

SPLICE 4th Workshop

attendees and their research

August 2019, Toronto

This document is the place to share brief information about you and your research. Please, provide your e-mail, affiliation, home page, and links to a few **papers** or **systems** that are **most relevant** to the workshop.

This document will serve as both, a *list of attendees*, and a *collection of relevant publications* to share

[Peter Brusilovsky](#)

[Stephen Edwards](#)

[Thomas Price](#)

[Lauri Malmi](#)

[Austin Cory Bart](#)

[Jordan Barria-Pineda](#)

[Chris Proctor](#)

[Barbara \(Barb\) Ericson](#)

[Jun Zheng](#)

[Nea Pirttinen](#)

[Jeremy Bradbury](#)

[Juho Leinonen](#)

[Andreas Stefik](#)

[James Fraser](#)

[Michelle Ichinco](#)

Peter Brusilovsky



School of Information Sciences, University of Pittsburgh

E-mail: peterb@pitt.edu, WWW: <http://www.pitt.edu/~peterb/>

Editor-in-Chief, IEEE Transactions on Learning Technologies

Architecture for interoperability

- Brusilovsky, P. (2004) [KnowledgeTree: A distributed architecture for adaptive e-learning](#). In: Proceedings of The Thirteenth International World Wide Web Conference, WWW 2004, New York, NY, 17-22 May, 2004, ACM Press, pp. 104-113. [\[PDF\]](#)

Personalized access to learning content

- Hsiao, I.-H., Sosnovsky, S., and Brusilovsky, P. (2010) Guiding students to the right questions: adaptive navigation support in an E-Learning system for Java programming. *Journal of Computer Assisted Learning* 26 (4), 270-283. [\[PDF\]](#)
- Brusilovsky, P., Somyurek, S., Guerra, J., Hosseini, R., Zadorozhny, V., and Durlach, P. (2016) Open Social Student Modeling for Personalized Learning. *IEEE Transactions on Emerging Topics in Computing* 4 (3), 450-461. [\[RG\]](#)
- Hosseini, R., Hsiao, I.-H., Guerra, J., and Brusilovsky, P. (2015) What Should I Do Next? Adaptive Sequencing in the Context of Open Social Student Modeling. In: G. Conole, T. Klobučar, C. Rensing, J. Konert and É. Lavoué (eds.) Proceedings of 10th European Conference on Technology Enhanced Learning (EC-TEL 2015), Toledo, Spain, September 15–18, 2015, pp. 155-168 [\[PDF\]](#)
- Guerra, J., Hosseini, R., Somyurek, S., and Brusilovsky, P. (2016) An Intelligent Interface for Learning Content: Combining an Open Learner Model and Social Comparison to Support Self-Regulated Learning and Engagement. In: Proceedings of the 21st International Conference on Intelligent User Interfaces (IUI '16), Sonoma, California, USA, ACM, pp. 152-163, [\[PDF\]](#)

Log-based analysis of learning and problem solving in programming

- Guerra, J., Sahebi, S., Lin, Y.-R., and Brusilovsky, P. (2014) The Problem Solving Genome: Analyzing Sequential Patterns of Student Work with Parameterized Exercises. In: J. Stamper, Z. Pardos, M. Mavrikis and B. M. McLaren (eds.) Proceedings of the 7th International Conference on Educational Data Mining (EDM 2014), London, UK, July 4-7, 2014, pp. 153-160. [\[PDF\]](#)
- Hosseini, R., Vihavainen (Hellas), A., and Brusilovsky, P. (2014) Exploring Problem Solving Paths in a Java Programming Course. In: Proceedings of Psychology of

Programming Interest Group Annual Conference, PPIG 2014, Brighton, UK, June 25-27, 2014. [[PDF](#)]

- Hosseini, R., Sirkiä, T., Guerra, J., Brusilovsky, P., and Malmi, L. (2016) Animated Examples as a Practice Content in Java Programming Course. In: Proceedings of the 47th ACM technical symposium on Computer Science Education (SIGCSE 2016), Memphis, Tennessee, USA, March 2-5, 2016, ACM Press, pp. 540-545. [[DOI](#)][[PDF](#)][[CuL](#)]

