conference on Software Maintenance (ICSM-10)* , 2010, 10pp. Timisoara, Romania [Acceptance rate of 36/133 or 26% ] Role: Co-author.
- C11** “Mining Challenge 2010: FreeBSD, GNOME Desktop and Debian/Ubuntu”, Abram Hindle, Israel Herraiz, Emad Shihab, and Zhen Ming Jiang *Proc. of 2010 Working Conference on Mining Software Repositories (MSR-10)* , 2010, 4pp. Cape Town, South Africa Un-refereed, as I was the challenge chair. Role: Challenge Track Chair. NSERC PGS-D
- C10** “What’s Hot and What’s Not: Windowing Developer Topic Analysis”, Abram Hindle, Michael W. Godfrey, Richard C. Holt *Proc. of 2009 IEEE Conference on Software Maintenance (ICSM-09)* , 2009, 11pp. Edmonton, Canada [Acceptance rate 35/162 or 22%] Role: Co-author. NSERC PGS-D
- C9** “Automatic Classification of Large Changes into Maintenance Categories”, Abram Hindle, Daniel M. Germán, Michael W. Godfrey, and Richard C. Holt *Proc. of 2009 IEEE Intl. Conference on Program Comprehension (ICPC-09)* , 2009, 10pp. Vancouver, Canada [Acceptance rate 20/74 or 27%] Role: Co-author. NSERC PGS-D
- C8** “Mining Recurrent Activities: Fourier Analysis of Change Events”, Abram Hindle, Michael W. Godfrey, Richard C. Holt *31st International Conference on Software Engineering ICSE Companion, ICSE-09 special track on New Ideas and Emerging Results (NIER)* , 2009, 4pp. Vancouver, Canada [Acceptance rate 21/118 or 15%] Role: Co-author. NSERC PGS-D
- C7** “Reverse Engineering CAPTCHAs”, Abram Hindle, Michael W. Godfrey, and Richard C. Holt *Proc. of the 2008 Working Conference on Reverse Engineering (WCRE-08)* , 2008, 10pp. Antwerp, Belgium [Acceptance rate 20/70 or 29%] Role: Co-author. NSERC PGS-D
- C6** “From Indentation Shapes to Code Structures”, Abram Hindle, Michael W. Godfrey, and Richard C. Holt *8th IEEE Intl. Working Conference on Source Code Analysis and Manipulation (SCAM 2008)* , 2008, 10pp. Beijing, China [Acceptance rate 23/61 or 38%] Role: Co-author. NSERC PGS-D
- C5** “Reading Beside the Lines: Indentation as a Proxy for Complexity Metrics”, Abram Hindle, Michael W. Godfrey, and Richard C. Holt *Proc. of 2008 IEEE Intl. Conference on Program Comprehension (ICPC-08)* , 2008, pp. Amsterdam, The Netherlands [Acceptance rate 38%] Role: Co-author. NSERC PGS-D
- C4** “What do large commits tell us?: A taxonomical study of large commits”, Abram Hindle, Daniel M. Germán, Richard C. Holt *Proc. of the 2008 Working Conference on Mining Software Repositories*

- (MSR-08) , 2008, 10pp. Leipzig, Germany [Acceptance rate 8/42 or 19%] Role: Co-author. NSERC PGS-D
- C3** “Release Pattern Discovery: A Case Study of Database Systems”, Abram Hindle, Michael W. Godfrey, Richard C. Holt *Proc. of the 2007 Intl. Conference on Software Maintenance (ICSM-07)* , 2007, 10pp. Paris, France [Acceptance rate 41/214 or 21%] Role: Co-author. NSERC PGS-D
- C2** “Measuring Fine-Grained Change in Software: Towards Modification-Aware Change Metrics”, Daniel M. Germán, Abram Hindle *Proc. IEEE METRICS 2005* , 2005, 10pp. Como, Italy [Acceptance rate 39/89 or 44%] Role: Co-author, editing. NSERC CGS-M
- C1** “Visualizing the evolution of software using softChange”, Daniel M. Germán, Abram Hindle, Norman Jordan *Proc. of Software Engineering Knowledge Engineering (SEKE)* , 2004, 6pp. Banff, Canada [Acceptance rate 38%] Role: Co-author, editing. NSERC CGS-M

