Shane McIntosh
Curriculum Vitae

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SUMMARY OF ACCOMPLISHMENTS

- Ranked among the most active and impactful early career software engineering scholars by a recent independent study (https://doi.org/10.1016/j.jss.2018.10.029).
- Recipient of selective national awards like the Governor General's Academic Gold Medal and the Vanier Canada Graduate Scholarship (see SELECTED AWARDS).
- Broad network of collaborators, which includes industrial practitioners and academics from institutions in Canada, Japan, Austria, and USA.

ACADEMIC EMPLOYMENT

Title	Department	University	Start Date	End Date
Associate Professor	David R. Cheriton School of Computer Science	Univ. of Waterloo, Canada	July 2020	Present
Canada Research Chair in Software Release Engineering	Dept. of Electrical and Computer Eng.	McGill University, Canada	Oct. 2019	June 2020
Assistant Professor	Dept. of Electrical and Computer Eng.	McGill University, Canada	July 2015	June 2020

EXTERNAL RESEARCH FUNDING (TOTAL $875,800 CAD)

Agency	Program	Start Date	End Date	Amount
NSERC	Tier 2 Canada Research Chair (Vacated July 2020)	Oct. 2019	Sep. 2024	$600,000 CAD
Mitacs	Accelerate International	Jun. 2019	Feb. 2020	$30,000 CAD
NSERC	Engage	Jan. 2019	Jun. 2019	$25,000 CAD
Mitacs	Accelerate	Sep. 2017	Dec. 2017	$15,000 CAD
FRQNT	Nouveaux Chercheurs	May 2017	Apr. 2019	$50,800 CAD
NSERC	Discovery	May 2016	Apr. 2021	$155,000 CAD

SELECTED AWARDS

- **Academic Gold Medal** Governor General of Canada. *One of two Ph.D. graduates from the Queen's University class of 2015 to be recognized with this award.*
- **ACM SIGSOFT Distinguished Paper** Int'l Conf. on Mining Software Repositories (MSR 2016). *One of two papers of the 36 accepted papers to receive this award.*
- **Distinguished Paper Award** Int'l Conf. on Mining Software Repositories (MSR 2014). *One of two papers of the 29 accepted papers to be recognized with this award.*
- **Distinguished Reviewer Awards** Int'l Conf. on Software Analysis, Evolution, and Reengineering (SANER 2019) and Int'l Conf. on Software Maint. and Evolution (ICSME 2018)
- **Vanier Canada Graduate Scholarship** NSERC. *The only software engineering scholar to be recognized with this award to date.* Held from 2012–2015, $150,000 CAD
- **Peter Silvester Award** Dept. of Elec. & Computer Eng., McGill University. *In recognition of strong performance as a junior faculty member.* 2016, $2,000 CAD

PAPERS IN REFEREED INTERNATIONAL JOURNALS (19 TOTAL)

Shorthand	Journal	Publisher	CORE Rank	Five Year Impact Factor	Papers
TSE	Transactions on Software Engineering	IEEE	A*	3.925	9
EMSE	Empirical Software Engineering	Springer	A	3.494	8
AUSE	Automated Software Engineering	Springer	A	2.341	1
IEEE SW	Software	IEEE	B	2.889	1

TSE'20a S. Vysali, S. McIntosh, B. Adams. Quantifying, Characterizing, and Mitigating Flakily Covered Program Elements. *Transactions on Software Engineering* (IEEE), In press, 12 pages, Jul. 2020.

IEEESW'20 F. El Zanaty, C. Rezk, S. Lijbrink, W. Van Bergen, M. Côté, S. McIntosh. Automatic Recovery of Missing Issue Type Labels. *Software* (IEEE), In press, 5 pages, Jun. 2020.

TSE'20b T. Hirao, S. McIntosh, A. Ihara, K. Matsumoto. Code Reviews with Divergent Review Scores: An Empirical Study of the OpenStack and Qt Communities. *Transactions on Software Engineering* (IEEE), In press, 13 pages, Feb. 2020.

TSE'20c K. Gallaba, S. McIntosh. Use and Misuse of Continuous Integration Features: An Empirical Study of Projects that (mis)use Travis CI. *Transactions on Software Engineering* (IEEE), 46(1):33–50, Jan. 2020.

TSE'19 C. Tantithamthavorn, S. McIntosh, A. E. Hassan, K. Matsumoto. The Impact of Automated Parameter Optimization on Defect Prediction Models. *Transactions on Software Engineering* (IEEE), 45(7):683–711, Jul. 2019.

