

# Christoph Treude, PhD

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## Research Interests

Empirical Software Engineering, Natural Language Processing, Computer Supported Collaborative Work, Human Computer Interaction, Computer Security, Software Documentation, Social Media

## Experience

**2018 – 2020:** ARC DECRA Fellow, *University of Adelaide, Australia*

**Research Focus:** Automatically Summarising and Measuring Software Development Activity.

**Since 2016:** Senior Lecturer, *University of Adelaide, Australia*

**Research Focus:** Source code and everything else: Enabling full access to software repositories

**2015:** Researcher, *Universidade de São Paulo, Brazil*

**Research Focus:** Automatically generating and summarizing open source project documentation for newcomers.

**2014 – 2015:** Researcher, *Universidade Federal do Rio Grande do Norte, Brazil*

**Research Focus:** Methods, tools and metrics based on Mining Software Repository techniques to evaluate the contributions of software developers and development teams.

**2012 – 2014:** Postdoctoral Researcher, *McGill University, Canada*

**Supervisor:** Dr. Martin Robillard

**Research Focus:** Automated Analysis of Software Documentation and Recommendation Systems for Software Engineering.

**2007 – 2012:** PhD in Computer Science, *University of Victoria, Canada*

**Supervisors:** Dr. Margaret-Anne Storey and Dr. Jens Weber

**Research Focus:** The Role of Social Media Artifacts in Collaborative Software Development.

## Education

**2007 – 2012:** PhD in Computer Science, *University of Victoria, Canada*

**2005 – 2006:** Exchange student, *University of British Columbia, Canada*

**2000 – 2007:** *Diplom* in Computer Science/Management Information Systems, *Universität Siegen, Germany*

## Publications

2018

M. Aniche, **C. Treude**, I. Steinmacher, I. Wiese, G. H. L. Pinto, M.-A. Storey, and M. A. Gerosa. How Modern News Aggregators Help Development Communities Shape and Share Knowledge. In *ICSE '18: Proceedings of the 40th International Conference on Software Engineering*, 2018. To appear.  
**(Acceptance rate 21%)**

S. Baltes, L. Dumani, **C. Treude**, and S. Diehl. SOTorrent: Reconstructing and Analyzing the Evolution of Stack Overflow Posts. In *MSR '18: Proceedings of the 15th International Conference on Mining Software Repositories*, 2018. To appear.  
**(Acceptance rate 33%)**

I. Steinmacher, **C. Treude**, and M. A. Gerosa. Let me in: Guidelines for the Successful Onboarding of Newcomers to Open Source Projects. In *IEEE Software*, 2018. To appear.

M. Zahedi, M. Ali Babar, and **C. Treude**. An Empirical Study of Security Issues Posted in Open Source Projects. In *HICSS '18: Proceedings of the 51st Hawaii International Conference on System Sciences*, 2018. To appear.

**C. Treude** and M. Aniche. Where does Google find API documentation? In *WAPI' 18: Proceedings of the 2nd International Workshop on API Usage and Evolution*, 2018. To appear.

2017

M. Aniche, G. Bavota, **C. Treude**, M. A. Gerosa, and A. van Deursen. Code Smells for Model-View-Controller Architectures. In *Empirical Software Engineering*, 2017. To appear.

D. A. da Costa, S. McIntosh, **C. Treude**, U. Kulesza, and A. E. Hassan. The Impact of Rapid Release Cycles on the Integration Delay of Fixed Issues. In *Empirical Software Engineering*, 2017. To appear.

R. Coelho, L. Almeida, G. Gousios, A. van Deursen, and **C. Treude**. Exception Handling Bug Hazards in Android: Results from a Mining Study and an Exploratory Survey. In *Empirical Software Engineering* 22, 3, pages 1264-1304, 2017.

I. S. Wiese, R. Ré, I. Steinmacher, R. T. Kuroda, G. Oliva, **C. Treude**, and M. A. Gerosa. Using contextual information to predict co-changes. In *Journal of Systems and Software* 128 (June 2017), pages 220-235, 2017.

F. N. A. Al Omran and **C. Treude**. Choosing an NLP Library for Analyzing Software Documentation: A Systematic Literature Review and a Series of Experiments. In *MSR '17: Proceedings of the 14th International Conference on Mining Software Repositories*, pages 187-197, 2017.  
**(Acceptance rate 31%)**

**C. Treude** and M. P. Robillard. Understanding Stack Overflow Code Fragments. In *ICSME '17: Proceedings of the 33rd International Conference on Software Maintenance and Evolution, NIER Track*, 2017. To appear.  
**(Acceptance rate 58%)**

M. P. Robillard, A. Marcus, **C. Treude**, G. Bavota, O. Chaparro, N. Ernst, M. A. Gerosa, M. Godfrey, M. Lanza, M. Linares-Vásquez, G. Murphy, L. Moreno, D. Shepherd, and E. Wong. On-Demand Developer Documentation. In *ICSME '17: Proceedings of the 33rd International Conference on Software Maintenance and Evolution, NIER Track*, 2017. To appear.  
**(Acceptance rate 58%)**

B. A. Campbell and C. Treude. NLP2Code: Code Snippet Content Assist via Natural Language Tasks. In *ICSME '17: Proceedings of the 33rd International Conference on Software Maintenance and Evolution, Demo Track*, 2017. To appear.  
**(Acceptance rate 50%)**

F. Steffens, S. Marczak, F. Figueira Filho, C. Treude, and C. de Souza. A Preliminary Evaluation of a Gamification Framework to Jump Start Collaboration Behavior Change. In *CHASE '17: Proceedings of the 10th International Workshop on Cooperative and Human Aspects of Software Engineering*, pages 90-91, 2017.

