

# SCOTT BATEMAN, PhD

Associate Professor | Faculty of Computer Science | University of New Brunswick

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## SECTION 1 | BIBLIOGRAPHY

Scott Saunders Bateman  
Citizenship Status: Canada  
+1 (506) 447-3336(office)  
+1 (506) 261-9057(mobile)

[scottb@unb.ca](mailto:scottb@unb.ca)

Web: [scottbateman.ca](http://scottbateman.ca)

Twitter: [@ScottBateman](https://twitter.com/ScottBateman)

LinkedIn: [ScottBateman](https://www.linkedin.com/in/ScottBateman)

GitHub: [ScottBateman](https://github.com/ScottBateman)

## FACULTY ADDRESS

P.O. Box 4400  
550 Windsor Street  
Fredericton, NB  
E3B 5A3, Canada

## HOME ADDRESS

15 Ridgewell Place  
Fredericton, NB  
E3B 6J9, Canada

## SECTION 2 | EDUCATION

### 2013 - Doctor of Philosophy

#### Computer Science – Human-Computer Interaction

University of Saskatchewan, Saskatoon, SK, Canada

Dissertation: *Social Feedback: Learning from Shared Interaction History to Support Information Seeking on the Web*

Advisors: Prof. Carl Gutwin & Prof. Gordon McCalla

### 2007 – Master of Science

#### Computer Science – Human-Computer Interaction/Educational Technology

University of Saskatchewan, Saskatoon, SK, Canada

Thesis: *Collaborative Tagging: folksonomy, metadata, visualization, e-learning*

Advisor: Prof. Gordon McCalla

### 2001 – Bachelor of Science

#### Major: Computer Science, First-class Honours

University of Prince Edward Island, Charlottetown, PE, Canada

## OTHER FORMAL EDUCATION

### 2007 – Certificate of University Teaching

University of Saskatchewan, Saskatoon, SK, Canada

## AREA(S) OF ACADEMIC INTEREST

Human-Computer Interaction, Computer Supported Cooperative Work, Game Design, Serious Games, and Mixed Reality Technology.

## SECTION 3 | EMPLOYMENT

### 3.1 EMPLOYMENT HISTORY AT UNB

- 2015 - present    **Associate Professor (tenure-track)** | Faculty of Computer Science  
University of New Brunswick
- 2015 - 2019      **Assistant Professor (tenure-track)** | Faculty of Computer Science  
University of New Brunswick

### 3.2 LIST RELEVANT PREVIOUS EMPLOYMENT IN CHRONOLOGICAL ORDER

- 2015 - 2019      **Adjunct Professor** | Dept. of Computer Science  
University of Prince Edward Island  
  
Collaborated on research projects and assisted in the supervision of undergraduate research
- 2012 - 2015      **Assistant Professor (tenure-track)** | Dept. of Computer Science  
University of Prince Edward Island
- 2013              **Visiting Researcher** | iLab  
University of Calgary (12 weeks)
- 2011              **Research Intern** | Microsoft Research  
Redmond, Washington, USA (14 weeks)
- 2008              **Research Intern** | Centre for Social Software-IBM Research  
Cambridge, Mass., USA (14 weeks)
- 2006              **Research Intern** | Department of Informatics-National College of Ireland  
Dublin, Ireland (12 weeks)

### 3.3 LEAVES GRANTED BY UNB OR OTHER UNIVERSITY

N/A

### 3.4 DISTINCTIONS, HONOURS, FELLOWSHIPS, SCHOLARSHIP

- 2012 - 2014      **Post-Doctoral Fellowship (NSERC PDF)** | Natural Science and Engineering Research  
Council (NSERC), to be taken up at Carnegie Mellon University, November 1st , 2012  
(\$80,000), declined.
- 2013              **Visiting Researcher Fellowship** | Department of Computer Science, University of Calgary.  
(\$1,000)

- 2012 **Best Graduate Student** | selected by faculty at the Department of Computer Science, University of Saskatchewan for academic and scholarly achievement, and for contributions made and service to the Department.  
**Walter C. Sumner Memorial Fellowship** | Walter C. Sumner Foundation. (\$6,000)  
**Microsoft Research Student Travel Award** | for CHI 2012, in Austin, Texas. (\$500)  
**Student Travel Award** | Univ. of Sask., for CHI 2012, in Austin, Texas. (\$750)  
**Faculty Scholarship** | Univ. of Sask. (\$13,700)
- 2011 **Microsoft Research Student Travel Award** | HCIR 2011, Mountain View, CA. (\$500)  
**Student Travel Award** | Univ. of Sask., for CHI 2011, Vancouver. (\$500)  
**Faculty Scholarship** | Univ. of Sask. (\$13,700)  
**Walter C. Sumner Memorial Fellowship** | Walter C. Sumner Foundation. (\$6,000)  
**Honourable Mention for Best Paper** | for the paper Using Target Assistance for Subtly Balancing Competitive Play, Conf. on Human-Factors in Computing (CHI '11).
- 2008 – 2011 **National Post Graduate Scholarship (PGS D)** | Natural Sciences and Engineering Research Council (NSERC). (\$63,000)  
**NSERC Holder's Scholarship** | Univ. of Sask. (\$18,000)  
**Faculty Scholarship** | Univ. of Sask. (\$33,000)
- 2010 **Best Paper Award** | for the paper Useful Junk? The Effects of Visual Embellishments on the Comprehension and Memorability of Charts, Conf. on Human-Factors in Computing (CHI '10).  
**Student Travel Award** | Univ. of Sask., for CHI 2010, in Atlanta. (\$750)
- 2007 - 2008 **LORNET Research Fellowship** | Univ. of Sask. (\$25,000)
- 2007 **Student Travel Award**, World Wide Web Conference | Banff, Canada. (\$500)
- 2005 - 2007 **College of Graduate Studies and Research Scholarship** | Univ. of Sask. (\$15,000)  
**Graduate Teaching Fellowship, Univ. of Saskatchewan** | (\$15,000)
- 2006 **Best Group Project**. Summer School on Personalized E-Learning | National College of Ireland.  
**1st Place in the Demo Competition, 2006 LORNET Conference** | for "Collective Intelligence in E-Learning" a demo of the Open Annotation and Tagging System (OATS).

## SECTION 4 | DISSEMINATION OF KNOWLEDGE

### 4.1 COURSES TAUGHT IN PRECEDING 5 YEARS

Winter 2021	<p><b>CS 4065/6065</b> – Interactive Human-Centered Systems – taught fourth-year/junior graduate course on introduction to HCI design, evaluation and research.</p> <p><b>CS 2053</b> – Introduction to Game Development – taught game design, development, 3D graphics, and relevant algorithms for games. Used the Unity platform.</p>
Fall 2020	<p><b>CS 3035</b> – Building User Interfaces –taught third year course on the implementation behind user interfaces.</p> <p><b>CS 6999</b> – Mixed Reality Course – newly designed senior grad course. Seminar style with a mixed reality-based project.</p>
Winter 2020	<p><b>CS 4065/6065</b> – Interactive Human-Centered Systems – taught fourth-year/junior graduate course on introduction to HCI design, evaluation and research.</p> <p><b>CS 2053</b> – Introduction to Game Development – taught game design, development, 3D graphics, and relevant algorithms for games. Used the Unity platform.</p>
Fall 2019	<p><b>CS 3035</b> – Building User Interfaces – designed and taught third year course on the implementation behind user interfaces. 48 students.</p>
Winter 2019	<p><b>CS 4065/6065</b> – Interactive Human-Centered Systems – taught fourth-year/junior graduate course on introduction to HCI design, evaluation and research. 29 students (19 CS4065, 10 CS6056). UNB.</p> <p><b>CS 2053</b> – Introduction to Game Development – taught game design, development, 3D graphics, and relevant algorithms for games. Used the Unity platform. 38 students. UNB.</p>
Fall 2018	<p><b>CS 1073</b> – Introduction to Computer Science I – taught Java, problem solving, program design. 44 students. UNB.</p>
Winter 2018	<p><b>CS 2053</b> – Introduction to Game Development – taught game design, development, 3D graphics, and relevant algorithms for games. Used the Unity platform. 38 students. UNB.</p> <p><b>CS 4065/6065</b> – Interactive Human-Centered Systems – taught fourth-year/junior graduate course on introduction to HCI design, evaluation and research. 26 students (18 CS4065, 8 CS6056). UNB.</p>
Fall 2017	<p><b>CS 1073</b> – Introduction to Computer Science I – taught Java, problem solving, program design. 44 students. UNB.</p>