TSE'18 S. McIntosh, Y. Kamei. Are Fix-Inducing Changes a Moving Target? A Longitudinal Case Study of Just-In-Time Defect Prediction. *Transactions on Software Engineering* (IEEE), 44(5):412–428, May 2018.

EMSE'18a D. A. da Costa, S. McIntosh, C. Treude, U. Kulesza, A. E. Hassan. The Impact of Rapid Release Cycles on the Integration Delay of Fixed Issues. *Empirical Software Engineering* (Springer), 23(2):835–904, Apr. 2018.

EMSE'18b D. A. da Costa, S. McIntosh, U. Kulesza, A. E. Hassan, S. L. Abebe. An Empirical Study of the Integration Time of Fixed Issues. *Empirical Software Engineering* (Springer), 23(1):334–383, Feb. 2018.

EMSE'17a C. Bezemer, S. McIntosh, B. Adams, D. M. Germán, A. E. Hassan. An Empirical Study of Unspecified Dependencies in Make-Based Build Systems. *Empirical Software Engineering* (Springer), 22(6):3117–3148, Dec. 2017.

TSE'17a D. A. da Costa, S. McIntosh, W. Shang, U. Kulesza, R. Coelho, A. E. Hassan. A Framework for Evaluating the Results of the SZZ Approach for Identifying Bug-Introducing Changes. *Transactions on Software Engineering* (IEEE), 43(7):641–657, July 2017.

TSE'17b F. Zhang, A. E. Hassan, S. McIntosh, Ying Zou. The Use of Summation to Aggregate Software Metrics Hinders the Performance of Defect Prediction Models. *Transactions on Software Engineering* (IEEE), 43(5):476–491, May 2017.

EMSE'17b P. Thongtanunam, S. McIntosh, A. E. Hassan, H. Iida. Review Participation in Modern Code Review: An Empirical Study of the Android, Qt, and OpenStack Projects. *Empirical Software Engineering* (Springer), 22(2):768–817, Apr. 2017.

TSE'17c C. Tantithamthavorn, S. McIntosh, A. E. Hassan, K. Matsumoto. An Empirical Comparison of Model Validation Techniques for Defect Prediction Models. *Transactions on Software Engineering* (IEEE), 41(1):1–18, Jan. 2017.

AUSE'16 S. McIntosh, B. Adams, M. Nagappan, A. E. Hassan. Identifying and Understanding Header File Hotspots in C/C++ Build Processes. *Automated Software Engineering* (Springer), 23(4):619–647, Dec. 2016.

TSE'16 C. Tantithamthavorn, S. McIntosh, A. E. Hassan, K. Matsumoto. Comments on "Researcher Bias: The Use of Machine Learning in Software Defect Prediction" *Transactions on Software Engineering* (IEEE), 42(11):1092–1094, Nov. 2016.

EMSE'16a Y. Kamei, T. Fukushima, S. McIntosh, K. Yamashita, N. Ubayashi, A. E. Hassan. Studying Just-In-Time Defect Prediction using Cross-Project Models. *Empirical Software Engineering* (Springer), 21(5):2072–2106, Oct. 2016.

EMSE'16b S. McIntosh, Y. Kamei, B. Adams, A. E. Hassan. An Empirical Study of the Impact of Modern Code Review Practices on Software Quality. *Empirical Software Engineering* (Springer), 21(5):2146–2189, Oct. 2016.

EMSE'15 S. McIntosh, M. Nagappan, B. Adams, A. Mockus, A. E. Hassan. A Large-Scale Empirical Study of the Relationship between Build Technology and Build Maintenance. *Empirical Software Engineering* (Springer), 20(6):1587–1633, Dec. 2015.

EMSE'12 S. McIntosh, B. Adams, A. E. Hassan. The evolution of Java build systems. *Empirical Software Engineering* (Springer), 17(4-5):578–608, Aug. 2012.

FULL PAPERS IN REFEREED INTERNATIONAL CONFERENCE PROCEEDINGS (33 TOTAL)

Shorthand	Conference Name	Publisher	CORE Rank	Accepted Papers
ICSE	Int'l Conf. on Software Engineering	ACM/IEEE	A*	7
FSE	Int'l Symp. on the Foundations of Software Engineering	ACM	A*	2
ASE	Int'l Conf. on Automated Software Engineering	ACM/IEEE	A	2
ICSME	Int'l Conf. on Software Maintenance and Evolution	IEEE	A	5
MSR	Int'l Conf. on Mining Software Repositories	ACM/IEEE	A	8
ESEM	Int'l Symp. on Empirical Software Engineering and Measurement	ACM	A	2
SANER	Int'l Conf. on Software Analysis, Evolution, and Reengineering	IEEE	B	6
APSEC	Asia-Pacific Software Engineering Conf.	IEEE	B	1

MSR'20 S. Mujahid, R. Abdalkareem, E. Shihab, S. McIntosh. Using Others' Tests to Avoid Breaking Updates. *In proc. of the 17th Int'l Conf. on Mining Software Repositories* (ACM/IEEE), To appear, May 2020. Accept: 45/171 (26%).