Stephen Edwards



Department of Computer Science, Virginia Tech

E-mail: edwards@cs.vt.edu, WWW: <http://people.cs.vt.edu/~edwards/>

Web-CAT:

- <http://web-cat.org/>
- <http://web-cat.cs.vt.edu/>
- Stephen H. Edwards. 2004. Using software testing to move students from trial-and-error to reflection-in-action. In *Proceedings of the 35th SIGCSE technical symposium on Computer science education* (SIGCSE '04). ACM, New York, NY, USA, 26-30. DOI=<http://dx.doi.org/10.1145/971300.971312>
- Stephen H. Edwards. 2003. Improving student performance by evaluating how well students test their own programs. *J. Educ. Resour. Comput.* 3, 3, Article 1 (September 2003). DOI=<http://dx.doi.org/10.1145/1029994.1029995>

IDE data logging with Web-CAT + plugin:

- Ayaan M. Kazerouni, Stephen H. Edwards, T. Simin Hall, and Clifford A. Shaffer. 2017. DevEventTracker: Tracking Development Events to Assess Incremental Development and Procrastination. In *Proceedings of the 2017 ACM Conference on Innovation and Technology in Computer Science Education (ITiCSE '17)*. ACM, New York, NY, USA, 104-109. DOI: <https://doi.org/10.1145/3059009.3059050>
- Ayaan M. Kazerouni, Clifford A. Shaffer, Stephen H. Edwards, and Francisco Servant. 2019. Assessing Incremental Testing Practices and Their Impact on Project Outcomes. In *Proceedings of the 50th ACM Technical Symposium on Computer Science Education (SIGCSE '19)*. ACM, New York, NY, USA, 407-413. DOI: <https://doi.org/10.1145/3287324.3287366>

CodeWorkout:

- <https://codeworkout.cs.vt.edu/>
- Stephen H. Edwards and Krishnan Panamalai Murali. CodeWorkout: Short programming exercises with built-in data collection. In *Proceedings of the 2017 ACM Conference*

on *Innovation and Technology in Computer Science Education*. ACM, New York, NY, USA, pp 188-193. DOI: <https://doi.org/10.1145/3059009.3059055>

- Stephen H. Edwards, Krishnan P. Murali, and Ayaan M. Kazerouni. 2019. The Relationship Between Voluntary Practice of Short Programming Exercises and Exam Performance. In *Proceedings of the ACM Conference on Global Computing Education (CompEd '19)*. ACM, New York, NY, USA, 113-119. DOI: <https://doi.org/10.1145/3300115.3309525>

Mindset-oriented feedback:

- Stephen Edwards and Zhiyi Li. 2016. Towards progress indicators for measuring student programming effort during solution development. In *Proceedings of the 16th Koli Calling International Conference on Computing Education Research (Koli Calling '16)*. ACM, New York, NY, USA, 31-40. DOI: <https://doi.org/10.1145/2999541.2999561>
- Michael S. Irwin and Stephen H. Edwards. 2019. Can Mobile Gaming Psychology Be Used to Improve Time Management on Programming Assignments? In *Proceedings of the ACM Conference on Global Computing Education (CompEd '19)*. ACM, New York, NY, USA, 208-214. DOI: <https://doi.org/10.1145/3300115.3309517>
- Bob Edmison and Stephen H. Edwards. 2019. Experiences Using Heat Maps to Help Students Find Their Bugs: Problems and Solutions. In *Proceedings of the 50th ACM Technical Symposium on Computer Science Education (SIGCSE '19)*. ACM, New York, NY, USA, 260-266. DOI: <https://doi.org/10.1145/3287324.3287474>

Interchange formats for data and assignments:

- Kate Sanders, Brad Richards, Jan Erik Moström, Vicki Almstrum, Stephen Edwards, Sally Fincher, Kat Gunion, Mark Hall, Brian Hanks, Stephen Lonergan, Robert McCartney, Briana Morrison, Jaime Spacco, and Lynda Thomas. 2008. DCER: sharing empirical computer science education data. In *Proceedings of the Fourth international Workshop on Computing Education Research (ICER '08)*. ACM, New York, NY, USA, 137-148. DOI=<http://dx.doi.org/10.1145/1404520.1404534>
- Stephen H. Edwards, Jürgen Börstler, Lillian N. Cassel, Mark S. Hall, and Joseph Hollingsworth. 2008. Developing a common format for sharing programming assignments. *SIGCSE Bull.* 40, 4 (November 2008), 167-182. DOI=<http://dx.doi.org/10.1145/1473195.1473240>
- P. Ihanntola, A. Vihavainen, A. Ahadi, M. Butler, J. Börstler, S.H. Edwards, E. Isohanni, A. Korhonen, A. Petersen, K. Rivers, M.A. Rubio, J. Sheard, B. Skupas, J. Spacco, C. Szabo, and D. Toll. Educational data mining and learning analytics in programming: Literature review and case studies. In *Proceedings of the 2015 ITICSE Working Group Reports (ITICSE-WGR '15)*. ACM, New York, NY, USA, 2015, pp. 41-63.

Thomas Price



E-mail: twprice@ncsu.edu Website: www4.ncsu.edu/~twprice/

Research Topics: Novice and block-based programming, hints and feedback for programming, help-seeking and avoidance, data-driven hint generation

iSnap: extends the Snap! novice programming environment with data-driven hints and feedback.

- Website/demo: go.ncsu.edu/isnap
- Datasets: <https://pslcdatashop.web.cmu.edu/Project?id=321>
- Papers on Data-driven Hint Generation:
 - Price, T. W., Dong, T. and Barnes, T. "Generating Data-driven Hints for Open-ended Programming." International Conference on Educational Data Mining. 2016. [[Paper](#) | [Slides](#)]
 - Price, T. W., R. Zhi and T. Barnes. "Evaluation of a Data-driven Feedback Algorithm for Open-ended Programming." Proceedings of the International Conference on Educational Data Mining. 2017, forthcoming. [[Paper](#)]
- Papers Evaluating the Impact of Hints:
 - Price, T. W., Y. Dong and D. Lipovac. "iSnap: Towards Intelligent Tutoring in Novice Programming Environments." ACM Special Interest Group on Computer Science Education (SIGCSE). 2017. (Exemplary CS Education Paper Award; 30% acceptance rate; 105/350 full papers) [[Paper](#) | [Slides](#)]
 - Price, T. W., R. Zhi and T. Barnes. "Hint Generation Under Uncertainty: The Effect of Hint Quality on Help-Seeking Behavior." Proceedings of the International Conference on Artificial Intelligence in Education. 2017, forthcoming. [[Paper](#)]
 - Price, T.W., Z. Liu, V. Catete and T. Barnes. "Factors Influencing Students' Help-Seeking Behavior while Programming with Human and Computer Tutor." [[Draft Paper](#) - Please Do Not Distribute]

Lauri Malmi



Professor, Department of Computer Science, Aalto University

Email: Lauri.Malmi@aalto.fi, WWW: <http://www.cs.hut.fi/~lma/>

LeTech research group focuses on developing advanced tools for supporting programming education (e.g., program visualization, algorithm visualization, automatic assessment) and evaluating their impact on students' learning results and learning process.