Winter 2017	<p><b>CS 1083</b> - Introduction to Computer Science II – taught Java, problem solving, program design. 39 students. UNB. Course director (coordinated with two other course sections on a common schedule, assignments, labs and exams).</p> <p><b>CS 4065/6065</b> – Interactive Human-Centered Systems – taught fourth-year/junior graduate course on introduction to HCI design, evaluation and research. 18 students. UNB.</p>
Fall 2016	<p><b>CS 1073</b> – Introduction to Computer Science I – taught Java, problem solving, program design. 39 students. UNB.</p> <p><b>CS 3025</b> – Human-Computer Interaction – taught introductory concepts in interface design, requirements and needs finding, and interface evaluation. 41 students. UNB.</p> <p><b>CS 2999</b> – Problem Solving for Programmers – supervised independent study course on advanced problem solving techniques. 7 students. UNB.</p>
Winter 2016	<p><b>CS 1083</b> – Introduction to Computer Science II – taught Java, problem solving, program design. 38 students. UNB.</p> <p><b>CS 2999</b> – Problem Solving for Programmers – supervised independent study course on advanced problem-solving techniques. 8 students. UNB.</p> <p><b>CS 4995/6905</b> – Interactive Human-Centered Systems – taught fourth-year/junior graduate course on introduction to HCI design, evaluation and research. 33 students. UNB.</p>
Fall 2015	<p><b>CS 1083</b> – Introduction to Computer Science II – taught Java, problem solving, program design. 24 students. UNB.</p>
Winter 2015	<p><b>CS 151</b> – Introduction to Computer Science I – taught Java, problem solving, program design. 34 students. UPEI.</p> <p><b>CS 482</b> – Software Systems Development Project – Supervise the development of capstone group projects, ensure that software engineering process and principles are correctly applied, advise on logistical challenges and conflict resolution. 10 students. UPEI.</p> <p><b>CS 483</b> – Video Game Programming Project – Supervise the development of capstone game for video game specialization, ensure that software engineering process and principles are correctly applied, communicate and work with industry advisors. 1 student. UPEI.</p>
Fall 2014	<p><b>CS 261</b> – Data Structures – Taught the design and implementation of data structures, sorting algorithms, and basic algorithm analysis. Overall student rating: 4.3/5, 26 students. UPEI.</p> <p><b>CS 495</b> – Data Science – Designed the curriculum for this new course, without the benefit of a textbook. Taught computational statistics, machine learning, and visualization. Overall student rating: 4.8/5, 17 students. UPEI.</p>

Winter 2014	<p><b>CS 151</b> – Introduction to Computer Science I – taught Java, problem solving, program design. Overall student rating: 4.2/5, 28 students. UPEI.</p> <p><b>CS 152</b> – Introduction to Computer Science II – taught Java, problem solving, program design. Overall student rating: 4.5/5, 32 students. UPEI.</p>
Fall 2014	<p><b>CS 151</b> – Introduction to Computer Science I – taught Java, problem solving, program design. Overall student rating: 4.2/5, 35 students UPEI.</p> <p><b>CS 321</b> – Human-Computer Interaction – taught need finding, interface design and evaluation. Overall student rating: 4.2/5, 15 students. UPEI.</p>
Winter 2013	<p><b>CS 151</b> – Introduction to Computer Science I – taught Java, problem solving, program design. Overall student rating: 4.3/5, 25 students. UPEI.</p>

#### **4.2 DEVELOPMENT OF NEW COURSES**

CS6999 (2020) – Mixed Reality Seminar (Graduate level)

CS 3035 (2019) – Building User Interfaces

CS 4065/6065 (2016) – Interactive Human-Centered Systems

#### **4.3 UPDATING OF EXISTING COURSES**

CS 2053(2018) – Video Game Development

#### **4.4 EFFECTIVE USE OR DEVELOPMENT OF TEACHING AIDS & TRAINING**

N/A

#### **4.5 INVOLVEMENT IN CURRICULUM DEVELOPMENT**

I co-organize a shared repository of HCI curriculum, course materials and educational activities for Canadian HCI Faculty. We currently have over 40 members.

#### **4.6 ORGANIZATION OF FIELD SCHOOLS, LABS OR PRACTICA**

NextGenUX 2018: Co-organizer for NextGenUX. A two-day tutorial and workshop event to introduce HCI research and practice to New Brunswick industry and government. Fredericton, NB. April 2018. The 20-day event attracted over 110 attendees, I saw presentations from 7 international HCI research leaders.

#### **4.7 a) DIRECTION OF RESEARCH ON UNDERGRADUATE OR GRADUATE STUDIES**

##### **UNDERGRADUATE RESEARCH ASSISTANTS**

Summer 2020	Book Sadprasid (UNB) NSERC USRA student working on qualitative analysis of novel computer interactions.
Summer 2019	Noor Ali (UNB) for research on developing an augmented reality-based game to connect families at a distance.  Nikita Baliesnyi (Taras Shevchenko National University of Kyiv), MITACS Globallink student creating a web toolkit for multi-display environments.
Winter 2019	Nathan Sonier (UNB) for research on developing an in-home, health visit video conferencing system.
Summer 2018	Wesley Finck (UNB) NSERC USRA student, research on developing a virtual prosthesis trainer. Co-supervised (with Erik Scheme).
Summer 2017	Ben Rombaut (UNB) for his research on Developing Therapeutic Gait Feedback for a Smart-Cane. Co-supervised (with Erik Scheme)  Nathaniel Brewer (UNB) for his research on Developing an experimental platform for evaluating spatial interfaces on mobile devices (Aug. 2017-Sept. 2017).  Alex Watson (UNB) for his research on Developing a Training Game for Upper Limb Prosthesis Users. Co-supervised (with Erik Scheme)
Summer 2016	Carly Smith (UNB) for her research on Developing a Training Game for Upper Limb Prosthesis Users. Co-supervised (with Erik Scheme).  Alex Watson (UNB) for his research on Developing a Training Game for Upper Limb Prosthesis Users. Co-supervised (with Erik Scheme).  Alex Kienzle (UNB) for his research on Visualizing Predictive Analytics Data.  David Hanna (UPEI) for his research on a multi-display framework for games.
Winter 2016	Danielle Brockway (UNB), in the development for a research lab administrative system.
Summer 2015	Courtney Horrocks (UPEI) NSERC USRA student, research on Communicating and Visualizing Correlation Data for the General Public.
Summer 2014	Igor Margues da Silva (Brazil) in his research and development of collaborative integrated development environments. Co-supervised with Carl Gutwin, student hosted at the University of Saskatchewan. Co-supervised (with Erik Scheme).  Nikita Volodin (UPEI) in the development of multi-surface application framework.  Yixin Wang (UPEI) in the development of a crowd-sourcing experiment system.  Harvey Xia (UPEI) in the development of research lab support applications.  Nguyen Cong Van (UPEI) in the development of collaborative video conferencing systems.

James Martin (UPEI) in the development of a zoomable web interface.

Nikita Volodin (UPEI) in the development of multi-surface application framework.

Yixin Wang (UPEI) in the development of a crowd-sourcing application framework.

Harvey Xia (UPEI) in the development of a for a crowd-funding portal.

Ivy Truong (Dalhousie University) in the development of an experimental system to test new pointing techniques.

Summer 2013

Camila Caraujo (Univ. Federal de Minas Gerais, Brazil) in the development of social mobile search app.

Maria Clara Pestana (Universidade Federal da Paraíba, Brazil) in the development of mobile map-based search app.

Lucas Rosa (Instituto Federal Catarinense, Brazil) in the development of a web-based IDE for large-scale capture of programming behaviour.

#### **BACHELOR (HONOURS THESIS)**

2018

Thierry Peltier (UNB) – Supervised honours thesis on Spatial Memory Interfaces for Mobile Devices. Completed May 2018.

2016

Stanley Petley (UNB) – Co-supervised (with Paul Cook, UNB) honours thesis on Visualizing Personal Affect from Social Media Streams. Completed May 2016.

Nikita Volodin (UPEI) - Supervising honours thesis project on Analyzing and Identifying Successful Behaviour in MOBA Games. Completed May 2016.

Jason Wuertz (UPEI) - Supervising honours thesis project on Understanding the Use of Interface Features for Coordination and Collaboration in MOBA Games. Completed May 2016.

#### **MASTERS THESIS (IN PROGRESS)**

2020-2022

Connor Wilson – MCS Student. Supervised research on persuasive and credible technology. Expected completion fall 2021.

2019-2021

Samridhi Pargal – MCS Student. Supervised research on interacting with data visualization in Augmented Reality. Expected completion summer 2021.

Isayah Vidito – MCS Student. Co-supervised (with Dawn MacIsaac, Computer Science, UNB) research on remote guidance of therapeutic exercise in mixed reality.

2018-2020

Benjamin MacPherson – MCS Student. Co-supervised (with Michael Fleming, Computer Science, UNB) research on intelligent adaptation in games. Expected completion summer 2020.

Alex Kienzle – MCS Student. Supervised research on augmented reality-based collaboration. Expected completion summer 2020.

Reyhan Pradantyo – MCS Student. Supervised research on augmented reality-based museum exploration. Expected completion spring 2020.