## REFEREED WORKSHOP PAPERS

- W11** “Improving ECG-based COVID-19 diagnosis and mortality predictions using pre-pandemic medical records at population-scale”, **Weijie Sun** and Sunil Vasu Kalmady and Zihan Wang and **Amir Salimi** and Nariman Sepehrvand and Abram Hindle and Luan Manh Chu and Russell Greiner and Padma Kaul *NeurIPS TS4H: Timeseries for Health* , 2022, 9pp. New Orleans, United States [Acceptance rate Unknown] Role: Co-Author. NSERC Discovery
- W10** “Dorabella Cipher as Musical Inspiration”, Bradley Hauer, Colin Choi, Abram Hindle, Scott Smallwood, Grzegorz Kondrak *Speech and Music workshop at ICON* , 2021, 6pp. India [Acceptance rate Unknown] Role: Co-Author. NSERC Discovery
- W9** “ECG for high-throughput screening of multiple diseases: Proof-of-concept using multi-diagnosis deep learning from population-based datasets”, Weijie Sun, Sunil Vasu Kalmady, **Amir S Salimi**, Nariman Sepehrvand, Eric Ly, Abram Hindle, Russell Greiner, Padma Kaul *Medical Imaging Workshop at NeurIPS* , 2021, 6pp. Online [Acceptance rate 56/90] Role: Co-Author. NSERC Discovery and CVC
- W8** “Experimental Analysis of the Dorabella Cipher with Statistical Language Models”, Bradley Hauer, **Colin Choi**, **Anirudh Sundar**, Abram Hindle, Scott Smallwood, Grzegorz Kondrak *The International Conference on Historical Cryptology (HistoCrypt 2021)* , 2021, 10pp. Role: Co-author. NSERC Discovery
- W7** “If you bill it, they will pay: Energy consumption in the cloud will be irrelevant until directly billed for”, Abram Hindle *Proceedings of the 7th International Workshop on Requirements Engineering for Sustainable Systems (RE4SuSy)* , 2018, 2pp. Role: author. NSERC Discovery
- W6** “Green mining: energy consumption of advertisement blocking methods”, **Kent Rasmussen**, **Alexander Wilson**, and Abram Hindle *Proceedings of the 3rd International Workshop on Green and Sustainable Software (GREENS 2014)* , 2014, 8pp. Role: Co-author / supervisor. NSERC Discovery
- W5** “Determining the provenance of software artifacts”, Michael Godfrey, Julius Davis, Daniel Germán and Abram Hindle *Fifth International Workshop on Software Clones* , 2011, 2pp. Waikiki, United States Role: Co-author, Editing.
- W4** “Software Process Recovery: Recovering Process From Artifacts”, Abram Hindle *Doctoral Symposium of the 17th Working Conference on Reverse Engineering 2010 (WCRE-10)* , 2010, 4pp. Boston, United States Role: Author. NSERC PGS-D

- W3** “Release Pattern Discovery via Partitioning: Methodology and Case Study”, Abram Hindle, Michael W. Godfrey, Richard C. Holt *Proc. of 2007 Intl. Workshop on Mining Software Repositories (MSR-07)* , 2007, 8pp. Minneapolis, United States [Acceptance rate 15/39 or 38%] Role: Co-author. NSERC PGS-D
- W2** “YARN: Animating Software Evolution”, Abram Hindle, ZhenMing Jiang, Walid Koneilat, Michael W. Godfrey, and Richard C. Holt *Proc. of 2007 IEEE International Workshop on Visualizing Software for Understanding and Analysis (VISsOFT-07)* , 2007, 8pp. Banff, Alberta [Acceptance rate 15/34 or 44%] Role: Co-author. NSERC PGS-D
- W1** “SCQL: A formal model and a query language for source control repositories”, Abram Hindle and Daniel M. Germán *Proc. of 2nd International Workshop on Mining Software Repositories (MSR 2005)* , 2005, 5pp. St. Louis, United States [Acceptance rate 11/38 or 29%] Role: Primary author. NSERC CGS-M

## POSTERS

- P5** “Software Process Recovery with Recovered Unified Process Views”, Abram Hindle *MSR Summer School 2010* , 2010, Kingston, Canada Role: Author.
- P4** “Mining Recurrent Activities: Fourier Analysis of Change Events”, Abram Hindle, Michael M. Godfrey, and Richard C. Holt *ICSE-09 special short paper track on New Ideas and Emerging Results (NIER)* , 2009, Vancouver, Canada Accepted papers also had to present a poster. Role: Author. NSERC PGS-D
- P3** “Evolutionary Focus”, Abram Hindle *Consortium for Software Engineering Research (CSER) Fall Meeting* , 2008, Markham, Canada Role: Author. NSERC PGS-D
- P2** “Reading Beside the Lines: Measuring the Indentation of Changes”, Abram Hindle *Consortium for Software Engineering Research (CSER) Fall Meeting* , 2007, Markham, Canada Role: Author. NSERC PGS-D
- P1** “CAPTCHA Breaking: The Visual Adversary”, Abram Hindle *Graduate Student Research Conference 2007* , 2007, University of Waterloo, Waterloo, Canada Role: Author. NSERC PGS-D

## PEER REVIEWED BOOK CHAPTERS

- B3** Chapter: “Expert Commentary: The potential synthesizer in your pocket”, from *A NIME Reader: Fifteen Years of New Interfaces for Musical Expression* , Abram Hindle. 2017, pp. Role: Author. NSERC Discovery
- B2** Chapter: “The Perils of Energy Mining: Measure a Bunch, Compare just Once”, from *Perspectives on Data Science for Software Engineering Software Data* , Abram Hindle. 2016, pp. Role: Author. NSERC Discovery
- B1** Chapter: “Latent Dirichlet Allocation: Extracting Topics from Software Engineering Data”, from *The Art and Science of Analyzing Software Data* , **Joshua Charles Campbell**, Abram Hindle, Eleni Stroulia. 2015, 17pp. Role: Co-author / supervisor. NSERC Discovery

# PRESENTATIONS, LECTURES, AND PERFORMANCES

## INVITED LECTURES

These are lectures whereby I was invited to come, lecture, and participate.