ESEC/FSE'19 T. Hirao, S. McIntosh, A. Ihara, K. Matsumoto. The Review Linkage Graph for Code Review Analytics: A Recovery Approach and Empirical Study. *In proc. of the 27th Symp. on the Foundations of Software Engineering* (ACM), pp. 578–589, August 2019. Accept: 73/303 (24%).

SANER'19 RENE P. K. Sidhu, G. Mussbacher, S. McIntosh. Reuse (or Lack Thereof) in Travis CI Specifications: An Empirical Study of CI Phases and Commands. *In proc. of the 26th Int'l Conf. on Software Analysis, Evolution, and Reengineering* (IEEE), pp. 524–533, February 2019.

APSEC'18 L. An, F. Khomh, S. McIntosh, M. Castelluccio. Why Did This Reviewed Code Crash? An Empirical Study of Mozilla Firefox. *In proc. of the 25th Asia-Pacific Software Engineering Conf.* (IEEE), pp. 396–405, December 2018. Acceptance: 52/191 (27%).

ESEM'18 F. El Zanaty, T. Hirao, S. McIntosh, A. Ihara, K. Matsumoto. An Empirical Study of Design Discussions in Code Review. *In proc. of the 12th Int'l Symposium on Empirical Software Engineering and Measurement* (ACM/IEEE), pp. 11:1–11:10, October 2018. Acceptance: 30/140 (21%).

ICSME'18 M. Robillard, M. Nassif, S. McIntosh. Threats of Aggregating Software Repository Data. *In proc. of the 34th Int'l Conf. on Software Maintenance and Evolution* (IEEE), pp. 508–518, September 2018. Acceptance: 45/174 (26%).

ICSME'18 Industry R. Wen, D. Gilbert, M. G. Roche, S. McIntosh. BLIMP Tracer: Integrating Build Impact Analysis with Code Review. *In proc. of the Industry track of the 34th Int'l Conf. on Software Maintenance and Evolution* (IEEE), pp. 685–694, September 2018. Acceptance: 15/32 (47%).

ASE'18 K. Gallaba, C. Macho, M. Pinzger, S. McIntosh. Noise and Heterogeneity in Historical Build Data: An Empirical Study of Travis CI. *In proc. of the 33rd Int'l Conf. on Automated Software Engineering* (ACM/IEEE), pp. 87–97, September 2018. Acceptance: 69/346 (20%).

SANER'18 C. Macho, S. McIntosh, M. Pinzger. Automatically Repairing Dependency-Related Build Breakage. *In proc. of the 25th Int'l Conf. on Software Analysis, Evolution and Reengineering* (IEEE), pp. 106–117, March 2018. Acceptance: 39/146 (27%).

MSR'17a C. Macho, S. McIntosh, M. Pinzger. Extracting Build Changes with BUILDDIFF. *In proc. of the 14th Int'l Conf. on Mining Software Repositories* (ACM/IEEE), pp. 368–378, May 2017. Acceptance: 37/121 (31%).

MSR'17b B. Ghotra, S. McIntosh, A. E. Hassan. A Large-Scale Study of the Impact of Feature Selection Techniques on Defect Classification Models. *In proc. of the 14th Int'l Conf. on Mining Software Repositories* (ACM/IEEE), pp. 146–157, May 2017. Acceptance: 37/121 (31%).

ICSME'16 J. Shimagaki, Y. Kamei, S. McIntosh, D. Pursehouse, N. Ubayashi. Why are Commits being Reverted? A Comparative Study of Industrial and Open Source Projects. *In proc. of the 32nd Int'l Conf. on Software Maintenance and Evolution* (IEEE), pp. 301–311, Oct. 2016. Acceptance: 35/127 (29%).

ESEM'16 K. Miura, S. McIntosh, Y. Kamei, A. E. Hassan, N. Ubayashi. The Impact of Task Granularity on Co-evolution Analyses. *In proc. of the 10th Int'l Symposium on Empirical Software Engineering and Measurement* (ACM/IEEE), no. 47, Sep. 2016. Acceptance: 27/122 (22%).

ICSE'16a P. Thongtanunam, S. McIntosh, A. E. Hassan, H. Iida. Revisiting Code Ownership and its Relationship with Software Quality in the Scope of Modern Code Review. *In proc. of the 38th Int'l Conf. on Software Engineering* (ACM/IEEE), pp. 1039–1050, May 2016. Acceptance: 101/530 (19%).