#### MASTER'S THESIS COMPLETED

- 2018 -2020      Cassandra Folkins – Masters of Applied Health Research. Co-supervised (with Emily Read, Nursing, UNB) research on serious games for promoting careers in nursing homes. Completed May 2020.
- 2017 -2019      Vinod Asokan – MCS Student. Supervised research on assistance for pointing-based interactions in augmented reality. Completed fall 2019.
- Ian Smith – MCS Student. Co-supervised (with Erik Scheme, Institute of Biomedical Engineering, UNB) research on visual feedback during therapeutic activities. Completed summer 2019.
- 2016 -2018      Jason Wuertz– MCS Student. Supervised research on game awareness widgets. **Awarded Best Thesis for the Faculty of Computer Science.**
- Manasi Shah – MCS Student. research on spatial interfaces for mobile devices. Completed fall 2018. (masters report-based student)
- Jawad Jandali – MCS Student. Co-supervised (with Michael Fleming, UNB) modeling abilities in core game tasks to support game balancing.
- 2016 - 2017      Aaron Tabor – MCS Student. Co-supervised (with Erik Scheme, UNB) project on training games for upper-limb prosthetics. Completed summer 2017. **Awarded Best Thesis for the Faculty of Computer Science.**

#### PhD (IN-PROGRESS)

- 2018-2021      Aaron Tabor – PhD in Computer Science, co-supervised (with Erik Scheme, UNB) project on bio-feedback interventions for positive physiological change. Expected completion 2021.
- 2019-2023      Ian Smith – PhD in Computer Science, co-supervised (with Erik Scheme, UNB) project on EMG control of everyday interfaces and EMS guidance. Expected completion 2023.

#### POST-DOCTORAL FELLOWS

2020 – 2022 Cora Woolsey, PhD conducting research on community building in the maker movement, and technology support tools for archaeological field work.

#### UNB COMMITTEE MEMBERSHIP

2020 MA Committee (Interdisciplinary Studies) member for Jeff Munde, Department of Media Arts and Culture, UNB. Masters Thesis: Conflict in an Online Game Mod Community.

2019 MSc. in Engineering, External Committee member for Zhihao Yu, UNB. Masters Thesis: FPGA-based IGBT Switching Spike Removal.

PhD Committee member and chair for Eltahir M. El-Shanta, Faculty of Computer Science, UNB. PhD Dissertation title: Software Patterns as Services. (2015-2019)

MCS Committee Chair for Alex Watson, MCS Thesis: Scalable Unified Data Analytics.

MSc Committee member for Deanna Musgrave, Interdisciplinary Studies, MSc. Thesis title: Mindful Multimedia: Connecting Crossmodal Interactions and Aesthetic Experiences in Visual Music.

2018 MCS Committee chair for Dmitry Shcherbakov, Faculty of Computer Science, UNB. MCS Thesis title: Application of Reinforcement Learning to Autonomous Aircraft Control in Partially Observable Environments.

2017 PhD Committee member for Christina Dore, Interdisciplinary Studies, UNB. PhD Dissertation title: Assessing and addressing the risk for burnout among hemodialysis nurses working in Quebec.

PhD Examining Committee Member and External Defence Chair for Katerina Biron, Electrical Engineering, UNB. PhD Dissertation title: Towards Improvement of the Dynamic Performance of Myoelectric Pattern Recognition for Improved Real-Time Usability.

MCS Committee chair for Vaibhavi Kalgutkar, Faculty of Computer Science, UNB. MCS Thesis title: Android authorship attribution through string analysis.

2016 M.Sc. in Engineering, Committee member for Gillian Phillips, Faculty of Engineering, UNB. MSc. Thesis title: Pairwise Attribute Noise Detection Algorithm for Detecting Noise in Surface Electromyography Recordings.

#### 4.7 b) EXTERNAL EXAMINER FOR Ph.D THESIS

N/A

#### 4.7 c) EXTERNAL EXAMINER FOR MASTER'S THESIS

2017 External Examiner for Rui Pan, M.Sc. in Interactive Arts and Technology, Simon Fraser University. Thesis title: First-Person Video Chat for Couples at a Distance. July 2017.

External Examiner for Radhika Gopi, M.Sc. in Computer Science, University of Regina. Thesis title: Twist: A Mobile Approach for Searching and Exploring within Twitter. May 2017.

#### **4.8 PUBLICATION OR PRODUCTION OF BOOKS, ARTICLES, FILMS, ETC. THAT ADVANCE TEACHING EFFECTIVENESS**

N/A

#### **4.9 AWARD HONOURS FOR TEACHING**

N/A

#### **4.10 ANY OTHER EQUIVALENT ACCOMPLISHMENTS**

##### **SUPERVISION OF FULL TIME RESEARCH ASSISTANTS/PROGRAMMERS**

2020 Siddharth Yadav in Development of a Mobile Interface for the presentation of health data to non-expert stake holders in collaboration with VeroSource, Inc (Fredericton, NB).

Khanjan Barad in Development of a Mobile Interface for the presentation of health data to non-expert stake holders in collaboration with VeroSource, Inc (Fredericton, NB).

2016 Aakash Shukla in the research and development of the Nursing Central mobile app (Jan. 2016-May 2016) at UNB.

2014 - 2015 Nolan Phillips, BSc in the development of a crowdsourcing solution to identify sales leads. In collaboration with nGauge, Inc., supported by NSERC Engage grant. (Sept. 2014 – Nov. 2015) at UPEI.

Nguyen Cong Van, BSc in the development of a video communication system in collaboration with XMG, Inc (Sept. 2014-Jan. 2015) at UPEI.

Peter Workman, BSc in the development of a virtual reality desktop computing system (Mar. 2014-July 2014).

## **SECTION 5 | RESEARCH, SCHOLARLY OR CREATIVE ACTIVITY**

### **5.1 ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION IN REFEREED JOURNALS**

FRONTIERS 2020 Jawad Jandali Refai, Scott Bateman, Michael W. Fleming. External Assistance Techniques that Target Core Game Tasks for Balancing Game Difficulty. Frontiers in Computer Science, Issue 2, 17 pages. <https://doi.org/10.3389/fcomp.2020.00017>

- TOCHI 2019 Aaron Tabor, Scott Bateman, Erik Scheme, m.c. shraefel. Comparing Heart Rate Variability Biofeedback and Simple Paced Breathing: Using Physiology to Inform the Design of Guided Breathing Technologies. *ACM Transactions on Computer-Human Interaction (TOCHI)*. In submission, second round. Original Submission April 5, 2019.
- IJHCS 2019 Barrett Ens, Joel Lanir, Anthony Tang, Scott Bateman, Gun A Lee, Thammathip Piumsomboon, Mark Billingham. Revisiting Collaboration through Mixed Reality: The Evolution of Groupware-Supplemental Visualization. *International Journal of Human-Computer Studies*. In press. Available online May 25, 2019. <https://doi.org/10.1016/j.ijhcs.2019.05.011>
- TNSRE 2018 Aaron Tabor, Scott Bateman, Erik Scheme. Evaluation of Myoelectric Control Learning using Multi-Session Game-Based Training. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*. Accepted, to be published. <https://doi.org/10.1109/TNSRE.2018.2855561>
- TVCG 2015 Dandan Huang, Melanie Tory, Bon Adriel Aseniero, Lyn Bartram, Scott Bateman, Sheelagh Carpendale, Anthony Tang, Robert Woodbury. Personal Visualization and Personal Visual Analytics. *IEEE Transactions on Visualization and Computer Graphics*. Volume 21, Issue 3, March, 2015. DOI: <http://dx.doi.org/10.1109/TVCG.2014.2359887>
- IJHCS 2013 Scott Bateman, Regan L. Mandryk, Carl Gutwin, Robert Xiao. Analysis and Comparison of Target Assistance Techniques for Relative Ray-Cast Pointing. *International Journal of Human-Computer Studies*. Volume 71, Issue 5, May 2013, 511-532. <http://dx.doi.org/10.1016/j.ijhcs.2012.12.006>
- ILE 2009 Jelena Jovanovic, Dragan Gasevic, Carlo Torniai, Scott Bateman, Marek Hatala. The Social Semantic Web in Intelligent Learning Environments-State of the Art and Future Challenges. *Interactive Learning Environments Journal*, Volume 17, Number 4. 2009. pp. 273–308.

## 5.2 REFEREED CONFERENCE PROCEEDINGS

- GI 2020 Vinod Asokan, Scott Bateman, Anthony Tang. Assistance for Target Selection in Mobile Augmented Reality. In the Proceedings of Graphics Interface 2020. May 2020, Toronto, Canada. 12 pages.
- CHI 2019 Jason Wuertz, Max V. Birk, Scott Bateman. Healthy Lies: The Effects of Misrepresenting Player Health Data on Experience, Behavior, and Performance. In the Proceedings of the ACM Conf. on Human Factors in Computing Systems (CHI 2019). May 2019, Montreal, Canada. Paper 319, 12 pages. <https://doi.org/10.1145/3290605.3300549>
- CHI 2018 Jason Wuertz, Sultan A Alharthi, William A Hamilton, Scott Bateman, Carl Gutwin, Anthony Tang, Zachary Touns, Jessica Hammer. A Design Framework for Awareness Cues in Distributed Multiplayer Games. In the Proceedings of the ACM Conf. on Human Factors in Computing Systems (CHI 2018). April 2018, Montreal, Canada. 243-257. <https://doi.org/10.1145/3173574.3173817>