<https://research.cs.aalto.fi/LeTech/>

Letech publications at Google Scholar:

<https://scholar.google.fi/citations?user=evaMgpcAAAAJ&sortby=pubdate&pagesize=100>

[For A+ learning management system follow this link](#)

[For ACOS interactive exercise portal follow this link](#)

Some recent papers:

Evaluating impact of systems

- P Brusilovsky, L Malmi, R Hosseini, J Guerra, T Sirkiä, K Pollari-Malmi (2018), [An integrated practice system for learning programming in Python: design and evaluation](#), Research and Practice in Technology Enhanced Learning 13 (1).
- Pollari-Malmi, K., Guerra, J., Brusilovsky, P., Malmi, L., & Sirkiä, T. (2017, November). [On the value of using an interactive electronic textbook in an introductory programming course](#). In *Proceedings of the 17th Koli Calling International Conference on Computing Education Research* (pp. 168-172). ACM.
- Sirkiä, T., & Sorva, J. (2015, July). [How Do Students Use Program Visualizations Within an Interactive Ebook?](#) In *Proceedings of the eleventh annual International Conference on International Computing Education Research* (pp. 179-188). ACM.
- Auvinen, T., Hakulinen, L., & Malmi, L. (2015). [Increasing students' awareness of their behavior in online learning environments with visualizations and achievement badges](#). *IEEE Transactions on Learning Technologies*, 8(3), 261-273.
- Hakulinen, L., Auvinen, T., & Korhonen, A. (2015). [The effect of achievement badges on students' behavior: An empirical study in a university-level computer science course](#). *International Journal of Emerging Technologies in Learning (iJET)*, 10(1), 18-29.

Visualization research

- T Sirkiä, Jsvee & Kelmü: [Jsvee & Kelmü: Creating and tailoring program animations for computing education](#). Journal of Software: Evolution and Process 30 (2), e1924
- T Sirkiä, Creating, [Creating, Tailoring, and Distributing Program Animations-Supporting the Production Process of Interactive Learning Content](#), PhD thesis, Aalto University, 2016
- Sirkiä, T. (2016, November). [Combining parson's problems with program visualization in CS1 context](#). In *Proceedings of the 16th Koli Calling International Conference on Computing Education Research* (pp. 155-159). ACM.
- Sirkiä, T., & Sorva, J. (2015, November). [Tailoring animations of example programs](#). In *Proceedings of the 15th Koli Calling Conference on Computing Education Research* (pp. 147-151). ACM.
- Sorva, J., Karavirta, V., & Malmi, L. (2013). [A review of generic program visualization systems for introductory programming education](#). *ACM Transactions on Computing Education (TOCE)*, 13(4), 15.

Interoperability

- Sirkiä, T., & Haaranen, L. (2017). [Improving online learning activity interoperability with acos server](#). *Software: Practice and Experience*, 47(11), 1657-1676.
- Brusilovsky, P., Edwards, S., Kumar, A., Malmi, L., Benotti, L., Buck, D., ... & Urquiza, J. (2014, June). [Increasing adoption of smart learning content for computer science education](#). In *Proceedings of the Working Group Reports of the 2014 on Innovation & Technology in Computer Science Education Conference* (pp. 31-57). ACM.
- Karavirta, V., Ihantola, P., & Koskinen, T. (2013, July). [Service-oriented approach to improve interoperability of e-learning systems](#). In *2013 IEEE 13th International Conference on Advanced Learning Technologies* (pp. 341-345). IEEE.

Austin Cory Bart



Assistant Professor, Department of Computer Science, University of Delaware

Email: acbart@udel.edu, WWW: <https://acbart.com>

Creation of educational software that integrates with LTI. Analysis of student use with these tools and their subsequent performance. Curriculum development using instructional design methods.

Relevant Projects:

- [BlockPy](#): Web-based Python environment that lets you work with blocks, text, or both. Designed for data science, BlockPy scaffolds beginners with immediate feedback. The system integrates with an LMS through LTI technology.
- [CORGIS](#) - Collection of real world datasets for introductory computing classes.
- [Pedal](#) - An architecture for analyzing student code and providing feedback.
- [Curriculum Material Packaging Project](#) - CSSPLICE Working Group that aims to make it easier to build/share/revise/track/etc. learning materials.