ICSE'16b C. Tantithamthavorn, S. McIntosh, A. E. Hassan, K. Matsumoto. Automated Parameter Optimization of Classification Techniques for Defect Prediction Models. *In proc. of the 38th Int'l Conf. on Software Engineering* (ACM/IEEE), pp. 321–332, May 2016. Accept: 101/530 (19%).

ICSE'16 SEIP J. Shimagaki, Y. Kamei, S. McIntosh, A. E. Hassan, N. Ubayashi. A Study of the Quality-Impacting Practices of Modern Code Review at Sony Mobile. *In proc. of the Software Engineering in Practice (SEIP) track of the 38th Int'l Conf. on Software Engineering* (ACM/IEEE), pp. 212–221, May 2016. Acceptance: 28/108 (26%).

MSR'16a D. A. da Costa, S. McIntosh, U. Kulesza, A. E. Hassan. Studying the Impact of Switching to a Rapid Release Cycle on Integration Delay of Addressed Issues: An Empirical Study of the Mozilla Firefox Project. *In proc. of the 13th Int'l Conf. on Mining Software Repositories* (ACM/IEEE), pp. 374–385, May 2016. Acceptance: 36/103 (35%).
🏆 *ACM SIGSOFT distinguished paper* 🏆

SANER'16a M. Beller, R. Bholanath, S. McIntosh, A. Zaidman. Analyzing the State of Static Analysis: A Large-Scale Evaluation in Open Source Software. *In proc. of the 23rd Int'l Conf. on Software Analysis, Evolution and Reengineering* (IEEE), pp. 470–481, Mar. 2016. Acceptance: 52/140 (37%).

SANER'16b C. Macho, S. McIntosh, M. Pinzger. Predicting Build Co-Changes with Source Code Change and Commit Categories. *In proc. of the 23rd Int'l Conf. on Software Analysis, Evolution and Reengineering* (IEEE), pp. 541–551, Mar. 2016. Acceptance: 52/140 (37%).
🏆 *Nominated for best paper* 🏆

ESEC/FSE'15 M. Nagappan, R. Robbes, Y. Kamei, É. Tanter, S. McIntosh, A. Mockus, A. E. Hassan. An Empirical Study of goto in C Code from GitHub Repositories. *In proc. of the 10th joint meeting of the European Software Engineering Conf. and the Symposium on the Foundations of Software Engineering* (ACM), pp. 404–414, Sep. 2015. Acceptance: 74/291 (25%).

ICSE'15a C. Tantithamthavorn, S. McIntosh, A. E. Hassan, A. Ihara, K. Matsumoto. The Impact of Mislabelling on the Performance and Interpretation of Defect Prediction Models *In proc. of the 37th Int'l Conf. on Software Engineering* (ACM/IEEE), pp. 812–823, May 2015. Acceptance: 84/452 (19%).

ICSE'15b B. Ghotra, S. McIntosh, A. E. Hassan. Revisiting the Impact of Classification Techniques on the Performance of Defect Prediction Models. *In proc. of the 37th Int'l Conf. on Software Engineering* (ACM/IEEE), pp. 789–800, May 2015. Acceptance: 84/452 (19%).

MSR'15 P. Thongtanunam, S. McIntosh, A. E. Hassan, H. Iida. Investigating Code Review Practices in Defective Files. *In proc. of the 12th Int'l Conf. on Mining Software Repositories* (ACM/IEEE), pp. 168–179, May 2015. Acceptance: 32/106 (30%).

SANER'15a R. Morales, S. McIntosh, F. Khomh. Do Code Review Practices Impact Design Quality? A Case Study of the Qt, VTK, and ITK Projects. *In proc. of the 22nd Int'l Conf. on Software Analysis, Evolution and Reeng.* (IEEE), pp. 171–180, Mar. 2015. Acceptance: 46/144 (32%).

SANER'15b X. Xia, D. Lo, S. McIntosh, E. Shihab, A. E. Hassan. Cross-Project Build Co-change Prediction. *In proc. of the 22nd Int'l Conf. on Software Analysis, Evolution and Reengineering* (IEEE), pp. 311–320, Mar. 2015. Acceptance: 46/144 (32%).

ICSME'14a S. McIntosh, B. Adams, M. Nagappan, A. E. Hassan. Mining Co-Change Information to Understand when Build Changes are Necessary. *In proc. of the 30th Int'l Conf. on Software Maintenance and Evolution* (IEEE), pp. 241–250, Oct. 2014. Acceptance: 40/210 (19%).