- CHI 2017A Aaron Tabor, Scott Bateman, Erik Scheme, David Flatla, Kathrin Gerling. Designing Game-Based Myoelectric Prosthesis Training. In the Proceedings of the ACM Conf. on Human Factors in Computing Systems (CHI 2017). May 2017, Denver, USA. 1352-1363. <https://doi.org/10.1145/3025453.3025676>
- CHI 2017B Jason Wuertz, Scott Bateman, Anthony Tang. Why Players use Pings and Annotations in Dota 2. In the Proceedings of the ACM Conf. on Human Factors in Computing Systems (CHI 2017). May 2017, Denver, USA. 1978-1982. <https://doi.org/10.1145/3025453.3025967>
- CSCW 2017 Carl Gutwin, Scott Bateman, Gaurav Arora, Ashley Coveney. Looking Away and Catching Up: Dealing with Attentional Disconnection in Synchronous Groupware. In the Proceedings of the ACM Conf. on Computer Supported Cooperative Work and Social Software (CSCW 2017). February 2017, Portland, USA. 2221-2235. <https://doi.org/10.1145/2998181.2998226>
- DIS 2017 Anthony Tang, Omid Farkoufar, Carman Neustaedter, Scott Bateman. Collaboration in 360° Videochat: Challenges and Opportunities. In the Proceedings of the ACM Conf. on Designing Interactive Systems (DIS 2017). June 10-14, 2017. Edinburgh, UK. 1327-1339. <https://doi.org/10.1145/3064663.3064707>
- MEC 2017 Aaron Tabor, Scott Bateman, Erik Scheme. Quantifying Muscle Control in Myoelectric Training Games. In the Proceedings of the Myoelectric Control Symposium (MEC 17). August 15-18, 2017. Fredericton, NB, Canada. 4 pages.
- CHI 2016 Omid Farkoufar, Kevin Ta, Richard Tang, Scott Bateman, Tony Tang. Stabilized Annotations for Mobile Remote Assistance. In the Proceedings of the ACM Conf. on Human Factors in Computing Systems (CHI 2016). May 2016, San Jose, USA. 1548-1560. <http://dx.doi.org/10.1145/2858036.2858171>
- DIS 2016 Brennan Jones, Kody Dillman, Richard Tang, Anthony Tang, Ehud Sharlin, Lora Oehlberg, Carman Neustaedter, Scott Bateman. Elevating Communication, Collaboration, and Shared Experiences in Mobile Video through Drones. In the Proceedings of the ACM SIGCHI Conference on Designing Interactive Systems (DIS 2016). June 4-8, 2016, Brisbane, Australia. 1123-1135. <http://dx.doi.org/10.1145/2901790.2901847>
- CHIR 2016 Scott Bateman, Carl Gutwin. (The Lack of) Privacy Concerns with Sharing Web Activity at Work and the Implications for Collaborative Search. In the Proceedings of the ACM SIGIR Conf. on Human-Information Interaction and Retrieval (CHIIR 2016). March, 2016, Chapel Hill, USA. 43-52. DOI: <http://dx.doi.org/10.1145/2854946.2854977>
- CHI 2015A Brennan Jones, Anna Witcraft, Scott Bateman, Carman Neustaedter, Anthony Tang. Mechanics of Camera Work in Mobile Video Collaboration. In the Proceeding of the ACM Conf. on Human Factors in Computing Systems (CHI 2015). April 2015, Seoul, Korea. 957-966.
- CHI 2015B Richard Tang, Anthony Tang, Scott Bateman, Xing-Dong Yang, Joaquim Jorge. Physio@Home: Exploring visual guidance and feedback techniques for physiotherapy exercises. In the

Proceeding of the ACM Conf. on Human Factors in Computing Systems (CHI 2015). April 2015, Seoul, Korea. 4123-4132.

- EICS 2015           Aditya Nittala, Xing-Dong Yang, Scott Bateman, Ehud Sharlin and Saul Greenberg. PhoneEar: Interactions for Mobile Devices that Hear High-Frequency Sound-Encoded Data. In the Proceedings of the 7th ACM SIGCHI Symposium on Engineering Interactive Computing Systems - EICS'15. (Duisburg, Germany), ACM Press, 6 pages, June 23-26.
- CHIPlay 2014       Jared Cechanowicz, Carl Gutwin, Scott Bateman, Regan Mandryk, Ian Stavness. Improving Player Balancing in Racing Games. In the Proceedings of The ACM SIGCHI Annual Symposium on Computer-Human Interaction in Play (CHI PLAY), October 19th-22nd, 2014. Toronto, Ontario, Canada. 47-56.
- CHI 2014           Rodrigo Vicencio-Moreira, Regan Mandryk, Carl Gutwin, Scott Bateman. The Effectiveness (or Lack Thereof) of Aim-Assist Techniques in First-Person Shooter Games. Proceedings of the ACM Conf. on Human Factors in Computing Systems (CHI 2014). April 26th-May 1st, 2014. Toronto, ON, Canada. 937-946.
- CSCW 2013         Scott Bateman, Carl Gutwin, Gordon McCalla. Supporting Loosely-Coupled Information Seeking in Tightly-Knit Groups using WebWear. Proceedings of the ACM Conf. on Computer Supported Cooperative Work and Social Software (CSCW 2013). Feb. 23rd-27th, 2013. San Antonio, TX, USA. 955-966.
- AIED 2013         Graham Erickson, Stephanie Frost, Scott Bateman, Gordon McCalla. Using the Ecological Approach to Create Simulations of Learning Environments. Proceedings of the International Conference on Artificial Intelligence in Education (AIED 2013). July 9-13th, 2013. pp 411-420.
- CHI 2012           Scott Bateman, Jaime Teevan, Ryen White. The Search Dashboard: How Reflection and Comparison Impact Search Behavior. Proceedings of the ACM Conf. on Human Factors in Computing Systems (CHI 2012). May 1-5th, 2012. Austin, TX, USA. pp. 1785-1794.
- UIST 2011         David Flatla, Carl Gutwin, Lennart Nacke, Scott Bateman, Regan Mandryk. Calibration Games: Making Calibration Tasks Enjoyable by Adding Motivating Game Elements. Proceedings of ACM Conference on User Interface Software Technology (UIST 2011), Santa Barbara, California. October 16-19, 2011. pp. 403-412.
- CHI 2011           Scott Bateman, Tadeusz Stach, Regan L. Mandryk, Carl Gutwin. Using Target Assistance for Subtly Balancing Competitive Play. Proceedings of ACM Conf. on Human Factors in Computing Systems (CHI 2011). May 7-12th, 2011. Vancouver, Canada. pp. 2355-2364. Honorable Mention for Best Paper Award.
- GI 2011            Scott Bateman, Andre Doucette, Robert Xiao, Carl Gutwin, Regan Mandryk, and Andy Cockburn. Effects of View, Input Device, and Track Width on Video Game Driving. Proceedings of Graphics Interface, May 15-18, 2011. St. John's, Canada. pp. 207-14

- CHI 2010 Scott Bateman, Regan L. Mandryk, Carl Gutwin, Aaron Genest, David McDine, Christopher Brooks. Useful Junk? The Effects of Visual Embellishments on the Comprehension and Memorability of Charts. Proceedings of ACM Conference on Human Factors in Computing Systems (CHI 2010). April 10-15, 2010. Atlanta, GA, USA. pp. 2573-2582. Best Paper Award.
- Group 2009 Group 2009 Scott Bateman, Michael Muller, Jill Freyne. Personalized Retrieval in Social Bookmarking. Proceedings of the ACM Conference on Supporting Group Work (Group 2009). May 10 - 13, 2009. Sanibel Island, Florida. pp. 91-94.
- EICS 2009 Scott Bateman, Carl Gutwin, Nathaniel Osgood, Gordon McCalla. Interactive Usability Instrumentation. Proceedings of the ACM Symposium on Engineering Interactive Computing Systems (EICS 2009). July 14-17, 2009. Pittsburgh, PA. pp. 45-54.
- HT 2008 Scott Bateman, Carl Gutwin, Miguel Nacenta. Seeing Things in the Clouds: The Effect of Visual Features on Tag Cloud Selections. Proceedings of ACM Conference on Hypertext and Hypermedia (HT 2008). Pittsburgh, US. June 16-20, 2008. pp. 193-202.
- ICSC 2008 Carlo Torniai, Jelena Jovanovic, Dragan Gasevic, Scott Bateman, Marek Hatala. Leveraging Folksonomies for Ontology Evolution in E-learning Environments. Proceedings of IEEE International Conference on Semantic Computing (ICSC 2008). Santa Clara, CA, USA. August 4-7, 2008. pp. 206-213.
- ICALT 2008 Carlo Torniai, Jelena Jovanovic, Dragan Gasevic, Scott Bateman, Marek Hatala. E-Learning Meets the Social Semantic Web. Proceedings of The 8th IEEE International Conference on Advanced Learning Technologies (ICALT 2008). Santander, Cantabria, Spain. July 1-5, 2008. pp. 389-393.
- ITS 2008 Jelena Jovanovic, Carlo Torniai, Dragan Gasevic, Scott Bateman, Marek Hatala. Leveraging the Social Semantic Web in Intelligent Tutoring Systems. Proceedings of the Conference on Intelligent Tutoring Systems (ITS 2008). Montreal, Canada. June 23-27, 2008. pp. 563-572
- WWW 2007 Scott Bateman, Christopher Brooks, Gordon McCalla, Peter Brusilovsky. Applying Collaborative Tagging to E-Learning. Workshop Proc. of Tagging and Metadata for Social Information Organization in conjunction with the International World Wide Web Conference (WWW 2007), May 8, 2007. Banff, Canada. 7 pages.
- AH 2006 Scott Bateman, Christopher Brooks, Gordon McCalla. Collaborative Tagging Approaches for Ontological Metadata in Adaptive E-Learning Systems. Workshop Proceedings of the 4th International Conference on Adaptive Hypermedia and Adaptive Web-Based Systems (AH 2006), June 20, 2006. Dublin, Ireland. pp. 3-12.
- LORN 2006A Scott Bateman, Rosta Farzan, Peter Brusilovsky, Gordon McCalla. OATS: The Open Annotation and Tagging System. Proceedings of the Third Annual International Scientific Conference of the Learning Object Repository Research Network (LORNET 2006). Montreal, November 8-10, 2006. 10 pages.