L. Silva, F. Pinto, U. Kulesza, and C. Treude. PerfMiner Visualizer: uma ferramenta para análise da evolução do atributo de qualidade de desempenho em sistemas de software. In *SBES '17: Proceedings of the 31st Brazilian Symposium on Software Engineering*, 2017. To appear.

## 2016

C. Treude and M. P. Robillard. Augmenting API Documentation with Insights from Stack Overflow. In *ICSE '16: Proceedings of the 38th International Conference on Software Engineering*, pages 392-403, 2016.  
**(Acceptance rate 19%)**

I. Steinmacher, T. U. Conte, C. Treude, and M. A. Gerosa. Overcoming Open Source Project Entry Barriers with a Portal for Newcomers. In *ICSE '16: Proceedings of the 38th International Conference on Software Engineering*, pages 273-284, 2016.  
**(Acceptance rate 19%)**

C. de Souza, F. Figueira Filho, M. Miranda, R. Ferreira, C. Treude, and L. Singer. The Social Side of Software Platform Ecosystems. In *CHI '16: Proceedings of the 34th Annual ACM Conference on Human Factors in Computing Systems*, 2016, pages 3204-3214.  
**(Acceptance rate 23%)**

M. Aniche, G. Bavota, C. Treude, A. van Deursen, and M. A. Gerosa. A Validated Set of Smells in Model-View-Controller Architectures. In *ICSME '16: Proceedings of the 32nd International Conference on Software Maintenance and Evolution*, pages 233-243, 2016  
**(Acceptance rate 29%)**

I. S. Wiese, I. Steinmacher, C. Treude, J. T. Da Silva, and M. A. Gerosa. Who is who in the mailing list? Comparing six disambiguation heuristics to identify multiple addresses of a participant. In *ICSME '16: Proceedings of the 32nd International Conference on Software Maintenance and Evolution*, pages 345-355, 2016.  
**(Acceptance rate 29%)**

M. Aniche, C. Treude, A. Zaidman, A. van Deursen, and M. A. Gerosa. SATT: Tailoring Code Metric Thresholds for Different Software Architectures. In *SCAM '16: Proceedings of the 16th International Working Conference on Source Code Analysis and Manipulation*, pages 41-50, 2016.  
**(Acceptance rate 38%)**

M. Aniche, M. A. Gerosa, and C. Treude. Developers' Perceptions on Object-Oriented Design and Architectural Roles. In *SBES '16: Proceedings of the 30th Brazilian Symposium on Software Engineering*, pages 63-72, 2016.

## 2015

C. Treude, M. P. Robillard, and B. Dagenais. Extracting Development Tasks to Navigate Software Documentation. In *IEEE Transactions on Software Engineering* 41, 6 (June 2015), pages 565-581, 2015.

C. Treude, F. Figueira Filho, and U. Kulesza. Summarizing and Measuring Development Activity. In *ESEC/FSE '15: Proceedings of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering*, pages 625-636, 2015.

(Acceptance rate 25%)

F. Figueira Filho, M. G. Perin, C. Treude, S. Marczak, L. Melo, I. Marques da Silva, and L. Bibiano dos Santos. A study on the geographical distribution of Brazil's prestigious software developers. In *Journal of Internet Services and Applications* 6, 17 (June 2015), pages 1-12, 2015.

F. Pinto, U. Kulesza, and C. Treude. Automating the Performance Deviation Analysis for Multiple System Releases: an Evolutionary Study. In *SCAM '15: Proceedings of the 15th International Working Conference on Source Code Analysis and Manipulation*, pages 201-210, 2015.

(Acceptance rate 35%)

R. Ferreira, M. Miranda, F. Figueira Filho, C. de Souza, C. Treude, and L. Singer. Os Aspectos Sociais dos Ecossistemas de Software. In *SBSC '15: Proceedings of the Brazilian Symposium in Collaborative Systems*, pages 9-16, 2015.

(Best Paper)

F. Steffens, S. Marczak, F. Figueira Filho, C. Treude, L. Singer, D. Redmiles, and B. Al-Ani. Using Gamification as a Collaboration Motivator for Software Development Teams: A Preliminary Framework. In *SBSC '15: Proceedings of the Brazilian Symposium in Collaborative Systems*, pages 48-55, 2015.

J. Lima, C. Treude, F. Figueira Filho, and U. Kulesza. Assessing Developer Contribution with Repository Mining-based Metrics. In *ICSME '15: Proceedings of the 31st International Conference on Software Maintenance and Evolution*, pages 536-540, 2015.

(Acceptance rate 35%)

L. Leite, C. Treude, and F. Figueira Filho. UEDashboard: Awareness of Unusual Events in Commit Histories. In *ESEC/FSE '15: Proceedings of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering*, pages 978-981, 2015.

C. Treude, C. Prolo, and F. Figueira Filho. Challenges in Analyzing Software Documentation in Portuguese. In *SBES '15: Proceedings of the 29th Brazilian Symposium on Software Engineering*, pages 179-184, 2015.

C. Treude, M. Sicard, M. Klocke, and M. P. Robillard. TaskNav: Task-based Navigation of Software Documentation. In *ICSE '15: Proceedings of the 37th International Conference on Software Engineering*, pages 649-652, 2015.