ICSME'14b D. A. da Costa, S. L. Abebe, S. McIntosh, Uirá Kulesza, A. E. Hassan. An Empirical Study of Delays in the Integration of Addressed Issues *In proc. of the 30th Int'l Conf. on Software Maintenance and Evolution* (IEEE), pp. 281–290, Oct. 2014. Accept: 40/210 (19%.)
🏆 *Nominated for best paper* 🏆

ASE'14 S. van der Burg, E. Dolstra, S. McIntosh, J. Davies, D. M. Germán, A. Hemel. Tracing Software Build Processes to Uncover License Compliance Inconsistencies. *In proc. of the 29th Int'l Conf. on Automated Software Engineering* (ACM/IEEE), pp. 731–741, Sep. 2014. Acceptance: 55/276 (20%).

ICSE'14 SEIP S. McIntosh, M. Poehlmann, E. Juergens, A. Mockus, B. Adams, A. E. Hassan, B. Haupt, C. Wagner. Collecting and Leveraging a Benchmark of Build System Clones to Aid in Quality Assessments. *In proc. of the Software Engineering in Practice (SEIP) track of the 36th Int'l Conf. on Software Engineering* (ACM/IEEE), pp. 145–154, Jun. 2014. Acceptance: 25/117 (21%).

MSR'14a S. McIntosh, Y. Kamei, B. Adams, A. E. Hassan. The Impact of Code Review Coverage and Code Review Participation on Software Quality: A Case Study of the Qt, VTK, and ITK Projects. *In proc. of the 11th Int'l Conf. on Mining Software Repositories* (ACM/IEEE), pp. 192–201, May 2014. Acceptance: 29/85 (34%).
🏆 *Distinguished paper award* 🏆

MSR'14b T. Fukushima, Y. Kamei, S. McIntosh, K. Yamashita, N. Ubayashi. An Empirical Study of Just-In-Time Defect Prediction Using Cross-Project Models. *In proc. of the 11th Int'l Conf. on Mining Software Repositories* (ACM/IEEE), pp. 172–181, May 2014. Accept: 29/85 (34%).
🏆 *Nominated for distinguished paper award* 🏆

ICSE'11 S. McIntosh, B. Adams, T. H. D. Nguyen, Y. Kamei, A. E. Hassan. An Empirical Study of Build Maintenance Effort. *In proc. of the 33rd Int'l Conf. on Software Engineering* (ACM/IEEE), pp. 141–150, May 2011. Acceptance: 62/441 (14%).

MSR'10 S. McIntosh, B. Adams, A. E. Hassan. The Evolution of ANT Build Systems. *In proc. of the 7th Int'l Conf. on Mining Software Repositories* (ACM/IEEE), pp. 42–51, May 2010. Acceptance: 16/51 (31%).
🏆 *Nominated for best paper award* 🏆

SHORT PAPERS IN REFEREED INTERNATIONAL CONFERENCE PROCEEDINGS (10 TOTAL)

Shorthand	Conference Name	Publisher	CORE Rank	Accepted Papers
ICSME	Int'l Conf. on Software Maintenance and Evolution	IEEE	A	1
MSR	Int'l Conf. on Mining Software Repositories	ACM/IEEE	A	8
SANER	Int'l Conf. on Software Analysis, Evolution, and Reengineering	IEEE	B	1

MSR'19 Challenge D. Abric, O. E. Clark, M. Caminiti, K. Gallaba, S. McIntosh. Can Duplicate Questions on Stack Overflow Benefit the Software Development Community? *In proc. of the Mining Challenge track of the 16th Int'l Conf. on Mining Software Repositories* (ACM/IEEE), In press, 5 pages. Acceptance: 14/27 (52%).
🏆 *Best Student Presentation of the Mining Challenge track* 🏆

MSR'18a Challenge N. Rabbani, M. Harvey, S. Saquif, K. Gallaba, S. McIntosh. Revisiting "Programmers' Build Errors" in the Visual Studio Context: A Replication Study using IDE Interaction Traces. *In proc. of the Mining Challenge track of the 15th Int'l Conf. on Mining Software Repositories* (ACM/IEEE), pp. 98–101, May 2018. Acceptance: 13/31 (42%).

MSR'18b Challenge R. Amlekar, A. F. R. Gamboa, K. Gallaba, S. McIntosh. Do Software Engineers Use Autocompletion Features Differently Than Other Developers? *In proc. of the Mining Challenge track of the 15th Int'l Conf. on Mining Software Repositories* (ACM/IEEE), pp. 86–89, May 2018. Acceptance: 13/31 (42%).