- ITS 2006 Christopher Brooks, Scott Bateman, Gordon McCalla, Jim Greer. Applying the Agent Metaphor to Learning Content Management Systems and Learning Object Repositories. Proceedings of the 8th International Conference on Intelligent Tutoring Systems (ITS 2006). June 26-30, 2006. Jhongli, Taiwan. pp. 808-810.
- LORN 2006B Christopher Brooks, Scott Bateman, Wengang Liu, Gordon McCalla, Jim Greer, Dragan Gasevic, Timmy Eap, Griff Richards, Khaled Hammouda, Shady Shehata, Mohamed Kamel, Fakhri Karray, Jelena Jovanovic. Issues and Directions with Educational Metadata. Proceedings of the Third Annual International Scientific Conference of the Learning Object Repository Research Network (LORNET 2006), Montreal, PQ, November 8-10, 2006. 9 pages.

### 5.3 a) BOOKS

N/A

### 5.3 b) PART(S) OF BOOKS

- SWEL 2009 Christopher Brooks, Scott Bateman, Jim Greer, Gord McCalla. Lessons Learned using Social and Semantic Web Technologies for E-Learning. Book Chapter 14 in Semantic Web Technologies for e-Learning, Vol. 4 (The Future of Learning). ISBN: 978-1-60750-062-9, November 2009. pp. 260 - 278.

### 5.4 EDITORIAL RESPONSIBILITIES

- 2021 ACM Conference on Human Factors in Computing Systems (CHI 2021) – Associate Chair – responsible for soliciting reviewers for each of 17 research papers, guiding the review process, writing meta-reviews, providing a recommendation and attending the virtual PC meeting. December 6-7, 2020.
- 2019 ACM SIGCHI Annual Symposium on Computer-Human Interaction in Play (CHI PLAY 2019) – Associate Chair – solicited reviewers, provided meta-reviews and made acceptance decisions on 9 papers
- ACM Conference on Designing Interactive Systems (DIS 2019) – Associate Chair - responsible for soliciting reviewers for each of 10 research papers, guiding the review process, writing meta-reviews, providing a recommendation and attending the virtual PC meeting.
- ACM Conference on Human Factors in Computing Systems (CHI 2019) – Associate Chair – responsible for soliciting reviewers for each of 17 research papers, guiding the review process, writing meta-reviews, providing a recommendation and attending the virtual PC meeting. December 6-7, 2018.

- 2014 - 2019 Member of the Editorial Board (Associate Editor) of the International Journal of Human-Computer Studies (IJHCS). Solicit reviewers, provide (meta-) reviews, make acceptance recommendations, and participate in board meetings (5 years).
- 2018 ACM Conference on Human Factors in Computing Systems (CHI 2018) – Associate Chair – responsible for soliciting reviewers for each of 20 research papers, guiding the review process, writing meta-reviews, providing a recommendation and attending the PC meeting in Montreal, PQ.  
ACM SIGCHI Annual Symposium on Computer-Human Interaction in Play (CHI PLAY 2018) – Associate Chair – solicited reviewers, provided meta-reviews and made acceptance decisions on 8 papers.
- 2017 ACM SIGCHI Annual Symposium on Computer-Human Interaction in Play (CHI PLAY 2017) – Associate Chair – solicited reviewers, provided meta-reviews and made acceptance decisions on 10 papers.
- 2016 ACM Conference on Human Factors in Computing Systems (CHI 2016) – Associate Chair – responsible for soliciting reviewers for each of 24 research papers, guiding the review process, writing meta-reviews, providing a recommendation and attending the PC meeting in San Jose, California.  
Graphics Interface (GI 2016) – Associate Chair. Find reviewers and provide reviews & meta-reviews for 5 papers, participate in virtual PC meeting to make acceptance decisions.  
ACM SIGCHI Annual Symposium on Computer-Human Interaction in Play (CHI PLAY 2016) – Associate Chair – solicited reviewers, provided meta-reviews and made acceptance decisions on 10 papers.
- 2015 ACM Conference on Human Factors in Computing Systems (CHI 2015) – Associate Chair – responsible for soliciting three reviewers for each of 11 research papers, guiding the review process, writing meta-reviews, providing a recommendation and attending the PC meeting in Seoul, Korea.  
ACM SIGCHI Annual Symposium on Computer-Human Interaction in Play (CHI PLAY 2015) – Associate Chair – solicited reviewers, provided meta-reviews and made acceptance decisions on 8 papers.  
Graphics Interface (GI 2015) – Associate Chair. Find reviewers and provide reviews & meta-reviews for 7 papers, participate in virtual PC meeting to make acceptance decisions.  
ACM SIGCHI Annual Symposium on Computer-Human Interaction in Play (CHI PLAY 2015) – Associate Chair – solicited reviewers, provided meta-reviews and made acceptance decisions on 11 papers.
- 2014 ACM SIGCHI Annual Symposium on Computer-Human Interaction in Play (CHI PLAY 2014) – Associate Chair – solicited reviewers, provided meta-reviews and made acceptance decisions on 7 papers.

Graphics Interface (GI 2014) – Associate Chair. Find reviewers and provide reviews & meta-reviews for 7 papers, participate in PC meeting to make acceptance decisions.

ACM Conference on Human Factors in Computing Systems (CHI 2014) - Work-In Progress Associate Chair – solicited reviewers, provided meta-reviews and made acceptance decisions for 6 short papers.

2009 ACM Conference on Human Factors in Computing Systems (CHI 2009) - Work-In Progress Associate Chair – solicited reviewers, provided meta-reviews and made acceptance decisions for 10 short papers.

## 5.5 CREATIVE ACCOMPLISHMENTS

N/A

## 5.6 NON-REFEREED (OR LIGHTLY REVIEWED) PUBLICATIONS

- CHI EA 2020 Aaron Tabor, Ian C. J. Smith, Scott Bateman, Josh Andres, Andrés Mejía Figueroa, and m.c. schraefel. 2020. 3rd Body As Starting Point Workshop: Exploring Themes for Inbodied Interaction Research and Design. In Extended Abstracts of the 2020 CHI Conference on Human Factors in Computing Systems (CHI EA 20). Association for Computing Machinery, New York, NY, USA, 1-8. DOI:<https://doi.org/10.1145/3334480.3375170>
- UbiComp 2019A Connor Wilson, Aaron Tabor, Scott Bateman. Diversifying Pro-Environmental Behaviours Redesigning Applications to Incorporate Environmental “Spill-over”. In the Proceedings of the Workshops of UbiComp 2019. London, UK. Sept. 9, 2019. 4 pages.
- UbiComp 2019B Aaron Tabor, Connor Wilson, Scott Bateman. Designing to Support Uncomfortable Breathing Exercises: Ethical Considerations. In the Proceedings of the Workshops of UbiComp 2019. London, UK. Sept. 9, 2019. 4 pages.
- BigVis 2019 Alex Watson, Scott Bateman, Suprio Ray. PySnippet: Accelerating Exploratory Data Analysis in Jupyter Notebook through Facilitated Access to Example Code. In the Proceedings of the Workshops of the EDBT/ICDT 2019 Joint Conference (EDBT/ICDT 2019). Lisbon, Portugal, March 26, 2019. 4 pages. [http://ceur-ws.org/Vol-2322/BigVis\\_8.pdf](http://ceur-ws.org/Vol-2322/BigVis_8.pdf)
- UIST 2018 Martin Feick, Anthony Tang, and Scott Bateman. 2018. Mixed-Reality for Object-Focused Remote Collaboration. In The 31st Annual ACM Symposium on User Interface Software and Technology Adjunct Proceedings (UIST '18 Adjunct). ACM, New York, NY, USA, 63-65. DOI: <https://doi.org/10.1145/3266037.3266102>
- Tech Report 2018 Scott Bateman, Carl Gutwin, Manasi Shah, Nathaniel Brewer. Supporting Visual Search and Spatial Memory in a Mobile Application Launcher. University of New Brunswick Technical Report. TR18-240. October 2018.