- T86** “ICSR Panel on Green computing and Reuse”, *ICSR 2022*, Montpellier, France. 2022-06-17.
- T82** “The Naturalness of Software, and the roots and branches thereof”, *ICSE 2022*, Pittsburgh, United States. 2022-05-13.
- T80** “Analyzing the Effects of Test Driven Development in Github with BOA”, *BOA Workshop*, Iowa City, United States. 2021-01-14.
- T79** “IGSC Panel on Software Energy Consumption”, *IGSC*, Online, USA. 2020-10-30.
- T78** “LASER Talk on the Cloud”, *LASER Talks*, Edmonton, Canada. 2020-10-29.
- T77** “Impractical Web Assembly”, *Exchange.js Javascript User’s Group*, Edmonton, Canada. 2020-06-04.
- T76** “Baby Steps into Optical Mark Recognition (OMR) with Python and OpenCV”, *Edmonton.py Python User’s Group*, Edmonton, Canada. 2020-05-11.
- T75** “Bots in SE in my lab”, *BotSE: Bots in SE*, Dagstuhl, Germany. 2019-11-17.
- T74** “The basics of physical synthesis and analysis”, *Sound Studies Seminar*, Edmonton, Canada. 2019-11-06.
- T73** “Energy Performance of Machine Learning”, *Software Engineering for Machine Learning Systems (SEMLS)*, Shonan, Japan. 2019-10-13.
- T72** “Journal First: What can Android mobile app developers do about the energy consumption of machine learning?”, *ICSE 2019*, Montreal, Canada, Canada. 2019-05-31.
- T71** “Optimization in Python”, *Edmonton.py Python User’s Group*, Edmonton, Canada. 2019-04-11.
- T70** “Unnaturalnets”, *Coffee Learning at ATB*, Edmonton, Canada. 2019-01-31.
- T69** “Training Deep Convolutional Networks with Unlimited Synthesis of Musical Examples for Multiple Instrument Recognition”, *SSI Sound Symposium 2018*, Edmonton, Canada. 2018-09-28.
- T68** “Unnaturalnets”, *Seminar to Osaka University and NAIST (remote)*, Osaka, Japan. 2018-06-14.
- T67** “MSR 2018 MIP Talk: What do large commits tell us? A taxonomical study of large commits.”, *The 15th International Conference on Mining Software Repositories*, Gotenberg, Sweden. 2018-05-29.
- T66** “Energy Consumption and Mining Software Repositories”, *Seminar*, Fukuoka, Japan. 2018-04-15.
- T65** “Abram Hindle’s intersection with Search Based Software Engineering”, *NII Shohan*, Shonan Village, Japan. 2017-12.
- T64** “Service-based License Verification of Open Source Software”, *Black Duck FLIGHT 2017*, Boston, USA. 2017-11-07.
- T63** “Unnatural nets”, *The 55th CREST Open Workshop - Bimodal Program Analysis*, London, UK. 2017-10-31.

- T62** “Green Software Engineering: The Curse of Methodology”, *Undergraduate Association of Computing Science*, Edmonton, Canada. 2016-03.
- T59** “Can big code find errors”, *Programming with “Big Code”*, Dagstuhl, Germany. 2015-11.
- T58** “Green-Star: Energy Star-like ratings for Apps”, *NII Shohan*, Shonan Village, Japan. 2015-10.
- T56** “Green Mining and the perils of evolving energy profiles”, *The 39th CREST Open Workshop - Measuring, Testing and Optimising Computational Energy Consumption*, London, UK. 2015-02-14.
- T54** “The trouble with performance analytics”, *Dagstuhl Seminar*, Dagstuhl, Germany. 2014-06.
- T47** “Green Mining Infrastructure”, *NII Shohan*, Shohan Village, Japan. 2013-10.
- T42** “Lessons learned from Green Mining”, *ASDS*, Ascona, Switzerland. 2013-04.
- T41** “Unnatural Code”, *Naturalness of Software Colloquium*, Davis, United States. 2013-04.
- T38** “CSER Keynote: Software Process Recovery: Picking the Fruit of Empirical Software Engineering”, *CSER*, Markham, Canada. 2011-09.
- T37** “Evidence-based Software Process Recovery”, *Microsoft Research*, Redmond, United States. 2010-11.
- T34** “Recovered Unified Process Views”, *Colloquium at UVic*, Victoria, Canada. 2010-04.
- T33** “Recovered Unified Process Views”, *Colloquium at UC Davis*, Davis, United States. 2010-04.
- T14** “Fast, Cheap, and Under Control: Evaluating Revision Data Reliably”, *Dagstuhl Seminar 07491 on Mining Programs and Processes*, Wadern, Germany. 2007.

## ACADEMIC LECTURES

These are lectures aimed at academic and scholarly audiences.