(Acceptance rate 60%)

S. Marczak, F. Figueira Filho, L. Singer, C. Treude, F. Steffens, D. Redmiles, and B. Al-Ani. Studying Gamification as a Collaboration Motivator for Virtual Software Teams: Social Issues, Cultural Issues, and Research Methods. In *Proceedings of the CSCW 2015 workshop on Doing CSCW Research in Latin America: Differences, Opportunities, Challenges, and Lessons Learned*, 2015.

L. Leite, C. Treude, and F. Figueira Filho. An Automatic Approach to Detect Unusual Events in Software Repositories. In *ELA-ES '15: Proceedings of the 2nd Latin-American School on Software Engineering*, 2015.

## 2013

L. Singer, F. Figueira Filho, B. Cleary, C. Treude, M.-A. Storey, and K. Schneider. Mutual Assessment in the Social Programmer Ecosystem: An Empirical Investigation of Developer Profile Aggregators. In *CSCW '13: Proceedings of the Conference on Computer Supported Cooperative Work*, pages 103-116, 2013.

(Acceptance rate 36%; nominated for Best Paper)

C. Parnin, **C. Treude**, and M.-A. Storey. Blogging Developer Knowledge: Motivations, Challenges and Future Directions. In *ICPC '13: Proceedings of the 21st International Conference on Program Comprehension*, pages 211-214, 2013.

**(Acceptance rate 36%; Most Promising Idea Award)**

B. Cleary, M.-A. Storey, C. Gomez, L. Singer, and **C. Treude**. Analyzing the Friendliness of Exchanges in an Online Software Developer Community. In *CHASE '13: Proceedings of 6th International Workshop on Cooperative and Human Aspects of Software Engineering*, pages 159-160, 2013.

B. Cleary, **C. Treude**, F. Figueira Filho, M.-A. Storey, and M. Salois. Improving Tool Support for Software Reverse Engineering in a Security Context. In *Foundations of Augmented Cognition, Lecture Notes in Computer Science, D. D. Schmorow and C. M. Fidopiastis, Eds.*, pages 113-122, 2013.

O. Barzilay, **C. Treude**, and A. Zagalsky. Facilitating Crowd Sourced Software Engineering via Stack Overflow. In *Finding Source Code on the Web for Remix and Reuse, S. E. Sim and R. Gallardo-Valencia, Eds.*, pages 289-308, 2013.

## 2012

**C. Treude** and M.-A. Storey. Work Item Tagging: Communicating Concerns in Collaborative Software Development. In *IEEE Transactions on Software Engineering* 38, 1 (January/February 2012), pages 19-34, 2012.

**(Special Section on Selected Papers from ICSE '09)**

**C. Treude**, P. Gorman, L. Grammel, and M.-A. Storey. WorkItemExplorer: Visualizing Software Development Tasks Using an Interactive Exploration Environment. In *ICSE '12: Proceedings of the 34th International Conference on Software Engineering*, pages 1399-1402, 2012.

**(Acceptance rate 31%)**

**C. Treude**, F. Figueira Filho, B. Cleary, and M.-A. Storey. Programming in a Socially Networked World: the Evolution of the Social Programmer. In *FutureCSD '12: Proceedings of the CSCW Workshop on the Future of Collaborative Software Development*, 2012.

**C. Treude**. The Role of Social Media Artifacts in Collaborative Software Development. *PhD thesis, University of Victoria*, 2012.

C. Parnin, **C. Treude**, L. Grammel, and M.-A. Storey. Crowd Documentation: Exploring the Coverage and the Dynamics of API Discussions on Stack Overflow. *Georgia Tech Technical Report GIT-CS-12-05, Georgia Institute of Technology*, 2012.

## 2011

**C. Treude** and M.-A. Storey. Effective Communication of Software Development Knowledge Through Community Portals. In *ESEC/FSE '11: Proceedings of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering*, pages 91-101, 2011.

**(Acceptance rate 17%)**

**C. Treude**, F. Figueira Filho, M.-A. Storey, and M. Salois. An Exploratory Study of Software Reverse Engineering in a Security Context. In *WCRE '11: Proceedings of the 18th Working Conference on Reverse Engineering*, pages 184-188, 2011.

**(Acceptance rate 48%)**

**C. Treude**, O. Barzilay, and M.-A. Storey. How do Programmers Ask and Answer Questions on the Web? (NIER Track). In *ICSE '11: Proceedings of the 33rd ACM/IEEE International Conference on Software Engineering*, pages 804-807, 2011.  
(Acceptance rate 23%)

C. Parnin and **C. Treude**. Measuring API Documentation on the Web. In *Web2SE '11: Proceedings of the 2nd International Workshop on Web 2.0 For Software Engineering*, pages 25-30, 2011.

**C. Treude**, M.-A. Storey, A. van Deursen, A. Begel, and S. Black. Second International Workshop on Web 2.0 for Software Engineering (Web2SE 2011). In *ICSE '11: Proceedings of the 33rd ACM/IEEE International Conference on Software Engineering*, pages 1222-1223, 2011.

**C. Treude**, M.-A. Storey, A. van Deursen, A. Begel, and S. Black. Workshop Report from Web2SE 2011: 2nd International Workshop on Web 2.0 for Software Engineering. In *SIGSOFT Software Engineering Notes* 36, 5 (September 2011), pages 24-29, 2011.