- Sci. Atlantic 2017 Manasi Shah, Nathaniel Brewer, Scott Bateman, Carl Gutwin. SpaceLaunch: A Faster App Launcher that Leverages Spatial Memory. Abstract presented at the Science Atlantic Computer Science Conference. Fredericton, NB. Oct. 13th-14th, 2017. My student Shah was awarded the Science Communication Award.
- Sci. Atlantic 2017 Nathaniel Brewer, Scott Bateman. The Development of SpaceLaunch: A Faster App Launcher Developed in Unity. Abstract presented at the Science Atlantic Computer Science Conference. Fredericton, NB. Oct. 13th-14th, 2017. My student Brewer was awarded 2nd best oral presentation.
- Sci. Atlantic 2017 Jason Wuertz, Scott Bateman. Understanding the Design of Non-Verbal Communication Tools through Studying Games. Abstract presented at the Science Atlantic Computer Science Conference. Fredericton, NB. Oct. 13th-14th, 2017.
- Sci. Atlantic 2017 Jawad Refai, Scott Bateman, Michael Fleming. Assistance Techniques in Video Games. Abstract presented at the Science Atlantic Computer Science Conference. Fredericton, NB. Oct. 13th-14th, 2017
- Sci. Atlantic 2017 Ian Smith, Santinder Gill, Erik Scheme, Scott Bateman. Improving gait through sensed cane feedback. Abstract presented at the Science Atlantic Computer Science Conference. Fredericton, NB. Oct. 13th-14th, 2017.
- CHI Play WIP 2016 Aaron Tabor, Scott Bateman, Erik Scheme. Game-Based Myoelectric Training. In the Extended Abstracts of the ACM SIGCHI Annual Symposium on Computer-Human Interaction in Play (CHI PLAY 2016). October 16-19, 2016. Austin, TX. 299-306.  
<https://doi.org/10.1145/2968120.2987731>
- Sci. Atlantic 2015 Jason Wuertz, Nikita Volodin, Scott Bateman. DOTA 2 as Platform for Human-Computer Interaction Research. Abstract presented at the Science Atlantic Computer Science Conference. Wolfville, NS. Oct. 23rd-25th, 2015. My student (Wuertz) was awarded 2nd best oral presentation.
- Sci. Atlantic 2014 Nikita Volodin, Scott Bateman, Carl Gutwin. A Flexible Programming Framework for Multi-Display Environments. Abstract presented at the Science Atlantic Computer Science Conference. Saint John, NB. Oct. 3rd-5th, 2014. My student Volodin was awarded 2nd best oral presentation.
- CHI-WIP 2014 Richard Tang, Hesam Alizadeh, Anthony Tang, Scott Bateman, Joaquim Jorge. Physio@ Home: design explorations to support movement guidance. In the Extended Abstracts on Human Factors in Computing Systems (CHI'14), 1651-1656.
- CSCW 2012 Expressiveness Matters in Command & Control Visualization. Proceedings of the Collaboration and Crisis Informatics Workshop, held at the 2012 ACM Conference on Computer Supported Collaborative Work (CSCW 2012). February 11-15th, 2012, Seattle, WA., USA. 4 pages.

- HCIR 2011 Scott Bateman, Carl Gutwin, Gordon McCalla, Ryen White. Collective Information Seeking: Supporting Search with Low-Cost Activity Sharing and Collaboration. Proceedings of the Fifth Workshop on Human-Computer Interaction and Information Retrieval (HCIR 2011). Oct. 2011. Mountain View, CA, USA. 4 pages.
- CSCW DC 2010 Scott Bateman. (2010) Using Group Interaction History in the Wild. Extended Proceedings of the Doctoral Colloquium of the 2010 ACM Conference on Computer Supported Collaborative Work (CSCW 2010). February 6 -10, 2010. Savannah, USA. pp. 523 - 524.
- HCI-ED 2010 Christopher Brooks, Scott Bateman, Jim Greer, Carl Gutwin. Improving the Video Timeline for Educational Video Content. In the Proceedings of the Workshop on HCI and Education, held at the ACM Conference on Human Factors in Computing Systems (CHI 2010), April 10-15, 2010. Atlanta, GA, USA. 4 pages
- Tech Rep. 2009 Scott Bateman, Regan Mandryk, Carl Gutwin, Robert Xiao. Investigation of Targeting-Assistance Techniques for Distant Pointing with Relative Ray Casting. Technical Report 3-2009, Department of Computer Science, University of Saskatchewan. 8 pages. Published December 14, 2009.
- ITS-W 2008 Scott Bateman, Christopher Brooks, Gord McCalla, Jim Greer. Learning Object Metadata: From the locally prescribed to the socially derived. In the Workshop for Semantic-Web Resource Repository Design, Search, and Management. Conference on Intelligent Tutoring Systems (ITS 2008). June 23, 2008. Montreal, Canada. 10 pp.
- SWUI 2008 Scott Bateman, Jelena Jovanovic, Carlo Torniai, Dragan Gasevic, Marek Hatala. Combined Usage of Ontologies and Folksonomies in E-learning Environments. In the Proceedings of the Semantic Web User Interaction Workshop held in conjunction with ACM Conference on Human Factors in Computing Systems (CHI 2008). Florence, Italy. April 5, 2008. 4 pages.
- LORNET 2006C Scott Bateman, and Gordon McCalla Collective Intelligence in E-Learning. Technical System Demonstration in the Demo Competition at the International Scientific Conference of the Learning Object Repository Research Network (LORNET 2006). Montreal, Canada. November 8-10, 2006. Awarded 1st Place in the Demo Competition.

#### **OTHER SUPERVISED STUDENT CONTRIBUTIONS**

- CHI Play SDC 2016 Aaron Tabor, Alex Kienzle, Carly Smith, Alex Watson, Jason Wuertz, David Hanna. The Fall of Momo: A Myo-Electric Controlled Game to Support Research in Prosthesis Training. Paper and demonstration accepted in the Student Design Competition Track at The ACM SIGCHI Annual Symposium on Computer-Human Interaction in Play (CHI PLAY 2016). October 16-2016. Austin, TX. ACM Press. **Awarded Best Game in the Student Demo Competition.**

#### **5.7 a) MANUSCRIPTS SUBMITTED**

N/A

### 5.7 b) MANUSCRIPTS IN PREPARATION

Six manuscripts in preparation for various journal or conference submissions.

### 5.8 PAPERS PRESENTED AT PROFESSIONAL AND TECHNICAL MEETINGS

Note: All conference publications listed above result in an invited presentation at the conference. In all cases first authors of the above conference papers presented at the conference.

### 5.9 PRESENTATION OF SEMINARS, CLINICS, WORKSHOPS

- 2018            Can video games inform the design of rehabilitation technology? Invited talk in the Institute of Biomedical Engineering seminar series. UNB, Fredericton, NB. November 14, 2018.
- ENGspire. Public panel presentation on path to a research career. Invited by the Atlantic Student Research Journal. Fredericton, NB. October 20, 2018.
- Sketching for System Design. Public tutorial presented at the NextGenUX Workshop and cast live online. Fredericton, NB. April 19-20, 2018.
- 2017            Research in the UNB HCI Lab. Public Seminar presented to the School of Mathematical and Computational Sciences at the University of Prince Edward Island, Nov. 27, 2017.
- Serious-ification: Doing “Serious” HCI Research... Based on Video Games. Invited talk for the Dept. of Computer Science at the University of Calgary. May 2017.
- 2015            An NSERC Engage Success Story: A collaboration between UPEI and nGauge, Inc. Presentation to the NSERC Atlantic Advisory Committee. May 2015, Charlottetown, PEI.
- Cloud Computing. Presentation and panel discussion for the Charlottetown Chapter of Canada’s IT Professional Society (CIPS) meeting April 2015.
- 2014            Why PEI for IT? Presentation and panel discussion for the Charlottetown Chapter of Canada’s IT Professional Society (CIPS) meeting April 2014.
- 2013            Social Feedback: Designing Interfaces for Learning from Shared Interaction History. Department of Computer Science Seminar, University of Calgary, Calgary, AB, June 18th, 2013.
- The Science of Fun Interactions. Invited talk presented to Spielo International, Moncton, NB, January 25th, 2013.

- 2012 Social Feedback: Learning from Shared Interaction History. Invited talk presented to the Interactive Information Retrieval Group at University of North Carolina, Chapel Hill, N.C., November 5th, 2012.
- Social Feedback: Learning from Shared Interaction History to Support Information Seeking on the Web. Department of Computer Science Seminar, University of Saskatchewan, Saskatoon, SK, August 2nd, 2012.
- Social Feedback: Learning from Shared Interaction History. Invited talk presented at Microsoft Research, Redmond, WA, April 5th, 2012.
- Target Assistance and Social Feedback: Two Approaches for Improving Performance with Interactive Systems. Invited talk presented at AT&T Research, Florham Park, NJ, March 26th, 2012.
- Social Feedback: Learning from Shared Interaction History. Invited talk presented to the Collaborative User Experience Group, IBM Research, Cambridge, MA, January 30th, 2012.
- 2010 What I Wish I Had Known Before I Started as a Graduate Student Sessional Instructor. Invited Panelist. Presented to the Graduate Student Teaching and Learning Workshop, University of Saskatchewan, September 1, 2010.
- 2007 Effectively Describing and Using Web Resources Invited talk presented to the PAWS Lab, at the University of Pittsburgh, April 2, 2007.
- 2007 The Web After 20 Years: A Convergence or Divergence of Ideas. Invited talk presented at the Saskatchewan Interactive Conference, Saskatoon, Saskatchewan, March 8, 2007.
- 2006 How Can We Describe and Use Digital Learning Materials More Effectively? Invited talk presented to Adaptive Web Systems Group at the University of Leeds, UK, September 5, 2006.