- T83** “What does music information retrieval have to do with software development?”, *CS Seminar*, Edmonton, Canada. 2022-05-18.
- T57** “On The Collision of Software Engineering with Computer Music”, *University of Victoria*, Victoria, Canada. 2015-04.
- T55** “On the Naturalness and Unnaturalness of Software”, *Hong Kong University of Science and Technology*, Hong Kong, China. 2014-12.
- T53** “Green Mining: Extracting Energy Consumption Profiles to Answer Questions about Your Applications”, *CSER*, Edmonton, Canada. 2014-05.
- T50** “On the Naturalness of Software”, *University of Victoria*, Victoria, Canada. 2014-02.
- T48** “Events Matter, Experiences Green Mining”, *MSR Asia*, Kyoto, Japan. 2013-10.
- T29** “Automated Process Extraction”, *Seminar on Advanced Tools & Techniques for Software Evolution (SATTOSE) 2009*, Baie de Somme, France. 2009-04.
- T22** “Reading Beside the Lines: Indentation as a Proxy for Complexity Metrics”, *Software Engineering Research Group PhD Seminar*, Waterloo, Canada. 2008-04-22.

- T20** “The Road to Automated Process Extraction”, *Seminar on Advanced Tools & Techniques for Software Evolution (SATTOSE) 2008*, Waulsort, Belgium. 2008-02.
- T18** “Release Pattern Discovery: A Case Study of Database Systems”, *Software Engineering Research Group PhD Seminar*, Waterloo, Canada. 2007-09-20.
- T17** “Release Pattern Discovery via Partitioning: Methodology and Case Study”, *Consortium for Software Engineering Research (CSER), Fall Meeting 2007*, Markham, Canada. 2007-09.
- T16** “YARN: Animating Software Evolution”, *Software Engineering Research Group PhD Seminar*, Waterloo, Canada. 2007-06-13.
- T15** “Release Pattern Discovery via Partitioning: Methodology and Case Study”, *Software Engineering Research Group PhD Seminar*, Waterloo, Canada. 2007-05-16.
- T5** “Visualizing the evolution of software using softChange”, *UVic SENG Colloquium*, Victoria, Canada. 2004.

## MUSICAL/ARTISTIC PERFORMANCES

These are musical and artistic performances in the service of the arts. Many of them are very technical and often relevant to computer science and other areas of study.

- M52** BEAMS Presents Western Canada Drone Day, Edmonton, AB, 2023-05-24
- M51** BEAMS Presents Art’s Birthday, Edmonton, AB, 2023-01-14
- M50** Norcal Noisefest, Sacramento, USA, 2022-09-30
- M49** Edmonton Noise Festival 2022, Edmonton, AB, 2022-08-28
- M48** BEAMS Presents Western Canada Drone Day, Edmonton, AB, 2022-05-28
- M47** BEAMS Presents Art’s Birthday, Edmonton, AB, 2022-01-17
- M46** BEAMS: Together Apart II, Edmonton, AB, 2021-11-27
- M45** Norcal Noisefest, Sacramento, USA, 2021-10-03
- M44** Edmonton Noise Festival 2021, Edmonton, AB, 2021-08-28
- M43** BEAMS Presents Art’s Birthday, Edmonton, AB, 2021-01-17
- M42** Norcal Noisefest, Sacramento, USA, 2020-10-03
- M41** BEAMS Presents Western Canada Drone Day, Edmonton, AB, 2020-05-26
- M40** Lead Lozenges Frozenlake121 Tape Release, Edmonton, AB, 2020-02-15
- M39** BEAMS Presents Art’s Birthday, Edmonton, AB, 2020-01-18
- M38** BEAMS Presents Duelling Axes, Edmonton, AB, 2019-11-09
- M37** BEAMS at the WORKS, Edmonton, AB, 2019-06-28
- M36** Dry Sockets, Victoria, BC, 2019-03-08
- M35** Black Lab Noise, Vancouver, BC, 2019-03-07
- M34** BEAMS Presents Art’s Birthday, Edmonton, AB, 2019-01-19
- M33** BEAMS presents Self Directed Studies, Edmonton, AB, 2018-12-08