## 2010

**C. Treude** and M.-A. Storey. Awareness 2.0: Staying Aware of Projects, Developers and Tasks using Dashboards and Feeds. In *ICSE '10: Proceedings of the 32nd ACM/IEEE International Conference on Software Engineering – Volume 1*, pages 365-374, 2010.  
(Acceptance rate 14%)

**C. Treude** and M.-A. Storey. Bridging Lightweight and Heavyweight Task Organization: The Role of Tags in Adopting New Task Categories. In *ICSE '10: Proceedings of the 32nd ACM/IEEE International Conference on Software Engineering – Volume 2*, pages 231-234, 2010.  
(Acceptance rate 25%)

G. Bougie, **C. Treude**, D. M. German, and M.-A. Storey. A Comparative Exploration of FreeBSD Bug Lifetimes. In *MSR '10: Proceedings of the 2010 International Working Conference on Mining Software Repositories*, pages 106-109, 2010.

M.-A. Storey, **C. Treude**, A. van Deursen, and L.-T. Cheng. The Impact of Social Media on Software Engineering Practices and Tools. In *FoSER '10: Proceedings of the FSE/SDP workshop on Future of software engineering research*, pages 359-364, 2010.

L. Grammel, H. Schackmann, A. Schröter, **C. Treude** and M.-A. Storey. Attracting the Community's Many Eyes: an Exploration of User Involvement in Issue Tracking. In *HAoSE' 10: Human Aspects of Software Engineering*, Article 3, 2010.

**C. Treude** and M.-A. Storey. The Implications of How We Tag Software Artifacts: Exploring Different Schemata and Metadata for Tags. In *Web2SE '10: Proceedings of the 1st Workshop on Web 2.0 For Software Engineering*, pages 12-13, 2010.

L. Grammel, **C. Treude**, and M.-A. Storey. Mashups Environments in Software Engineering. In *Web2SE '10: Proceedings of the 1st Workshop on Web 2.0 For Software Engineering*, pages 24-25, 2010.

M.-A. Storey, L. Grammel, and **C. Treude**. Smart Media: Bridging Interactions and Services for the Smart Internet. In *The Smart Internet, Lecture Notes in Computer Science*, M. Chignell, J. Cordy, J. Ng, and Y. Yesha, Eds., pages 152-169, 2010.

**C. Treude**. The Role of Emergent Knowledge Structures in Collaborative Software Development. In *ICSE '10: Proceedings of the 32nd ACM/IEEE International Conference on Software Engineering – Volume 2*, pages 389-392, 2010.

**C. Treude**, M.-A. Storey, K. Ehrlich, and A. van Deursen. Web2SE: First Workshop on Web 2.0 for Software Engineering. In *ICSE '10: Proceedings of the 32nd ACM/IEEE International Conference on Software Engineering – Volume 2*, pages 457-458, 2010.

**C. Treude**, M.-A. Storey, K. Ehrlich, and A. van Deursen. Workshop report from Web2SE: First workshop on Web 2.0 for Software Engineering. In *SIGSOFT Software Engineering Notes 35, 5 (October 2010)*, pages 45-50, 2010.

## 2009

**C. Treude** and M.-A. Storey. How tagging helps bridge the gap between social and technical aspects in software development. In *ICSE '09: Proceedings of the 2009 IEEE 31st International Conference on Software Engineering*, pages 12-22, 2009.

**(Acceptance rate 12%; invited to TSE Special Section on Selected Papers from ICSE '09)**

**C. Treude** and M.-A. Storey. ConcernLines: A timeline view of co-occurring concerns. In *ICSE '09: Proceedings of the 2009 IEEE 31st International Conference on Software Engineering*, pages 575-578, 2009.

**(Acceptance rate 33%)**

L. Grammel, M.-A. Storey, and **C. Treude**. User interfaces for visual analysis and monitoring in business intelligence. In *CASCON '09: Proceedings of the 2009 Conference of the Center for Advanced Studies on Collaborative Research*, pages 323-324, 2009.

**C. Treude**, M.-A. Storey, and J. Weber. Empirical Studies on Collaboration in Software Development: A Systematic Literature Review. *Technical Report DCS-331-IR, Department of Computer Science, University of Victoria*, 2009.

## 2007

**C. Treude**, S. Berlik, S. Wenzel, and U. Kelter. Difference computation of large models. In *ESEC/FSE '07: Proceedings of the 6th Joint Meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering*, pages 295-304, 2007.

**(Acceptance rate 17%)**

**C. Treude**. Einsatz multidimensionaler Suchstrukturen zur Optimierung der Bestimmung von Dokumentendifferenzen. *Diplom thesis, Universität Siegen*, 2007.  
(in German)

## Presentations

### Keynote Addresses

How Do Social Media Artifacts Support Collaborative Software Development? Empirical Studies from the University of Victoria  
September 5, 2011, 4th International Workshop on Social Software Engineering, Szeged, Hungary

### Invited Talks

Unlocking the information hidden in software repositories with NLP and ML  
February 2, 2018, Tokyo Institute of Technology, Tokyo, Japan

Using NLP and ML to unlock information hidden in software repositories  
February 2, 2018, Waseda University, Tokyo, Japan

Bridging the gap between software documentation authors and consumers  
*January 29, 2018, Kyushu University, Fukuoka, Japan*

Unlocking information hidden in software repositories  
*January 17, 2018, Osaka University, Osaka, Japan*

Enabling full access to the information in software repositories  
*December 18, 2017, Nara Institute of Science and Technology, Nara, Japan*

Bimodal Software Documentation  
*October 31, 2017, The 55th CREST Open Workshop - Bimodal Program Analysis, London, United Kingdom*

Unlocking the insights hidden in software documentation  
*October 18, 2017, Monash University, Melbourne, Australia*

Using Natural Language Processing to Enhance Software Documentation  
*July 10, 2017, Harbin Institute of Technology, Harbin, China*