Jordan Barria-Pineda

Email: jab464@pitt.edu

PhD student at the School of Computing and Information, University of Pittsburgh

Webpage: <http://pitt.edu/~jab464/>

[Demo paper] Jordan Barria-Pineda, Julio Guerra, Yun Huang, and Peter Brusilovsky. 2017. Concept-Level Knowledge Visualization For Supporting Self-Regulated Learning. In *Proceedings of the 22nd International Conference on Intelligent User Interfaces (IUI '17)*, Limassol, Cyprus, March 2017.

If you want to try our demo versions of our Mastery Grids system, you can:

1) Login to this page:

<http://kt1.exp.sis.pitt.edu/kt>

with the credentials:

Username: adl01

Password: adl01

2) Then select “ADL project sandbox” option

3) Click one of the links and try the different versions of our system!

Monica McGill

mmmcgill@knox.edu

Associate Professor, Dept of CS

<https://csedresearch.org/>

See <https://csedresearch.org/supporting-articles/> for some related (open access) articles. My ICER presentation on Tuesday will also have some future directions/more fun with data.

Chris Proctor



PhD candidate, Learning Sciences and Technology Design
Graduate School of Education
Stanford University

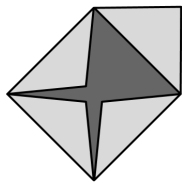
[CV](#) (currently on job market)

cproctor@stanford.edu

<http://chrisproctor.net>

Based on our [ICER '19 paper](#) organizing the theory space of computational thinking, I will be presenting Unfold Studio, a web application for middle- and high-school literacy-based CS

education, and considering how a theoretical stance can guide CS education infrastructure supporting pedagogy and research.



Unfold Studio

Live site: <https://unfold.studio>

Documentation & pedagogy: <http://docs.unfold.studio>

Code: https://github.com/cproctor/unfold_studio

Relevant publications

- Kafai, Y. B., Proctor, C., & Lui, D. (2019). From theory bias to theory dialogue: Embracing cognitive, situated and critical framings of computational thinking for k-12 CS education. *Proceedings of the 2019 ACM Conference on International Computing Education Research*. New York, NY, USA: ACM. ([link](#))
- Proctor, C. (2019). Measuring the computational in computational participation: Debugging interactive stories in middle school computer science. *Proceedings of the 2019 conference on computer support for collaborative learning (CSCL '19)*. International Society of the Learning Sciences. ([link](#))
- Proctor, C., Bigman, M., & Blikstein, P. (2019). Defining and designing computer science education in a k-12 public school district. 7. Minneapolis, MN. ([link](#))
- WProctor, C., & Blikstein, P. (2019). Unfold studio: Supporting critical literacies of text and code. *Information and Learning Science*, 1(2). ([link](#))
- Proctor, C., & Garcia, A. (in press). Hogg, L., & Stockbridge, K. (Eds.). Student voices in the digital hubbub. *The importance of student voice in the classroom*. ([link](#))

Barbara (Barb) Ericson



School of Information, University of Michigan

E-mail: barbarer@umich.edu, WWW: <https://www.si.umich.edu/people/barbara-ericson>

Recent Relevant Publications

- YekkehZaare, I., Resnick, P., & Ericson, B. (2019, July). A Spaced, Interleaved Retrieval Practice Tool that is Motivating and Effective. In *Proceedings of the 2019 ACM Conference on International Computing Education Research* (pp. 71-79). ACM.
- Ericson, B. J., Foley, J. D., & Rick, J. (2018, August). Evaluating the Efficiency and Effectiveness of Adaptive Parsons Problems. In *Proceedings of the 2018 ACM Conference on International Computing Education Research* (pp. 60-68). ACM.

- Ericson, B. J., Rogers, K., Parker, M., Morrison, B., & Guzdial, M. (2016, August). Identifying design principles for CS teacher Ebooks through design-based research. In *Proceedings of the 2016 ACM Conference on International Computing Education Research* (pp. 191-200). ACM.