ICSME'17 NIER Q. Cao, R. Wen, S. McIntosh. Forecasting the Duration of Incremental Build Jobs. *In proc. of the New Ideas and Emerging Results track of the 33rd Int'l Conf. on Software Maintenance and Evolution* (IEEE), pp. 524–528, Sep. 2017. Acceptance: 15/26 (58%).

MSR'17a Challenge Y. Khan, Y. Gupta, K. Gallaba, S. McIntosh. The Impact of the Adoption of Continuous Integration on Developer Attraction and Retention. *In proc. of the Mining Challenge track of the 14th Int'l Conf. on Mining Software Repositories* (ACM/IEEE), pp. 491–494, May 2017. Acceptance: 14/29 (48%).

MSR'17b Challenge M. Manglaviti, E. Coronado-Montoya, K. Gallaba, S. McIntosh. An Empirical Study of the Personnel Overhead of Continuous Integration. *In proc. of the Mining Challenge track of the 14th Int'l Conf. on Mining Software Repositories* (ACM/IEEE), pp. 471–474, May 2017. Acceptance: 14/29 (48%).

MSR'16a Challenge J. G. Barnett, C. K. Gathuru, L. S. Soldano, S. McIntosh. The Relationship between Commit Message Detail and Defect Proneness in Java Projects on GitHub. *In proc. of the Mining Challenge track of the 13th Int'l Conf. on Mining Software Repositories* (ACM/IEEE), pp. 496–499, May 2016. Acceptance: 10/24 (42%).
🏆 *Mining challenge runner-up* 🏆

MSR'16b Challenge C. Désarmeaux, A. Pecatikov, S. McIntosh. The Dispersion of Build Maintenance Activity across Maven Lifecycle Phases. *In proc. of the Mining Challenge track of the 13th Int'l Conf. on Mining Software Repositories* (ACM/IEEE), pp. 492–495, May 2016. Acceptance: 10/24 (42%).

MSR'14 Challenge K. Yamashita, S. McIntosh, Y. Kamei, N. Ubayashi. Magnet or Sticky? An OSS Project-by-Project Typology. *In proc. of the Mining Challenge track of the 11th Int'l Conf. on Mining Software Repositories* (ACM/IEEE), pp. 344–347, May 2014. Acceptance: 9/19 (47%).

CSMR-WCRE'14 ERA S. McIntosh, K. Legere, A. E. Hassan. Orchestrating Change: An Artistic Representation of Software Evolution. *In proc. of the Early Research Achievements (ERA) track of the 1st joint meeting of the Conf. on Software Maintenance and Reengineering and the Working Conf. on Reverse Engineering* (IEEE), pp. 353–357, Mar. 2014. Acceptance: 12/33 (36%).

INVITED PAPERS AND TALKS

SECONFIG'19 S. McIntosh. The Influence of Noise in Continuous Integration Data. *Int'l Workshop on Software Engineering for Infrastructure and Configuration Code* (co-located with ASE 2019), San Diego, USA, Nov. 2019. *Keynote address*.

KLAGENFURT'19 S. McIntosh. Use, Misuse, and Reuse of Continuous Integration Features. *University of Klagenfurt*, Klagenfurt, Austria, Apr. 2019.

GERRIT'18 S. McIntosh. Supporting and Understanding Modern Code Review. *Gerrit User Summit*, Mountain View, USA, Nov. 2018.

MICROSOFT'18 S. McIntosh. (Mis)use of Continuous Integration Features. *Microsoft Continuous Deployment Workshop*, Redmond, USA, Aug. 2018.

GERRIT'17 S. McIntosh. Mining Gerrit Repositories for Contentious Reviews and Community Evolution. *Gerrit User Summit*, London, UK, Oct. 2017.

SHONAN'17 S. McIntosh. Building on an unsound foundation: How release pipelines can impact our predictive models. *Mining Software Repositories: Accomplishments, Challenges and Future Trends*, National Institute of Informatics (NII) Shonan Meeting #95, Shonan, Japan. Mar. 2017. *Invited lecture*.

NUANCE'16 S. McIntosh. Understanding and Supporting Modern Software Development and Release Teams. *Nuance Communications nCode Summit*, Montréal, Canada. Sep. 2016. *Keynote address*.

SANER'16 FOSE B. Adams, S. McIntosh. Modern Release Engineering in a Nutshell: Why Researchers should Care. *In proc. of the Future of Software Engineering (FOSE) track of the 23rd Int'l Conf. on Software Analysis, Evolution, and Reeng.* (IEEE), pp. 78–90, May 2016.