Code Snippet Content Assist via Software Development Tasks  
*July 7, 2017, Harbin Institute of Technology, Harbin, China*

Supporting Newcomers to Software Projects  
*July 6, 2017, Harbin Institute of Technology, Harbin, China*

Building Tools to Improve Access to Software Documentation  
*June 19, 2017, Singapore Management University, Singapore*

“Stop trying to do what you’re trying to do”: Developers’ Perceptions of Measuring Productivity  
*March 6, 2017, Dagstuhl Seminar on Rethinking Productivity in Software Engineering, Dagstuhl, Germany*

Searching and summarizing software documentation  
*February 7, 2017, Northern Arizona University, Flagstaff, AZ, United States*

Improving access to software documentation  
*January 18, 2017, Data61, Sydney, NSW, Australia*

Finding and navigating software documentation  
*June 14, 2016, MapTek, Adelaide, SA, Australia*

Making sense of software documentation with natural language processing  
*April 18, 2016, Hong Kong University of Science and Technology, Hong Kong, China*

Using natural language processing to make sense of software documentation  
*April 4, 2016, Deakin University, Melbourne, Australia*

Using NLP to identify meaningful sentences in informal documentation  
*March 7, 2016, NII Shonan Meeting on Mining & Modeling Unstructured Data in Software – Challenges for the Future, Shonan, Japan*

TaskNav: A Search Interface for Software Documentation Using Natural Language Processing  
*December 3, 2015, Fluminense Federal University, Niterói, RJ, Brazil*

Searching Software Documentation with the Help of Natural Language Processing  
*November 12, 2015, Bluesoft, São Paulo, SP, Brazil*

Source code and everything else: Enabling full access to software repositories  
*October 13, 2015, University of Adelaide, SA, Australia*



Using Natural Language Processing to Extract Task Descriptions from Software Documentation  
*September 17, 2015, Concordia University, Montreal, QC, Canada*

Supporting Software Developers by Automatically Extracting Development Task Descriptions  
*February 27, 2015, Universidade de São Paulo, SP, Brazil*

The Role of Social Media Artifacts in Collaborative Software Development  
*April 9, 2012, University of Massachusetts Amherst, MA, United States*

The Role of Social Media Artifacts in Collaborative Software Development  
*February 27, 2012, The College of William and Mary, Williamsburg, VA, United States*

The Role of Social Media Artifacts in Collaborative Software Development  
*February 25, 2012, Rochester Institute of Technology, Rochester, NY, United States*

Awareness 2.0: Staying Aware of Projects, Developers and Tasks using Dashboards and Feeds  
*September 1, 2010, IBM Research, Hawthorne, NY, United States*

Lightweight Collaboration: Tags, Dashboards and Feeds in IBM's Jazz  
*March 22, 2010, University of California, Irvine, CA, United States*

Dashboards in IBM's Jazz: Business Intelligence for Software Development  
*November 4, 2009, IBM CASCON Workshop on User Interfaces for Visual Analysis and Monitoring in Business Intelligence, Toronto, ON, Canada*

Lightweight Collaboration: Tags, Dashboards & Feeds in Jazz  
*August 20, 2009, McGill University, Montreal, QC, Canada*

How Tagging Supports Informal Processes in Software Development  
*Aug 3, 2009, Department of National Defense, Valcartier, QC, Canada*

Tags for Work Items and Dashboards in IBM's Jazz  
*July 3, 2009, IBM Cognos, Ottawa, ON, Canada*

How Tagging Supports Informal Processes in Software Development  
*June 25, 2009, IBM Research, Hawthorne, NY, United States*

How Tagging Supports Informal Processes in Software Development  
*June 22, 2009, IBM Research, Cambridge, MA, United States*

### *Presentations at Seminars and Meetings*

How We Do Research: the Graduate Students' View  
*November 17, 2011, Graduate Student Seminar, University of Victoria, BC, Canada*

Work Item Explorer: Exploring Jazz work items using an interactive visualization  
(with Patrick Gorman, Bradley Blashko, Lars Grammel, and Margaret-Anne Storey)  
*October 31, 2010, Consortium for Software Engineering Research (CSER) Fall Meeting, Toronto, ON, Canada*

Awareness 2.0: Staying Aware of Projects, Developers and Tasks using Dashboards and Feeds in Jazz  
*June 29, 2010, IBM CAS Seminar, IBM Ottawa, ON, Canada*

Lightweight Collaboration: Tags, Dashboards & Feeds in Jazz  
*October 28, 2009, IBM CAS Seminar, IBM Ottawa, ON, Canada*

Tagging in Jazz & the Visibility of Collaboration in Software Development  
*June 4, 2009, IBM CAS Seminar, IBM Ottawa, ON, Canada*

Team Work in Software Evolution: A Systematic Literature Review

*April 27, 2009, Consortium for Software Engineering Research (CSER) Spring Meeting, Montreal, QC, Canada*

How Tagging helps bridge the Gap between Social and Technical Aspects in Software Development

*March 27, 2009, Software Engineering Colloquium, University of Victoria, BC, Canada*

Research on collaborative software development using IBM's Jazz

*October 26, 2008, Consortium for Software Engineering Research (CSER) Fall Meeting, Toronto, ON, Canada*

Collaboration through Artifacts

*June 12, 2008, IBM CAS Seminar, IBM Ottawa, ON, Canada*

Difference Computation of Large Models

*November 23, 2007, Software Engineering Colloquium, University of Victoria, BC, Canada*