- M32** BEAMS at Nuit Blanche, Edmonton, AB, 2018-09-29
- M31** Edmonton Noise Fest, Edmonton, AB, 2018-09-1
- M30** Hall of Noise, Edmonton, AB, 2018-03-30
- M29** Norcal Noise Fest, Sacramento, California, 2017-10
- M28** BEAMS at the WORKS Art's Festival, Boreal Acoustic Music Society,, Edmonton, Canada, 2017-06-29
- M27** Drone Day, Edmonton, Canada, 2017-05-27
- M26** "Inception", Dirt Buffet Cabaret 23, Mile Zero Dance, Edmonton, Canada, 2017-03-14
- M25** Art's Birthday, Boreal Acoustic Music Society, Edmonton, Canada, 2017-01
- M24** RDP Open Input, Sewing Machine Factory, Edmonton, Canada, 2016-12-13
- M23** Lords of Misrule, Ortona Armoury, Edmonton, Canada, 2016-12-10
- M22** Goodbye for Noh, Boreal Acoustic Music Society, Edmonton, Canada, 2016-10-22
- M21** Autumnal Solstice, Edmonton, Canada, 2016-09-22
- M20** "CrossRockies Ninjambient", NME SYOSIS, New Music Edmonton, Edmonton, Canada, 2016-09-17
- M19** Norcal Noise Fest, Sacramento, California, 2016-09
- M18** Ramshackle Day Parade, Edmonton, Canada, 2016-08-31
- M17** Screaming Skull, Boreal Acoustic Music Society, Edmonton, Canada, 2016-07-24
- M16** Art's Birthday, Boreal Acoustic Music Society, Edmonton, Canada, 2016-01
- M15** "Sound of Stars", Dark Night, Telus World of Science, Edmonton, Canada , 2015-10
- M14** "Connectivity installation and performance", Nuit Blanche Edmonton 2015, Nuit Blanche, Edmonton, Canada, 2015-09
- M13** "Noise of Nature", Fresher Night, Bangladesh Student Society, Edmonton, Canada, 2015-09
- M12** Norcal Noise Fest, Sacramento, California, 2015-09
- M11** Quarter's Art's Night, Boreal Acoustic Music Society, Edmonton, Canada, 2015-07
- M10** WORKS Art's Festival, Boreal Acoustic Music Society,, Edmonton, Canada, 2015-06
- M9** "What Absorbs The Light", Now Hear This Festival, New Music Edmonton, 2015-03-22
- M8** Art's Birthday, Boreal Acoustic Music Society,, Edmonton, Canada, 2015-01
- M7** Sasquatch Musical Gathering, Edmonton, Canada, 2014-07-26
- M6** Edmonton Sound Art and Noise Festival, Edmonton, Canada, 2014-04
- M5** Art's Birthday, Boreal Acoustic Music Society,, Edmonton, Canada, 2014-01
- M4** "Computer Vision Improv ", BEAMS and RapidFire Theatre, Boreal Acoustic Music Society,, Edmonton, Canada, 2013-11
- M3** "SWARMED: Bubble Wrap", WORKS Art's Festival, Boreal Acoustic Music Society,, Edmonton, Canada, 2013-06
- M2** "SWARMED", WORKS Art's Festival, Boreal Acoustic Music Society,, Edmonton, Canada, 2012-06

## NON-ACADEMIC PRESENTATIONS

These are presentations and lectures given to a general audience or professionals such as software developers.

- T88** “How to add methods to existing classes in JS, Ruby, and Python”, *Edmonton.py Python User’s Group*, Edmonton, Canada. 2023-05-04.
- T87** “Shuffling in Python”, *Edmonton.py Python User’s Group*, Edmonton, Canada. 2022-10-11.
- T85** “Python in the Browser”, *Edmonton.py Python User’s Group*, Edmonton, Canada. 2022-06-14.
- T84** “Pyodide! Python in the Browser”, *Exchange.js Javascript User’s Group*, Edmonton, Canada. 2022-06-07.
- T81** “Metaprogramming in Javascript and Ruby”, *Exchange.js Javascript User’s Group*, Edmonton, Canada. 2021-06-03.
- T61** “HTTP/2.0”, *Edmonton Exchange.JS Meetup*, Edmonton, Canada. 2016-02.
- T60** “Introduction to Deep Learning”, *Edmonton Python Users Group*, Edmonton, Canada. 2016-02.
- T52** “Generic Map/Reduce in Go”, *Edmonton Go User’s Group*, Edmonton, Canada. 2014-04.
- T51** “Iteration in Go”, *Edmonton Go User’s Group*, Edmonton, Canada. 2014-02.
- T49** “Go and C”, *Edmonton Go User’s Group*, Edmonton, Canada. 2013-11.
- T46** “Iteration in Python”, *Edmonton Python User’s Group*, Edmonton, Canada. 2013-09.
- T45** “Websockets”, *Edmonton Javascript User’s Group*, Edmonton, Canada. 2013-09.
- T44** “Android Activity Lifecycle”, *YEGDROID: Edmonton Android Users Group*, Edmonton, Canada. 2013-04.
- T43** “Design Patterns in Ruby”, *YEGRB: Edmonton Ruby Users Group*, Edmonton, Canada. 2013-04.
- T40** “Addressing Mobile Users with SVG, Canvas and JS”, *Exchange.JS: Edmonton Javascript User Group*, Edmonton, Canada. 2013-01.
- T39** “Intro to OCaml”, *EFPUg: Edmonton Functional Programming Users Group*, Edmonton, Canada. 2012-11.
- T36** “Web Based Computer Music UIs with Mongrel2 and Harbinger”, *Toronto Perl Mongers*, Toronto, Canada. 2010-08.
- T35** “Android-based Distributed Computer Music”, *Toronto Perl Mongers*, Toronto, Canada. 2010-06.
- T32** “OpenID, Email extracting/parsing and Topic Analysis!”, *Kitchener/Waterloo Perl Mongers*, Waterloo, Canada. 2010-01.
- T31** “Mandelbulb: Exploring 3D Fractals”, *Kitchener/Waterloo Perl Mongers*, Waterloo, Canada. 2009-11.
- T30** “Various Short Talks: Twitter, IRC and Perl”, *Toronto Perl Mongers*, Toronto, Canada. 2009-04.
- T28** “Magick Scheme Image Manipulation Gateway”, *Toronto Ruby Users’ Group*, Toronto, Canada. 2009-03.