GERRIT'15 S. McIntosh. Mining Gerrit Repositories to Study the Impact of Modern Code Review Practices *Gerrit User Summit*, Mountain View, USA, Nov. 2015.

COW'15 S. McIntosh. Building on an Unsound Foundation: How Release Pipelines can Impact our Predictive Models. *44th CREST Open Workshop, Predictive Modelling for Software Engineering*, UCL, London, UK, Nov. 2015.

UdeM'15 S. McIntosh. Software Build Systems: Enabling the Rapid Release Cycle of Modern Software Systems. *Université de Montréal*, Montréal, Canada, Oct. 2015.

INVITATION-BASED WORKSHOPS AND SEMINARS

Co-organizer
- Release Engineering for Mobile Applications. Co-organized by Y. Kamei and M. Nagappan. *National Institute of Informatics (NII) Shonan Meeting #152*, Shonan, Japan. Dec. 2019.

Invitee
- Resilient Software Configuration and Infrastructure Code Analysis. *Schloss Dagstuhl Seminar #20142*, Wadern, Germany. Mar. 2020.
- DevOps and Microservices APIs. *2nd Vienna Software Seminar*, University of Vienna, Vienna, Austria. Aug. 2019.
- Automatic Quality Assurance and Release. *Schloss Dagstuhl Seminar #18122*, Wadern, Germany. Mar. 2018.
- On the Relation of Software Architecture and DevOps/Continuous Delivery. *1st Vienna Software Seminar*, University of Vienna, Vienna, Austria. Dec. 2017.
- Data-Driven Search-Based Software Engineering. *National Institute of Informatics (NII) Shonan Meeting #105*, Shonan, Japan. Dec. 2017.
- Predictive Modelling for Software Engineering. *44th CREST Open Workshop*, University College London, London, UK. Nov. 2015.

GRADUATE STUDENT MENTORSHIP

Ph.D. Students

Name	Start Date	End Date	Co-authored Papers	Current Position
Farshad Kazemi	Jan. 2020	—		Ph.D. Student
Keheliya Gallaba	Sep. 2016	—	TSE'20c, ASE'18, MSR'19 Challenge, MSR'18a Challenge, MSR'18b Challenge, MSR'17a Challenge, MSR'17b Challenge	Ph.D. Student
Toshiki Hirao (Co-advised w/ A. Ihara, K. Matsumoto)	Jun. 2016	Feb. 2020	TSE'20b, ESEC/FSE'19, ESEM'18	Entrepreneur
Christian Macho (Co-advised w/ M. Pinzger)	Aug. 2015	May 2019	ASE'18, MSR'17a, SANER'17a, SANER'16a	Postdoctoral Researcher at the University of Klagenfurt
Chakkrit Tantithamthavorn (Co-advised w/ K. Matsumoto, A. E. Hassan)	May 2014	Sep. 2016	TSE'19, TSE'17c, TSE'16, ICSE'16b, ICSE'15a	Lecturer (tenure-track)[1] at Monash University, Australia
Patanamon Thongtanunam (Co-advised w/ H. Iida, A. E. Hassan)	May 2014	Sep. 2016	EMSE'17b, ICSE'16a, MSR'15	Lecturer (tenure-track) at the University of Melbourne, Australia
Daniel Alencar da Costa (Co-advised w/ U. Kulesza, A. E. Hassan)	Jan. 2014	Feb. 2016	EMSE'18a, EMSE'18b, TSE'17a, MSR'16, ICSME'14b	Lecturer (tenure-track) at the University of Otago, New Zealand

[1]Equivalent to a tenure-track assistant professor in the Canadian academic system.

| Kazuhiro Yamashita (Co-advised w/ Y. Kamei, A. E. Hassan) | Jan. 2014 | Mar. 2017 | EMSE'16a, MSR'14b, MSR'14 Challenge | Researcher at Fujitsu Industrial Research Lab, Japan |

Master's Students

Name	Start Date	End Date	Co-authored Papers	Current Position
Mehran Meidani	Jan. 2019	—		M.Eng. Student
Shivashree Vysali	Sep. 2018	—	TSE'20a	M.Eng. Student
Farida El Zanaty	Jan. 2018	Dec. 2019	IEEESW'20, ESEM'18	Data Scientist at Wise Systems
Christophe Rezk	Sep. 2017	—	IEEESW'20	Technical Consultant
Puneet K. Sidhu (Co-advised w/ G. Mussbacher)	Sep. 2017	Aug. 2019	SANER'19 RENE	TBD
Ruiyin Wen	Sep. 2016	Aug. 2018	ICSME'18 Industry, ICSME'17 NIER	Software Engineer at Qualcomm
Baljinder Ghotra	May 2014	May 2017	ICSE'15a, MSR'17b	Software Engineer at BlackBerry