Difference Computation of Large Models

*October 4, 2007, IBM CAS Seminar, IBM Ottawa, ON, Canada*

## *Posters and Exhibits*

Visualizing software development tasks using multiple coordinated views

(with Patrick Gorman, Lars Grammel, and Margaret-Anne Storey)

*November 7-10, 2011, IBM CASCON 2011, Toronto, ON, Canada*

Work Item Explorer: Exploring Jazz work items using an interactive visualization

(with Patrick Gorman, Bradley Blashko, Lars Grammel, and Margaret-Anne Storey)

*November 1-4, 2010, IBM CASCON 2010, Toronto, ON, Canada*

Dashboards in IBM's Jazz: Business Intelligence for Software Development

*November 2-5, 2009, IBM CASCON 2009, Toronto, ON, Canada*

Dashboards in IBM's Jazz: Business Intelligence for Software Development

*November 1, 2009, Consortium for Software Engineering Research (CSER) Fall Meeting, Toronto, ON, Canada*

How Tagging Supports Informal Processes in Software Development

*May 19, 2009, IBM Jazz Research Reception at the International Conference on Software Engineering (ICSE), Vancouver, BC, Canada*

Tag Clouds for Semi-Structured Documents (with Maria-Elena Hernandez and Sean Falconer)

*October 27-30, 2008, IBM CASCON 2008, Toronto, ON, Canada*

How Tagging Supports Informal Processes in Software Development

*October 26, 2008, Consortium for Software Engineering Research (CSER) Fall Meeting, Toronto, ON, Canada*

## Teaching

### *Supervised Students*

**PhD:** Mahfouth Ahmad Alghamdi

Summarising Software Engineering Data

(Co-supervised with Markus Wagner)

*October 2017 – , University of Adelaide, Australia*

**PhD:** Bakheet Hamdan M Aljedaani

A Knowledge-based Approach to the Development of Secure Software for IoT-based Healthcare

(Co-supervised with M. Ali Babar)

*September 2016 – , University of Adelaide, Australia***MSc degree:** Alantiel Freire Marins

Summarizing and Measuring Development Activity

(Co-supervised with Marco A. Gerosa)

*Started August 2015, Universidade de São Paulo, Brazil***Bachelor's thesis:** Larissa Leite

An Automatic Approach to Detect and Notify Development Teams of Unusual Events in Software Repositories

(Co-supervised with Fernando Figueira Filho)

*January 2015 – April 2015, Universidade Federal do Rio Grande do Norte, Brazil***Undergraduate Co-op Software Developer:** Marc Klocke

TaskNav: Web Platform for Documentation Analysis

(Co-supervised with Martin Robillard)

*May 2014 – August 2014, McGill University, Canada***Undergraduate Co-op Software Developer:** Mathieu Sicard

TaskNav: Web Platform for Documentation Analysis

(Co-supervised with Martin Robillard)

*May 2014 – August 2014, McGill University, Canada***Undergraduate Research Project:** Ben Fisher

Interface and API Design for Documentation Analysis

(Co-supervised with Martin Robillard)

*January 2014 – April 2014, McGill University, Canada***Undergraduate Co-op Software Developer:** Mathieu Nassif

Infrastructure for API Documentation Analysis

(Co-supervised with Martin Robillard)

*May 2013 – August 2013 and May 2014 – August 2014, McGill University, Canada***Undergraduate Co-op Software Developer:** Joshua Liben

Infrastructure for API Documentation Analysis

(Co-supervised with Martin Robillard)

*May 2013 – August 2013, McGill University, Canada***Part-time programmer:** Thor Kell

Development of a workflow support prototype for reverse engineers in a security context

(Co-supervised with Brendan Cleary and Margaret-Anne Storey)

*January 2012 – April 2012, University of Victoria, Canada***Undergraduate Co-op Software Developer:** Patrick Gorman

Development of WorkItemExplorer, an interactive environment to visually explore issue tracking data

(Co-supervised with Lars Grammel and Margaret-Anne Storey)

*May 2010 – August 2010 and May 2011 – August 2011, University of Victoria, Canada***Honours thesis:** Patrick Gorman

Evaluation of WorkItemExplorer through user studies with professional software developers

(Co-supervised with Margaret-Anne Storey)

*September 2011 – December 2011, University of Victoria, Canada*

### *Instructor*

**Mining Software Repositories** (*Undergraduate and Graduate course, co-taught with Fernando Figueira Filho and Uirá Kulesza*)

*February 2015 – June 2015, Universidade Federal do Rio Grande do Norte, Brazil*

**Programmierpraktikum** (*programming course in Java, taught in German*)

*April 2007 – July 2007, Universität Siegen, Germany*

### *Teaching Seminars Taken*

**EDCI 560:** Teaching and Learning in Higher Education

*January 2009 – April 2009, University of Victoria, Canada*

### *Teaching Assistant*

**SENG 435/CSC 485A/CSC 578A:** Computer-Supported Collaborative Work

*September 2009 – December 2009, University of Victoria, Canada*

**SENG 371:** Software Evolution

*September 2008 – December 2008, University of Victoria, Canada*

**CSC 105:** Computers and Information Processing

*September 2007 – December 2007, University of Victoria, Canada*

**Softwaretechnik I / Datenbanksysteme I** (*courses on Software Engineering and Database Systems, taught in German*)

*October 2003 – March 2004, Universität Siegen, Germany*

**Programmierpraktikum** (*programming course in Java, taught in German*)

*April 2003 – September 2003 and April 2004 – March 2005, Universität Siegen, Germany*