Jun Zheng

Undergraduate Student, Department of Computer and Mathematical Sciences, University of Toronto Scarborough

Email: jun.zheng@mail.utoronto.ca

Workshop Paper: Jun Zheng and Brian Harrington. 2019. Identity Atheneum: Combining User Management, Analytics and Gamification in a Multi Tool Hub. In Proceedings of the 5th ACM SPLICE Project Workshop in conjunction with ICER2019 (SPLICE '19), August 11, 2019, Toronto Canada

GitHub: <https://github.com/cms-urg>

Nea Pirttinen

Master's Student, Department of Computer Science, University of Helsinki, Finland

email: nea.pirttinen@helsinki.fi

Workshop paper: Nea Pirttinen and Juho Leinonen. 2019. [Integrating CrowdSorcerer: Lessons Learned](#). In *Proceedings of the 5th ACM SPLICE Project Workshop in conjunction with ICER 2019* (SPLICE 2019), August 11, 2019, Toronto, Canada. [\[slides\]](#)

Previous publications on CrowdSorcerer:

- Nea Pirttinen, Vilma Kangas, Irene Nikkarinen, Henrik Nygren, Juho Leinonen, and Arto Hellas. 2018. [Crowdsourcing programming assignments with CrowdSorcerer](#). In *Proceedings of the 23rd Annual ACM Conference on Innovation and Technology in Computer Science Education* (ITiCSE 2018).
- Nea Pirttinen, Vilma Kangas, Henrik Nygren, Juho Leinonen, and Arto Hellas. 2018. [Analysis of Students' Peer Reviews to Crowdsourced Programming Assignments](#). In *Proceedings of the 18th Koli Calling International Conference on Computing Education Research* (Koli Calling '18).
- Vilma Kangas, Nea Pirttinen, Henrik Nygren, Juho Leinonen, and Arto Hellas. 2019. [Does Creating Programming Assignments with Tests Lead to Improved Performance in Writing Unit Tests?](#). In *Proceedings of the ACM Conference on Global Computing Education* (CompEd '19).

GitHub for [CrowdSorcerer](#)

Jeremy Bradbury



Associate Professor, Ontario Tech University, Oshawa, ON, Canada

web: <http://www.jeremybradbury.ca>, <http://www.sqrlab.ca>

email: jeremy.bradbury@uoit.ca

github: <https://github.com/sqrlab>, twitter: [@jeremy_bradbury](https://twitter.com/jeremy_bradbury)

Relevant publications related to educational CS games:

- Michael A. Miljanovic, Jeremy S. Bradbury. [“A Review of Serious Games for Programming.”](#) *Proc. of the 4th Joint Conference on Serious Games (JCSG 2018)*, Darmstadt, Germany, Nov. 7-8, 2018, 12 pp.
- Michael A. Miljanovic, Jeremy S. Bradbury. [“Making Serious Programming Games Adaptive.”](#) *Proc. of the 4th Joint Conference on Serious Games (JCSG 2018)*, Darmstadt, Germany, Nov. 7-8, 2018, 6 pp.
- Michael A. Miljanovic, Jeremy S. Bradbury. [“RoboBUG: A Serious Game for Learning Debugging.”](#) *Proc. of the 13th Annual ACM International Computing Education Research Conference (ICER 2017)*, pages 93-100, Tacoma, WA, USA, Aug. 2017.
- Michael A. Miljanovic, Jeremy S. Bradbury. [“Robot ON!: A Serious Game for Improving Programming Comprehension.”](#) *Proc. of the 5th International Workshop on Games and Software Engineering (GAS 2016)*, pages 33-36, Austin, Texas, USA, May 2016.

Juho Leinonen



PhD student, Department of Computer Science, University of Helsinki, Finland

juho.leinonen@helsinki.fi

[@leinonen_juho](#)

[Google Scholar](#)