- T27** “Harbinger: Sonifying the mundane and mildly entertaining”, *Kitchener/Waterloo Perl Mongers*, Waterloo, Canada. 2009-03.
- T26** “Harbinger: Making your desktop sing with the help of Perl and Lispy Perl”, *Toronto Perl Mongers*, Toronto, Canada. 2009-03.
- T25** “Magick-scheme and Lispy Perl”, *Toronto LISP Users’ Group*, Toronto, Canada. 2009-02.
- T24** “Lispy Perl or Perlsh Lisp”, *Kitchener/Waterloo Perl Mongers*, Waterloo, Canada. 2008-11.
- T23** “Hpricot and webscraping”, *Toronto Ruby Users’ group*, Toronto, Canada. 2008-09.
- T21** “Hiding in Public: File Management in Unsafe Conditions”, *Toronto Perl Mongers*, Toronto, Canada. 2008-02.
- T19** “Perl in Scheme”, *Kitchener/Waterloo Perl Mongers*, Waterloo, Canada. 2007-10.
- T13** “Beyond Perl”, *Kitchener/Waterloo Perl Mongers*, Waterloo, Canada. 2006-10.
- T12** “Uses of IRC Bots”, *Kitchener/Waterloo Perl Mongers*, Waterloo, Canada. 2006-02.
- T11** “Audio In Hypermedia Lecture”, *Dr. D. German’s Hypermedia Class*, Victoria, Canada. 2004.
- T10** “OOP in Perl”, *Dr. M. Zastre’s SENG265 Class*, Victoria, Canada. 2004.
- T9** “Class::Multimethods and WWW::Mechanize”, *Victoria Perl-mongers*, Victoria, Canada. 2004.
- T8** “Game Development in Perl”, *Victoria Perl-mongers*, Victoria, Canada. 2004.
- T7** “C and Perl”, *Victoria Perl-mongers*, Victoria, Canada. 2004.
- T6** “Game Development in Perl”, *UVic Game Developers Club*, Victoria, Canada. 2004.
- T4** “Introduction to Recursive Descent Parsers”, *Victoria Perl-mongers*, Victoria, Canada. 2003.
- T3** “CORBA and Perl”, *Victoria Perl-mongers*, Victoria, Canada. 2003.
- T2** “Audio In Hypermedia Lecture”, *Dr. D. German’s Hypermedia Class*, Victoria, Canada. 2003.
- T1** “OOP in Perl”, *Victoria Perl-mongers*, Victoria, Canada. 2003.

## AWARDS & GRANTS

### GRANTS AND AWARDS

2022 – 2027	NSERC Discovery Grant \$175000
2021	CIHR Project Grant: The EXamining Population-Level mORtality from the Electrocardiogram using Artificial Intelligence (EXPLORE-AI) Study (PI: Kaul, Grenier, Sandu, Baaney, Hindle) \$390000
2020	Telus World of Science Fellowship \$2500
2020	New Frontiers in Research Fund: Autonomously Adaptive Soundscapes for Reducing Stress in Critically-Ill Patients \$249946 (PI: Frishkopf, Papathanassoglou, Kutsogiannis, Hindle)

2018	MITACS Accelerate Cluster with Granify (PI: Barbosa, Reformat, Hindle) \$240000
2017 – 2022	NSERC Discovery Grant \$115000
2017	CS-Can/Info-Can Outstanding Young Computer Science Researcher prize \$1000
2017	Mining Software Repositories Early Career Achievement Award
2016	KIAS Team Grant with PI: M. Friskopf \$7500
2015	MITACS Accelerate Cluster with Bioware \$106666
2014	NSERC Engage with BioWare \$22000
2013	Microsoft Software Engineering Innovation Foundation Award \$25000
2012 – 2017	NSERC Discovery Grant \$95000
2011	Start-up Grant \$ 100000

## PAPER AND PRESENTATION AWARDS

2021	Best MSR Mining Challenge Paper – MSR 2021
2016	SIGSOFT ACM Distinguished Paper Award – ICSE 2016
2015	Best MSR Mining Challenge Paper – MSR 2016
2015	Best MSR Mining Challenge Paper – MSR 2015
2012	MSR Best Paper Award – MSR 2012
2012	Best MSR Mining Challenge Paper – MSR 2012
2010	Best Presentation Award - Mining Software Archives 2010

## TEACHING AWARDS

2018	Faculty of Science: Students' Choice Honor Roll
2018	Dean of Teaching Innovation Besties (colloquial)
2015	The Interdepartmental Science Students' Society: Excellence in Undergraduate Teaching Award
2014	Faculty of Science: Students' Choice Honor Roll

## SCHOLARSHIPS

2018	JSPS Invitational Fellowships for Research in Japan (4 months)
2008 – 2010	UW David R. Cheriton Graduate Scholarship, Type 1.
2005 – 2008	UW Graduate President Scholarship.
2005 – 2008	NSERC Post-Graduate Scholarship, PGS-D (Ph.D).
2004 – 2005	NSERC Canadian Graduate Scholarship, CGS-M (Masters).
2003 – 2004	UVic Graduate President Scholarship.
2003	UVic Graduate Fellowship.