## Activities

### *Service to the Community*

**Empirical Software Engineering:** Editorial Board member

**IEEE Software Blog:** Associate Editor (Human Factors)

**ICSE 2016:** Publicity Team

**ICSE 2014:** Publicity Chair

**UVic SE Colloquium:** Co-organizer of Software Engineering Colloquium at University of Victoria, 2007–2009

### *Workshop Organization*

**SSE 2016:** 8th International Workshop on Social Software Engineering at the Symposium on the Foundations of Software Engineering (FSE) 2016

*with Fabio Calefato and Andrew Begel*

**QualiDASE 2015:** Bellairs 2015 Workshop on Qualitative Data Analysis in Software Engineering at McGill University's Bellairs Research Institute  
*with Martin Robillard*

**ProK 2014:** Bellairs 2014 Workshop on Representing Programming Knowledge at McGill University's Bellairs Research Institute  
*with Martin Robillard*

**Web2SE 2011:** 2nd International Workshop on Web 2.0 for Software Engineering at the International Conference on Software Engineering (ICSE) 2011  
*with Margaret-Anne Storey, Arie van Deursen, Andrew Begel, and Sue Black*

**Web2SE 2010:** First Workshop on Web 2.0 for Software Engineering at the International Conference on Software Engineering (ICSE) 2010  
*with Margaret-Anne Storey, Arie van Deursen, and Kate Ehrlich*

**User Interfaces for Visual Analysis and Monitoring in Business Intelligence** at IBM CASCON 2009  
*with Lars Grammel and Margaret-Anne Storey*

### *Program Committee Memberships*

**ICSE 2019:** 41st International Conference on Software Engineering

**FSE 2018:** ACM SIGSOFT Symposium on the Foundations of Software Engineering

**SANER 2018:** 25th International Conference on Software Analysis, Evolution and Reengineering

**MSR 2018:** 15th International Conference on Mining Software Repositories

**SBES 2018:** 32nd Brazilian Symposium on Software Engineering

**CSCW 2018:** 21st Conference on Computer-Supported Cooperative Work and Social Computing (External Reviewer)

**SCORE 2018:** Student Contest on Software Engineering @ ICSE 2018

**ICSE 2018 SRC:** Student Research Competition of the 40th International Conference on Software Engineering

**WAPI 2018:** 2nd International Workshop on API Usage and Evolution @ ICSE 2018

**ICSE 2017:** 39th International Conference on Software Engineering

**ICSME 2017:** 33rd International Conference on Software Maintenance and Evolution

**SANER 2017:** 24th International Conference on Software Analysis, Evolution, and Reengineering

**ICGSE 2017:** 12th International Conference on Global Software Engineering

**SCAM 2017:** 17th International Working Conference on Source Code Analysis and Manipulation

**SBES 2017:** 31st Brazilian Symposium on Software Engineering

**ICSE 2017 SRC:** Student Research Competition of the 39th International Conference on Software Engineering

**ICSME NIER 2017:** New Ideas track of the 33rd International Conference on Software Maintenance and Evolution

**ISEC 2017:** 10th India Software Engineering Conference

**EAST 2017:** 4th International Workshop on Evidential Assessment of Software Technologies

**CHI 2017:** International Conference of Human-Computer Interaction (External Reviewer, recognized as Excellent Reviewer)

**CSCW 2017:** 20th Conference on Computer-Supported Cooperative Work and Social Computing (External Reviewer)

**SCAM 2016:** 16th International Working Conference on Source Code Analysis and Manipulation

**MSR 2016:** 13th Working Conference on Mining Software Repositories

**SBCARS 2016:** 10th Brazilian Symposium on Software Components, Architectures, and Reuse

**ICGSE 2016:** 11th International Conference on Global Software Engineering

**ICSME ERA 2016:** Early Research Achievements track of the 32nd International Conference on Software Maintenance and Evolution

**FSE 2016 Artifacts Track:** Artifacts track of the 24th International Symposium on the Foundations of Software Engineering

**ICSME 2016 Artifacts Track:** Artifacts track of the 32nd International Conference on Software Maintenance and Evolution

**SANER ERA 2016:** Early Research Achievements track of the 23rd International Conference on Software Analysis, Evolution, and Reengineering

**CSI-SE 2016:** 3rd International Workshop on CrowdSourcing in Software Engineering @ ICSE 2016

**CHASE 2016:** 9th International Workshop on Cooperative and Human Aspects of Software Engineering @ ICSE 2016

**WASHES 2016:** 1st Workshop on Social, Human, and Economic Aspects of Software @ SBQS 2016

**SSE 2015:** 7th International Workshop on Social Software Engineering @ FSE 2015

**OISE 2015:** First Workshop of Open Innovation in Software Engineering

**STIL 2015:** Symposium in Information and Human Language Technology

**ICSME ERA 2015:** Early Research Achievements track of the 31st International Conference on Software Maintenance and Evolution

**SBCARS 2015:** 9th Brazilian Symposium on Software Components, Architectures and Reuse @ CBSOFT 2015

**CHI 2015:** International Conference of Human-Computer Interaction (External Reviewer)

**CSI-SE 2015:** 2nd International Workshop on CrowdSourcing in Software Engineering @ ICSE 2015

**CHASE 2015:** Cooperative and Human Aspects of Software Engineering @ ICSE 2015

**MSR Mining Challenge 2015:** Mining Challenge of the 12th Working Conference on Mining Software Repositories

**MSR 2015:** 12th Working Conference on Mining Software Repositories

**SANER ERA 2015:** Early Research Achievements track of the 22nd IEEE International Conference on Software Analysis, Evolution, and Reengineering