**5.10 CONSULTING ACTIVITIES, PROFESSIONAL SERVICES TO GOVERNMENTAL, PROFESSIONAL & INDUSTRIAL ASSOCIATIONS, EDUCATION INSTITUTIONS, GRANTING AGENCIES, ETC.**

**EXTERNAL PROGRAM REVIEWER**

- 2018 Academic External Reviewer for the Bachelor of Information Technology in Interactive Media and Design Program, Carleton University, November 2018.

**EXTERNAL GRANT REFEREEING**

- 2020 MITACS Accelerate Grant Review. Reviewed applications for a Canadian faculty member's application to the MITACS Accelerate programme. 1 applications.

- 2019 NSERC Collaborative Research and Development Grant Review. Reviewed applications for a Canadian faculty member's application to the NSERC CRD programme. 1 application.
- MITACS Accelerate Grant Review. Reviewed applications for a Canadian faculty member's application to the MITACS Accelerate programme. 2 applications.
- NSERC Discovery Grant Review. Reviewed application for a Canadian faculty member's application to the Discovery Grant programme. 2 applications.
- 2018 MITACS Accelerate Grant Review. Reviewed applications for a Canadian faculty member's application to the MITACS Accelerate programme. 2 applications.
- NSERC Discovery Grant Review. Reviewed application for a Canadian faculty member's application to the Discovery Grant programme. 2 applications.
- 2017 NSERC Strategic Partnership. Reviewed application to NSERC's Strategic Partnership programme. 1 application.
- NSERC Discovery Grant Review. Reviewed application for a Canadian faculty member's application to the Discovery Grant programme. 1 application.
- 2016 2016 MITACS Converge Grant Review. Reviewed applications for a Canadian faculty member's application to the MITACS Converge programme. 1 application.
- 2016 MITACS Accelerate Grant Review. Reviewed applications for a Canadian faculty member's application to the MITACS Accelerate programme. 1 application.
- 2016 NSERC Discovery Grant Review. Reviewed application for a Canadian faculty member's application to the Discovery Grant programme. 1 application
- 2014 Canadian Foundation for Innovation Grant Review Committee Member. Reviewed 6 applications for major infrastructure grants (\$2-\$16 million) for several Canadian Universities. Attended and discussed applications with the review committee in Toronto (Sept. 2014).

#### **5.11 AWARDS(GRANTS,CONTRACTS, FELLOWSHIPS)**

- 2020 - 2024 NSERC Discovery Grant. Mixed Reality Groupware. (5 years; \$205,000; 100% of award)
- 2020 - 2022 NSERC CRD. To support Reducing Cognitive Load and Increasing Usability in Mixed Reality Collaboration with Kognitiv Spark (\$150,000; 100% of award).
- 2019 - 2021 MITACS Accelerate. To develop patient-facing information displays for VeroSource, Fredericton, NB (total value: \$333,333; 15% of award).
- NBIF Concept Innovation Grant. To support research project Improving Community Engagement in the Maker Movement (\$55,000; 100% of award).

- MITACS Accelerate. To support post-doctoral fellow, Cora Woolsey, to support Community Engagement in the Maker Movement with The Ville Cooperative (\$55,000; 100% of award).
- 2014 - 2020 NSERC Discovery Grant. To investigate the Use of Social Feedback in Information Work (\$150,000; \$25,000/year; 100% of award).
- 2018 - 2020 MITACS Accelerate Cluster. To develop interactive gesture detection and use for wrist worn EMG device for Pison, Boston, USA (total value: \$240,000; 25% of award).  
MITACS Accelerate. To support research intern Cassandra Folkins, to develop an educational serious game for New Brunswick Association of Nursing Homes (total value: \$40,000; 50% of award).
- 2019 Research Contract. To investigate interactive surface identification in heads-up-display technology for Kognitiv Spark (\$48,000; 100% of contract).
- 2018 NSERC Engage. To investigate the use and representation of deixis in remote augmented reality-based collaboration (\$25,000; 100% of award).  
Harrison McCain Foundation Young Scholars Award. To support the Building Therapeutic Relaxation Games project (\$19,125; 100% of award).  
Technology Innovation Grant. National Research Council Canada, for investigation of Drone technology for Flaigh, Inc (Fredericton, NB) (\$5,250; 100% of contract).
- 2015 - 2017 NBIF Start-up Award. Start-up funding to support infrastructure and students at the University of New Brunswick (\$100,000; 100% of award).
- 2017 Harrison McCain Foundation Visiting Professorship Award. Competitive Award from the McCain Foundation to support a research visit by Prof. Rainer Herpers of Bonn-Rhein-Sieg University of Applied Sciences, Germany (\$10,000; 100% of award).
- 2016 NBIF Innovation Voucher. New Brunswick Foundation for Innovation research contract to investigate information visualization technology with Remsoft, Inc (Fredericton, NB) (\$27,758; 100% of award).  
Technology Innovation Grant. National Research Council Canada, for investigation information visualization technology with EvaluPlan Consulting (Fredericton, NB) (\$5,250; 100% of contract).
- 2014-2015 Tri-Council New Award Recognition. Awarded by UPEI in support of continued research success (1 course release/year; 5 years). Declined after year 1.  
NSERC SurfNet Special Funding. For the creation and support of the Web Application Framework for Multi-Surface Games (GAMS API), with Carl Gutwin (Univ. of Saskatchewan) (\$25,000; 50% of award).

- NSERC Engage Grant. For investigating the use of Crowdsourcing to identify sales leads with nGauge, Inc. (\$24,604.00; 100% of award)
- 2015 Canadian Excellence Research Chair (CERC) Seed Grants. For Model Support for Treatment Strategies in Managing Sea Louse Parasites and Evolution of Resistance on Atlantic Salmon Farms. Revie, C. (PI), Co-investigators: MacEwan, G., Groner, G., Fast, M., and Bateman, S. (\$19,948; 0% of award)
- NSERC Engage Grant. For investigating augmented reality in mobile video collaboration with XMG Studio, Inc. (Toronto, ON) (\$24,875.00; 100% of award)
- Technology Innovation Grant. National Research Council Canada, for investigation object recognition through web technology with XMG Studio, Inc. (Toronto, ON) (\$5,250; 100% of contract).
- 2013 - 2014 NSERC SurfNet Special Funding. For the creation and support of the Web Application Framework for Multi-Surface Environments (WAMS API), with Carl Gutwin (Univ. of Saskatchewan) (\$25,000; 50% of award).
- 2014 GRAND Grant. To support projects within the GRAND National Centre of Excellence. (\$23,669.00; 100% of award).
- Technology Innovation Grant. National Research Council Canada, for investigation of the design of a crowd-funding equity platform with industrial partner Rocklyn Foundation. (Moncton, NB) (\$5,250; 100% of contract).
- Technology Innovation Grant. National Research Council Canada, for investigation of Energy Consumption Feedback Appliance with industrial partner Reinvented, Inc. (Charlottetown, PE) (\$5,250; 100% of contract).
- 2013 Young Network Investigator. GRAND National Centre of Excellence (\$5,000; 100% of award).
- Technology Innovation Grant. National Research Council Canada, for investigation of mobile interfaces with industrial partner Hotpot Parking (Fredericton, NB) (\$2,625; 50% of contract) with David Leblanc (UPEI).
- Technology Innovation Grant. National Research Council Canada, for investigation of mobile interfaces with industrial partner nGauge (Moncton, NB) (\$3,500; 100% of contract).
- Major Research Grant. University of Prince Edward Island. Social Feedback to Support Computer Programming (\$6,600; 100% of award).
- Collaborating Researcher. SurfNet NSERC Strategic Network.
- 2012 Start-up Grant. University of Prince Edward Island (\$9,500; 100% of award).