## SERVICE

2023 Review for TOSEM  
 2023 Review for TSE  
 2023 Review for EMSE  
 2023 SANER Steering Committee  
 2023 MSR Steering Committee  
 2023 MSR 2023 Vision Track Co-Chair  
 2023 Associate Chair Research, Computing Science  
 2023 MSR 2023 Program Committee  
 2022 SANER Steering Committee  
 2022 MSR Steering Committee  
 2022 Tenure rep at FEC for colleague  
 2022 Department Industrial Advisory Board Director  
 2022 Review for IEEE Software  
 2022 ICSME 2022 Program Committee  
 2022 SANER 2022 Program Co-Chair  
 2021 SANER 2021 Proceedings Co-Chair  
 2021 MSR 2021 Program Committee  
 2021 BotSE 2021 Program Committee  
 2021 BoKSS 2021 Program Committee  
 2021 ICSE: SEIS 2021 Program Committee  
 2021 FSE 2020 Mentor for Students  
 2020 Computing Science Industrial Advisory Board Member  
 2020 Dev Edmonton Executive Committee  
 2020 Dev Edmonton Director  
 2020 Edmonton.Py Org Committee  
 2020 Exchange.js Org Committee  
 2020 MSR 2020 Education Track Co-Chair  
 2020 MSR 2020 Awards Committee  
 2020 BotSE 2020 Program Committee  
 2019 SANER 2020 Program Committee  
 2019 SEIS 2020 Program Committee  
 2019 Review for Journals: EMSE, JSS, TSE, Sustainability  
 2019 SANER 2019 Program Committee  
 2019 SCAM 2019 Program Committee  
 2019 ICSME 2019 Program Committee  
 2019 MSR 2019 Program Committee  
 2019 MSR 2019 Education Track Co-Chair  
 2019 Graduate Admission Committee  
 2019 MSR 2019 Awards Committee  
 2018 Review for Journals EMSE, AUSE, SPE, JSME, JSS, TSE  
 2018 NL4SE2018 Program Committee  
 2018 FEC Committee (tenure and promotion)  
 2018 MSR 2018 Program Committee  
 2018 MSR 2017 Special Issue Editor  
 2018 MobileSoft 2018 Program Committee

2018	CRC2018 review (EU Grants)
2018	ICSME 2018 Program Committee
2018	ICSE:SEIS 2019 Program Committee
2018	SANER 2018 Program Committee
2018	GREENS 2018 Program Committee
2017	ICSE 2018 Program Committee
2018	Dev Edmonton Executive Committee
2018	Edmonton.Py Org Committee
2015 – 2019	MSR Steering Committee
2015 – 2019	Exchange.JS Organization Committee
2016 – 2017	MSR 2017 Program Co-Chair
2011 – 2013, 2016	ICSM / ICSME Program Committee
2011 – 2014, 2016	MSR Program Committee
2014, 2016	GREENS Program Committee
2014 – 2016	IT Oversight Committee
2014 – 2015	Reviewed for SANER
2013, 2015	SCAM Program Committee
2011–2013, 2015	Reviewed for TOSEM
2011 – 2015	Reviewed for EMSE
2015	ICSME Tools Program Committee
2011, 2013, 2015	Reviewed for IEEE Software
2014 – 2015	Reviewed for NSERC CRD and NSERC Discovery Grants
2012, 2013, 2015	Reviewed for Journal of Software Systems
2012 – 2015	Reviewed for TSE
2014	Reviewed for Journal Science of Computer Programming
2014	International Working Conference on Source Code Analysis and Manipulation 2014 (SCAM) Program Co-Chair
2014	ICSME Tools Co-Chair
2014	ICSE 2014 Tool Demo Program Committee
2011 – 2013	ICSE 2013 Web Chair
2011 – 2013	ICPC Program Committee
2012 – 2013	Distinguished Lecture Series Coordinator
2013	DAPSE 2013 Program Committee
2013	DeSForM 2013 Subreviewer
2012	CASCON 2012 Program Committee
2012	IWESEP 2012 Program Committee
2011, 2012	WCRE Program Committee
2012	ICPC 2012 Tool Demo Track Co-Chair
2011	FSE 2011 Tool Demos Program Committee
2011	WCRE 2011 Tool Demos Program Committee
2010	Data Analysis in Software Engineering 2011 Program Committee
2010	WCRE 2010 Workshop Co-Chair.
2010	MSR 2010 Mining Challenge Chair
2004 – 2010	Reviewed for various conferences and journals, including IEEE Intl. Conference on Software Maintenance (ICSM), IEEE Intl. Conference on Program Comprehension (ICPC), IEEE Working Conference on Source Code Analysis and Manipulation (SCAM), Intl. Working Conference on Mining Software Repositories (MSR), Empirical Software Engineering, Transactions on Software Engineering, and for the journal/magazine IEEE Software.

2009	MSR 2009 Web Chair
2008	Linux Tutorial for a Grade 11 Computer Science Class, Victoria Park Collegiate, Toronto, June 2008.
2006 – 2007	Volunteer for UW Graduate Student Research Conference (GSRC)