UNDERGRADUATE AND GRADUATE TEACHING

Course Development

Course Name	Role	Course Description	Pedagogical Features
Software Analytics (ECSE 611)	Course Creator	The application of analytics (i.e., the discovery and communication of meaningful patterns in data) to software development and release practices.	Instructor-guided exploration of the seminal and recent literature, student-led, discussion-oriented lectures.
Software Delivery (ECSE 437)	Course Creator	Fundamentals of design, development, and operation of code integration processes, release pipelines, and deployment strategies for software systems.	Active learning techniques including jigsaw readings, pair-and-share, live coding, in-class exercises.
Intro. to Software Engineering (ECSE 321)	Co-redesigner (w/ G. Mussbacher and D. Varró)	Design, development and testing of software systems. Software life cycle: requirements analysis, software architecture and design, implementation, integration, test planning, and maintenance.	Project-based learning, live coding, in-class exercises.

Courses Instructed
- Software Analytics (ECSE 611), Winter '17, '18, '19, '20, Enrollment: 6–18 students
- Software Delivery (ECSE 437), Fall '18, '19, Enrollment: 10–55 students
- Software Requirements Engineering (ECSE 326), Fall '19, Enrollment: 110 students
- Software Validation (ECSE 429), Fall '17, Enrollment: 103 students
- Intro. to Software Engineering (ECSE 321), Fall '15, '16, '17, '18, Enrollment: 67–90 students

ACADEMIC SERVICE

Associate Editor
- Journal of Systems and Software (JSS), 2017–Present

Special Interest Group Roles
- Co-chair, Digital Learning (webinars, tech talks), ACM Special Interest Group on Software Engineering (ACM SIGSOFT), 2018–Present

Steering Committee Membership
- Int'l Conf. on Predictive Models and Data Analytics in Software Engineering (PROMISE), 2018–Present

Organizing Committee Roles
- Co-chair, Proceedings, Int'l Conf. on Software Engineering (ICSE'22)
- Co-chair, Artifact Evalation Committee, Int'l Symposium on the Foundations of Software Engineering (FSE'21 Artifacts)
- Co-chair, Student Mentorship Workshop, Int'l Conf. on Software Engineering (ICSE'20)
- Co-chair, Formal Tool Demonstrations track, Int'l Symposium on the Foundations of Software Engineering (FSE'20 Tools)
- Co-chair, Student Volunteers track, Int'l Conf. on Software Engineering (ICSE'19)
- Co-chair, Tutorials track, Int'l Conf. on Agile Software Development (XP'19)
- Co-chair, Tutorials track, Asia-Pasific Software Engineering Conf. (APSEC'18)
- Co-chair, Technical program, Int'l Conf. on Predictive Models and Data Analytics in Software Engineering (PROMISE'18)
- Co-chair, Early Research Achievements track, Int'l Conf. on Software Analytics, Evolution, and Reengineering (SANER'18 ERA)
- Co-chair, Technical program, Int'l Workshop on Release Engineering (RELENG'16)
- Co-chair, Technical program, Int'l Workshop on Empirical Software Engineering in Practice (IWESEP'16)

Selected Program Committee Membership
- Int'l Conf. on Software Engineering (ICSE'20, '21)
- Int'l Symposium on the Foundations of Software Engineering (ESEC/FSE'20)
- Int'l Conf. on Automated Software Engineering (ASE'18, '19)
- Int'l Conf. on Object-Oriented Programming, Systems, Languages, and Apps (OOPSLA'17)
- Int'l Symposium on Empirical Software Engineering and Measurement (ESEM'17, '18, '19, '20)
- Int'l Conf. on Software Maintenance and Evolution (ICSME'16, '17, '18, '20)
- Int'l Conf. on Mining Software Repositories (MSR '16, '17, '18, '20)
- Int'l Conf. on Software Analysis, Evolution, and Reengineering (SANER'18, '19, '20)
- Int'l Conf. on Program Comprehension (ICPC'18)
- Int'l Conf. on Predictive Models and Data Analytics in Software Engineering (PROMISE'17, '19, '20)
- Int'l Working Conf. on Source Code Analysis and Manipulation (SCAM'18)

EDUCATION
Ph.D. Queen's University, Canada (Sep. 2012–Jul. 2015)
🏆 *Governor General's Academic Gold Medal* 🏆
M.Sc. Queen's University, Canada (Sep. 2009–Jan. 2011)
🏆 *Distinguished thesis award* 🏆
B.A.Comp. University of Guelph, Canada (Sep. 2003–Dec. 2008)