**ICSME 2015:** 31st International Conference on Software Maintenance and Evolution

**SSE 2014:** 6th International Workshop on Social Software Engineering @ FSE 2014

**ICSME ERA 2014:** Early Research Achievements track of the 30th International Conference on Software Maintenance and Evolution

**CSI-SE 2014:** Crowdsourcing in Software Engineering @ ICSE 2014

**CHASE 2014:** Cooperative and Human Aspects of Software Engineering @ ICSE 2014

**MSR 2014:** 11th Working Conference on Mining Software Repositories

**MSR Mining Challenge 2014:** Mining Challenge of the 11th Working Conference on Mining Software Repositories

**CSMR-WCRE Demo 2014:** Tool Demonstrations track of the CSMR-WCRE 2014 Software Evolution Week

**CSMR-WCRE ERA 2014:** Early Research Achievements track of the CSMR-WCRE 2014 Software Evolution Week

**ICSE Posters 2014:** Poster track @ ICSE 2014

**SSE 2013:** 5th International Workshop on Social Software Engineering @ ESEC/FSE 2013

**ICPC ERA 2013:** Early Research Achievements track of the 21st International Conference on Program Comprehension

**ICSE SCORE 2013:** Student Contest on Software Engineering @ ICSE 2013

**ICPC Demo 2013:** Tool demo track of the 21st International Conference on Program Comprehension

**CHASE 2013:** Cooperative and Human Aspects of Software Engineering @ ICSE 2013

**MSR Mining Challenge 2013:** Mining Challenge of the 10th Working Conference on Mining Software Repositories

**CSMR ERA 2013:** Early Research Achievements track of the 17th European Conference on Software Maintenance and Reengineering

**ICPC 2012:** 20th International Conference on Program Comprehension

**ICPC Demo 2012:** Tool demo track of the 20th International Conference on Program Comprehension

**FutureCSD 2012:** The Future of Collaborative Software Development @ CSCW 2012

**FSE NIER 2012:** New Ideas track of the International Symposium on the Foundations of Software Engineering

**FlexiTools 2011:** Flexible Modeling Tools @ ICSE 2011

**PLATEAU 2010:** Evaluation and Usability of Programming Languages and Tools @ SPLASH 2010

**CHASE 2010:** Cooperative and Human Aspects of Software Engineering @ ICSE 2010

### *Journal Reviews*

**EMSE:** Empirical Software Engineering journal (25 papers since 2010, Member of the EMSE Review Board since 2014/2015, Distinguished Reviewer Award in 2017)

**TSE:** IEEE Transactions on Software Engineering (12 papers since 2010)

**IEEE Software** (11 papers since 2012)

**JSS:** Journal of Systems and Software (9 papers since 2015)

**TBIT:** Behaviour & Information Technology (7 papers since 2015)

**JSME:** Journal of Software: Evolution and Process (5 papers since 2014)

**PeerJ** (3 papers since 2015)

**JBCS:** Journal of the Brazilian Computer Society (2 papers since 2016)

**TOIT:** ACM Transactions on Internet Technology (2 papers since 2013)

**TOSEM:** Transactions on Software Engineering and Methodology (2 papers since 2015)

**PLOS One** (2 papers since 2017)

**JISA:** Journal of Internet Services and Applications (1 paper in 2016)

**T-IFS:** IEEE Transactions on Information Forensics and Security (1 paper in 2013)

### *Reviewer*

**APSEC:** Asia-Pacific Software Engineering Conference, 2016

**ASE:** International Conference Automated Software Engineering, 2013, 2016

**ICSE:** International Conference on Software Engineering, 2013, 2012, 2010, 2009, 2008

**ICSM:** International Conference on Software Maintenance, 2011

**ESEC/FSE:** Joint meeting of the European Software Engineering Conference and the Symposium on the Foundations of Software Engineering, 2011, 2013

**FSE:** International Symposium on the Foundations of Software Engineering, 2010, 2014

**InfoVis:** Symposium on Information Visualization, 2009, 2008

**VL/HCC:** Symposium on Visual Languages and Human-Centric Computing, 2009, 2008

**CHASE:** Cooperative and Human Aspects of Software Engineering, 2008

**Book:** Graph Data Management: Techniques and Applications (*Eds. S. Sakr and E. Pardede*)



## Awards

**2018 – 2020:** ARC Discovery Early Career Researcher Award (DECRA), AUD 361,446

**2017:** JSPS Postdoctoral Fellowship for Research in Japan, Short-term Program

**2017:** Distinguished Reviewer Award for Outstanding Service as a Reviewer for the Journal on Empirical Software Engineering

**2015:** Post-doctoral Fellowship from FAPESP, the São Paulo Research Foundation

**2015:** Best Paper Award at SBSC 2015 (*with Renato Ferreira, Muller Miranda, Fernando Figueira Filho, Cleidson de Souza, and Leif Singer*)

**2014 – 2015:** Young Talents Scholarship from CNPq's Science Without Borders program, a Brazilian government research initiative

**2013:** Most Promising Idea Award at ICPC 2013 (*with Chris Parnin and Margaret-Anne Storey*)

**2013:** Winner of Stack Overflow Visualization Contest (*with Lars Grammel and Chris Parnin*)

**2008 – 2011:** IBM CAS PhD fellowship

**2007 – 2008:** University of Victoria fellowship

**2004 – 2007:** Scholarship from German National Merit Foundation (*Studienstiftung des deutschen Volkes*)

**2005 – 2006:** Hölderlin Scholarship from SAP AG, Germany

**2003 – 2007:** Scholarship from e-fellows.net GmbH, Germany

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