## SUPERVISION

- Samuel Iwuchukwu – MSc in Progress
- Anisha Islam – MSc in Progress
- Weijie Sun – PhD in Progress – Co-supervised with Russ Grenier
- Calvin Eng – PhD in Progress
- Abdul Ali Bangash – PhD 2023 – Co-supervised with Karim Ali “Cost-effective Strategies to Develop Energy-Efficient Mobile Applications”
- Hareeme Sahar – PhD in Progress
- Amir Salimi – PhD in Progress – Co-supervised with Osmar Zaiane and Modular Synthesizers”
- Hazel Campbell – PhD 2021 “Application of Natural Language Processing and Information Retrieval in Two Software Engineering Tools”
- Candy Pang – PhD 2019 “Grounded Theory for DevOps Education” – Co-supervised with Denilson Barbosa
- Shaiful Chowdhury – PhD 2019 “Towards Developing Energy Efficient Mobile Applications: Models, Tools, and Guidelines”
- Amir Salimi – Masters 2021 “Percussive Sound Generation with Virtual Listeners and Modular Synthesizers”
- Alexander Wong – Masters 2021 “Classification and Analysis of 12-Lead Electrocardiograms”
- Yourui Guo – Masters 2020 “Sound Relaxation: Soundscape Exploration using Reinforcement Learning” – Co-supervised with Nathan Sturtevant
- Candy Pang – PhD 2019 “Grounded Theory for DevOps Education” – Co-supervised with Denilson Barbosa
- Stephen Romansky – Masters 2018 “Modelling Mobile Energy Consumption As A Total and A Time Series”
- Rameel Sethi – Masters 2018 “A Framework for Synthesis of Musical Training Examples for Polyphonic Instrument Recognition” – Co-supervised with Vadim Bulitko
- Eddie Santos – Masters 2018 “Applications of the Naturalness of Software”
- Varun Sapra – Course-based Masters 2016 “Web Server Energy Efficiency Under HTTP/2”
- Karan Aggarwal – Masters 2015 “Using System Calls to Track Application Energy Consumption Profiles” – Co-supervised with Eleni Stroulia
- Gregory Burlet – Masters 2015 “Guitar Tablature Transcription using a Deep Belief Network”
- Anahita Alipour – Masters 2013 “A Contextual Approach towards More Accurate Duplicate Bug Report Detection” – Co-supervised with Eleni Stroulia

- Chenlei Zhang – Masters 2013 “The Impact of User Choice and Software Change on Energy Consumption”

## TEACHING

2023	CMPUT 301	Intro to SE Winter
2023	CMPUT 404	Web Services SE Winter
2022	CMPUT 663	Machine Learning Applied: Software Analytics Fall
2022	CMPUT 301	Intro to SE Winter
2022	CMPUT 404	Web Services Winter
2021	CMPUT 404	Web Services Fall
2022	CMPUT 301	Intro to SE Winter
2021	CMPUT 404	Web Services Fall
2021	CMPUT 301	Intro to SE Winter
2021	CMPUT 404	Web services Winter
2020	CMPUT 663	Machine Learning Applied: Software Analytics Fall
2020	CMPUT 404	Web services Winter
2020	CMPUT 301	Intro to SE Winter
2020	CMPUT 201	Actually learn programming Winter
2019	CMPUT 663	Machine Learning Applied: Software Analytics Winter
2019	CMPUT 404	Web Services Winter
2018	CMPUT 301	Intro to SE Fall
2017	CMPUT 404	Web Services Winter and Fall
2016	CMPUT 301	Intro to SE Fall
2016	CMPUT 404	Web Services Winter
2016	CMPUT 811	Multimedia Data Mining (1 week)
2016	CMPUT 664	Machine Learning Applied: Software Analytics Winter
2016	CMPUT 492	Directed Studies: Software Energy Consumption Winter
2016	CMPUT 701	Course-based Masters Essay Winter
2015	CMPUT 701	Course-based Masters Essay Fall
2015	CMPUT 410	Web Services Winter
2015	CMPUT 301	Intro to SE Winter
2015	CMPUT 301	Intro to SE Fall
2015	CMPUT 496	Directed Studies Winter
2015	CMPUT 496	Directed Studies Summer
2015	CMPUT 605	Directed Studies Winter
2014	CMPUT 496	Directed Studies Fall
2014	CMPUT 410	Web Services Winter
2014	CMPUT 301	Intro to SE Winter
2014	CMPUT 301	Intro to SE Fall
2013	CMPUT 660	Topics in MSR and the Cloud
2013	CMPUT 497	Directed Studies Fall
2013	CMPUT 301	Intro to SE Winter
2013	CMPUT 301	Intro to SE Fall



2013	CMPUT 664	Topics in Mining Software Repositories
2012	CMPUT 301	Intro to SE Fall
2012	CMPUT 301	Intro to SE Winter
2012	CMPUT 664	Topics in Mining Software Repositories

## PROFESSIONAL MEMBERSHIP

- DevEdmonton Board Member (elected), 2018 –
- Association for Computing Machinery Member, 2015 –
- IEEE Society Member, 2004 – 2015, 2018 –
- Boreal Electroacoustic Music Society, 2013 –
- New Music Edmonton, 2013 –

## INTERESTS AND HOBBIES

**Programming and programming languages** are a particular passion of mine. I am a member of numerous Edmonton based developer user groups. I have been an active member of developer user groups in Victoria, Waterloo, Toronto, Davis, and Edmonton. I like to learn new languages, concepts, and enjoy writing serious software in languages like OCaml, Haskell, Common LISP, Perl, Javascript, and Ruby. I am an active programmer.

**Computer music** — I have performed music numerous times at the Victoria Noise Festival, the Sacramento Norcal Noise Fest, “The Lab” in San Francisco, and in Edmonton. I produce computer noise music with my own software and hardware. In fact much of my musical code ends up in my research code (signal processing).