## 5.12 OTHER EVIDENCE OF RESEARCH ACCOMPLISHMENTS

N/A

### **5.13 MEMBERSHIP AND ACTIVE INVOLVEMENT IN PROFESSIONAL AND LEARNED SOCIETIES**

Member of the ACM – Association of Computer Machinery

Member of ACM SIGCHI – Special Interest Group of Human-Computer Interaction

### **5.14 RECORD OF PURSUIT OF ADVANCED DEGREES AND/OR FURTHER ACADEMIC STUDY**

N/A

## **SECTION 6 | SERVICE**

### **6.1 SERVICE TO THE UNIVERSITY**

#### **Committees (list level, committee name, dates)**

UNB, Faculty of CS – Graduate Committee Member (2018-19, 2019-20)

UNB – Inter-Faculty Committee (IFAC) Member (2017-18)

UNB, Faculty of CS – Vision Committee Member (2017-18, 2018-19)

UNB, UNB, Faculty of CS – Second Year Advisor (2019-20)

UNB, Faculty of CS – CS Square Committee (2019-20)

UNB, Faculty of CS – Assessment Committee Member (2017-18, 2019-20)

UNB, Faculty of CS – Science Atlantic Committee (2015-19)

UNB, Faculty of CS – Programming Team Committee (2015-19)

UNB, Faculty of CS – Recruitment Committee (2015-16, 2016-17)

UNBT – FCS Representative for the Collective Agreement Bargaining Committee (2016)

UNB – Senate Admissions Committee (2015-16)

#### **Administrative Positions (list position, dates)**

N/A

### **6.2 SERVICE OUTSIDE THE UNIVERSITY OF SCHOLARLY OR ACADEMIC SIGNIFICANCE**

- Community Affairs as a Representative of the University

- Service to Governmental Agencies

**Service to Public or Private Organizations and Companies**

N/A

**SECTION 7 | OTHER RELEVANT INFORMATION**

**7.1 TECHNICAL CONTRIBUTIONS**

The technical developments used in research in own work and the work of my research group the HCI Lab is posted publicly to our Github repositories (software repositories) publicly as open source projects. This is to promote the dissemination of knowledge and the replicability of our research findings. Please see:

<https://github.com/scottbateman> and <https://github.com/hcilab>

**7.2 OUTREACH WORK TO SCHOOL AGED CHILDREN**

- 2020            Computer Science Video Game Summer Camp and Maker Camps. Organized six, one-week summer camps for middle and high school-aged children, in collaboration with the Ville Cooperative. Teaching the fundamentals of computer science through fun and engaging video game and electronics-based activities. Cancelled due to COVID-19.
  
- 2019            Computer Science Video Game Summer Camp. Organized four, one-week summer camps delivered to ~50 middle and high school-aged children. Teaching the fundamentals of computer science through fun and engaging video game-based activities.
  
- 2018            Computer Science Video Game Summer Camp. Organized two, one-week summer camps delivered to 38 middle school-aged children. Teaching the fundamentals of computer science through fun and engaging video game-based activities.
  
- 2017            Interacting with Software. Interactive presentation and demo of interactive software and research activities in the UNB Human-Computer Interactions Lab. Presented to grade 8 class from Woodstock, NB.
  
- 2016            Introduction to Computer Science with SonicPi. Prepared and delivered and introductory programming exercise for approximately 60 middle school students at George Street Elementary School, Fredericton, NB.  
  
                  Introduction to Programming through Data Analysis. Prepared and delivered an introductory programming exercise for two groups of middle school and high school students, attending the Fredericton River Valley Regional Science Fair.  
  
                  2016 Interacting with Software. Interactive presentation and demo of interactive software and research activities in the UNB Human-Computer Interactions Lab. Presented to grade 8 class from Bliss Carman School.

- 2015 Hour of Code Mentor. Volunteered to provide hour of code mentorship and instruction to a grade two class (Mrs. MacKay) at New Maryland Elementary School.
- Making Games with Scratch. Introductory tutorial and hands-on activities about how to use Scratch to make games. Presented to grades 5 and 6 at Spring Park School, Charlottetown.
- Hour of Code Mentor. Volunteered to provide hour of code mentorship and instruction to a grade two class (Mrs. MacKay) at New Maryland Elementary School.
- Making Games with Scratch. Introductory tutorial and hands-on activities about how to use Scratch to make games. Presented to grades 5 and 6 at Spring Park School.
- 2014 The Charlottetown Maker Co-operative. Established a group of interested faculty and members of the community to establish a community-based maker space in Charlottetown. The maker space opened in 2015 and offer community run courses in computer programming, electronics, 3D printing and making.
- 2013 Introduction to Programming Games in Scratch and Python. Outreach course. I designed and taught an outreach course for fifteen children, aged 12-15. The course taught introductory programming skills and exposed students to Computer Science. The course consisted of eight, 1.5 hour classes, and was held at Stone Park Junior High School, Charlottetown, PEI.
- Making Your Interface C.R.A.P. Outreach talk presented to the Charlottetown Chapter of Canada's IT Professional Society (CIPS) meeting. January, 2013.
- 2010 Consider Studying Interactive Systems and Computer Science at University. Outreach presentation given to an eleventh-grade computer class, promoting the study of Computer Science and Interactive Systems at university. December 16th, 2010 at Colonel Gray High School, Charlottetown, PE, in Mr. Michael Peterson's class.

### 7.3 CONFERENCE CHARING

- 2020 Masterclass Track Co-Chair of the ACM CHI Play Conference. Ottawa, Ontario, November 15, 2020.
- 2017 Technical Program HCI Chair of the 2017 International Conference on Computer Graphics and Interactive Techniques (Graphics Interface 2017). Edmonton, AB. May 2017.
- 2017 Organizing Co-Chair for 2017 Conference for Mathematics, Statistics and Computer Science (Science Atlantic). Fredericton, NB. October 2017.

### 7.4 CONFERENCE SESSION CHARING

N/A

### 7.5 OTHER ACADEMIC ACTIVITIES

N/A

## 7.6 MEDIA COVERAGE, INTERVIEW OR EXPERT OPINION

- 2019 "UNB Student uses Augmented Reality to Help Amputees" CTV Live at Five, <https://atlantic.ctvnews.ca/video?clipId=1634092&jwsourc=cl> March 19, 2019.
- 2018 "Facebook Breach" Maritime Noon, CBC Radio One (to all maritime provinces), 1 hour, radio phone-in-show. March 27, 2018.  
2018 "Facebook breach not scaring away users: experts". Michael Staples, The Daily Gleaner (newspaper), Fredericton, New Brunswick. March 23rd, 2018.
- 2017 "UNB prof seeks to level the playing field in video games for out-of-touch parents" by Joseph Tunney, CBC Website, December 16, 2017. <http://www.cbc.ca/news/canada/new-brunswick/unb-computer-science-video-game-balancing-1.4450416>  
Radio Interview about player balancing research in the UNB HCI Lab by Joseph Tunney, aired on CBC Radio One in New Brunswick. December 16, 2017.
- 2016 "UNB's Scott Bateman Helps Humans and Computers Communicate" by Cara Smith, Huddle, June 20, 2016. <http://huddle.today/scott-bateman/>
- 2015 Interviews on the need for teaching Computer Science in grade school. Interviewed by 9 separate CBC Radio morning show hosts from across Canada. CBC Radio. March 24, 2015.

## 7.7 EXTERNAL REVIEWING FOR CONFERENCES, PEER-REVIEW WORKSHOPS & JOURNALS

Venue – year (# of papers) Total: 139

- Communications of the ACM – 2012 (1), 2013 (2), 2014 (1), 2016(2), 2017 (1)
- Oxford University Press – Book Proposal Review – 2019 (1)
- Journal of Applied Cognitive Psychology – 2013 (1)
- ACM Transactions on the Web (TWEB, Journal) -2011 (1)
- Int. Journal of Human-Computer Studies (IJHCS) – 2009 (1), 2010 (2), 2013 (1), 2014 (1), 2016 (1), 2017 (3), 2018 (1)
- Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT) – 2018 (2)
- IEEE Transactions on Visualization and Computer Graphics – 2016 (2), 2017 (1), 2020 (1)
- International Journal of Artificial Intelligence in Education – 2020 (2)
- Journal of Systems and Software – 2010 (1)
- IEEE Transactions on Learning Technology – 2010 (1)

- Journal of Interactive Learning Environments – 2009 (1)
- ACM CHI – 2009 (4), 2010 (2), 2011(4), CHI 2012 (6), CHI 2013 (5), CHI 2014 (7), 2017(7)
- ACM CHI Work-in-progress – 2015 (3)
- ACM CHI Student Research Competition – 2015 (2)
- ACM CSCW – 2008 (1), 2010 (1), 2011 (1), 2012 (1), 2013 (2), 2014 (4), 2015 (3), 2018 (2)
- ACM CHI-IR – 2016 (3)
- ACM TEI – 2015 (1), 2017 (1)
- ACM DIS – 2014 (1), 2016 (1), 2020 (1)
- IEEE InfoViz – 2012 (1), 2013 (1), 2014 (2)
- Symposium on Human-Computer Information Retrieval – 2011 (3)
- ACM ISS – 2013 (1), 2014 (1), 2018 (1)
- Information Interaction in Context Symposium (IIX) – 2012 (2), 2014 (4)
- ACM UIST User Interface and Software Technology – 2010 (2), 2015 (1)
- ACM Intelligent Tutoring Systems – 2011 (2)
- Extended Semantic Web Conference – 2010 (2), 2011 (1)
- Graphics Interface – 2008 (1), 2011 (2), 2013 (3), 2018 (1)
- Workshop on Adaptation for the Social Web – 2008 (3)
- Int. Workshop on Interacting with Multimedia Content in the Social Semantic Web – 2008 (3)
- International Learning Object Research Network Conference – 2007 (2)
- European Conference on Technology Enhanced Learning – 2007 (2), 2009 (2)
- International Conference of Artificial Intelligence in Education – 2007 (3)
- Workshop on Data Mining for User Modeling – 2007 (1)