Relevant publications

- Juho Leinonen, Leo Leppänen, Petri Ihantola, and Arto Hellas. 2017. “[Comparison of Time Metrics in Programming](#)”. In *Proceedings of the 2017 ACM Conference on International Computing Education Research (ICER '17)*. ACM, New York, NY, USA, 200-208.
- Arto Hellas, Juho Leinonen, and Petri Ihantola. 2017. “[Plagiarism in Take-home Exams: Help-seeking, Collaboration, and Systematic Cheating](#)”. In *Proceedings of the 2017 ACM Conference on Innovation and Technology in Computer Science Education (ITiCSE '17)*. ACM, New York, NY, USA, 238-243.
- Juho Leinonen, Petri Ihantola, and Arto Hellas. 2017. “[Preventing Keystroke Based Identification in Open Data Sets](#)”. In *Proceedings of the Fourth (2017) ACM Conference on Learning @ Scale (L@S '17)*. ACM, New York, NY, USA, 101-109.
- Juho Leinonen, Krista Longi, Arto Klami, and Arto Vihavainen. 2016. “[Automatic Inference of Programming Performance and Experience from Typing Patterns](#)”. In *Proceedings of the 47th ACM Technical Symposium on Computing Science Education (SIGCSE '16)*. ACM, New York, NY, USA, 132-137.
- Krista Longi, Juho Leinonen, Henrik Nygren, Joni Salmi, Arto Klami, and Arto Vihavainen. 2015. “[Identification of programmers from typing patterns](#)”. In *Proceedings of the 15th Koli Calling Conference on Computing Education Research (Koli Calling '15)*. ACM, New York, NY, USA, 60-67.

Andreas Stefik



Associate Professor
Computer Science
University of Nevada, Las Vegas
2016 White House Champion of Change
stefika@gmail.com
@AndreasStefik

Selected Publications:

- Timothy Rafalski, P. Merlin Uesbeck, Cristina Panks-Meloney, Patrick Daleiden, William Allee, Amelia Mcnamara, and Andreas Stefik. 2019. A Randomized Controlled Trial on the Wild Wild West of Scientific Computing with Student Learners. In *Proceedings of the 2019 ACM Conference on International Computing Education Research (ICER '19)*. ACM, New York, NY, USA, 239-247. DOI: <https://doi.org/10.1145/3291279.3339421>
- Computer Science Principles for Teachers of Blind and Visually Impaired Students, Andreas Stefik, Richard Ladner, William Allee, Sean Mealin. SIGCSE 2019
- Uesbeck, M., Stefik A.M. A Randomized Controlled Trial on the Impact of Polyglot Programming in a Database Context. 9th Workshop on Evaluation and Usability of Programming Languages and Tools (PLATEAU 2018). Schloss Dagstuhl--Leibniz-Zentrum fuer Informatik, Volume 67, 2019.
- Andreas Stefik, Stefan Hanenberg, Methodological Irregularities in ProgrammingLanguage Research. IEEE Computer, 2017
- Phillip Merlin Uesbeck, Andreas Stefik, Stefan Hanenberg, Jan Pedersen, and Patrick Daleiden. 2016. An empirical study on the impact of C++ lambdas and programmer experience. In *Proceedings of the 38th International Conference on Software Engineering (ICSE '16)*. ACM, New York, NY, USA, 760-771.
- Andreas Stefik and Susanna Siebert. 2013. An Empirical Investigation into Programming Language Syntax. *ACM Transactions on Computing Education* 13, 4, Article 19 (November 2013), 40 pages.

- Clemens Mayer, Stefan Hanenberg, Romain Robbes, Éric Tanter, and Andreas Stefik. 2012. An empirical study of the influence of static type systems on the usability of undocumented software. SIGPLAN Not. 47, 10 (October 2012), 683-702.

James Fraser



PhD candidate, Computational Science
Graduate School of Computer Science
University of Guelph

Email: jfrase09@uoguelph.ca

IFS: <https://sat.socs.uoguelph.ca/>

GitHub: <https://github.com/ian-james>

CV - <https://www.linkedin.com/in/jamey-fraser-7a48716/>

Slides: [**https://tinyurl.com/yyjltyvj**](https://tinyurl.com/yyjltyvj)

Research Project: IFS: An educational platform for investigating student's course performance and experience. Investigates introductory students programming and writing submissions and their use of formative feedback. Student's interaction and submissions data is collected along with self-assessments, and psychological surveys.