
Craig Anslow

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RESEARCH INTERESTS

Software Engineering: Software Visualization, Software Development Tools, Empirical Software Engineering, Human Aspects of Software Engineering, Usability and Evaluation of Programming Languages
Human Computer Interaction: Information Visualization, Visual Analytics, Interactive Surfaces, CSCW

EDUCATION

Victoria University of Wellington, New Zealand
PhD, Software Engineering 2008-2013
Thesis: *Collaborative Software Visualization in Co-located Environments*
Supervisors: James Noble, Stuart Marshall, and Robert Biddle
MSc, Computer Science 2006-2007
Thesis: *Evaluating X3D For Use in Software Visualization*
Supervisors: James Noble and Robert Biddle
BSc (Honours), First Class, Computer Science 2002
Report: *XML Database Support for Program Trace Visualization*
Supervisors: James Noble and Robert Biddle
BSc, Computer Science 1999-2001

PROFESSIONAL EXPERIENCE

Lecturer (Assistant Professor) March 2017 -
School of Engineering and Computer Science, Victoria University of Wellington Wellington, New Zealand

- I teach on the ICT Grad School programme and conduct research in the areas of Human Computer Interaction, Software Engineering, and Visualization. I co-lead the Human Computer Interaction (HCI) Research Group.

Senior Postdoctoral Research Fellow January 2015 - January 2017
Department of Computer Science, Middlesex University London, UK

- Worked on the FP7 VALCRI project to research and develop natural user interfaces for the next-generation visual analytics-based criminal intelligence (Police) analysis applications to assist law enforcement agencies. I was responsible for the touch based interface, hardware design, and analytical provenance for sensemaking. The project had 18 partners from all across Europe including law enforcement agencies from Belgium and UK.

Postdoctoral Research Fellow January 2014 - December 2014
Department of Computer Science, University of Calgary Calgary, Canada

- Worked on developing a novel emergency management system for operations centres involving natural user interfaces, visual analytics, and big data within a multi-surface environment.
- Taught SENG 515-615 (undergraduate and graduate) course on Agile Software Engineering.
- Successfully wrote a NSERC CRD research grant for next generation emergency operations centres (\$378K CAD) and a Mitacs Accelerate research grant (\$15K CAD).
- Continue to co-supervise and mentor one PhD student. Supervised one masters student to completion.

Postdoctoral Research Fellow August 2013 - December 2013
School of Engineering and Computer Science, Victoria University of Wellington Wellington, New Zealand

- Collaborated with Oracle Labs in developing and evaluating a novel software visualization application.

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- Independent Consultant** January 2009 - December 2013
VUI Consultants *Wellington, New Zealand*

 - Consulted for various clients on the design of visualization and multi-touch applications for: Te Papa Museum of NZ, NextWindow, IceAV, Fingertapps, 2Touch, ClickSuite, Story Inc, and Victoria University of Wellington.
 - Research Assistant** March 2008 - March 2013
School of Engineering and Computer Science, Victoria University of Wellington *Wellington, New Zealand*

 - Worked on research projects for my PhD supervisors and co-supervised undergraduate and masters students.
 - Research Intern** June 2007 - February 2008
SAP Research *Palo Alto, California, USA*

 - Integrated MediaWiki technology with SAP's business applications (Business By Design).
 - Software Developer** October 2005 - October 2006
Unisys *Wellington, New Zealand*

 - Developed a real time telco billing software application and maintained a subscriber provisioning application.
 - Change Coordinator** February 2005 - October 2005
Unisys *Wellington, New Zealand*

 - Provided ITIL services for change, release, and configuration management to New Zealand Government clients.
 - Web Developer** April 2003 - December 2004
Marketing Group, Victoria University of Wellington *Wellington, New Zealand*

 - Enhanced the University's corporate web site by providing technical web expertise services to departments.

TEACHING EXPERIENCE

- Lecturer** March 2017 – present
School of Engineering and Computer Science, Victoria University *Wellington, New Zealand*

 - SWEN 131 - Programming for Software Development
 - SWEN 501 - Professional Programming Skills
 - SWEN 502 - Software Development Studio I
 - SWEN 503 - Software Development Studio II
- External Lecturer** February 2016 – present
Department of Computer Science, University of Oxford *Oxford, UK*

 - I teach the Agile Methods (AGM) course as part of the Professional Masters in Software Engineering Programme. The course focuses on understanding the theory and practice of Agile methods.
- Lecturer** Winter 2014
Department of Computer Science, University of Calgary *Calgary, Canada*

 - SENG 515 Agile Software Engineering (Undergraduate) and SENG 615 Agile Software Engineering (Graduate)
- Teaching Assistant** 2001-2003 and 2009
School of Engineering and Computer Science, Victoria University *Wellington, New Zealand*

 - COMP205 Software Design and Engineering 2009
 - COMP389 Software Engineering Project 2002-2003
 - COMP301 Software Engineering Principles 2003
 - COMP302 Databases 2002
 - COMP130 Introduction to Computers and Applications 2001

STUDENT SUPERVISION

- School of Engineering and Computer Science, Victoria University of Wellington** 2017 - present
I supervised the following students: Wellington, New Zealand
- Benjamin Powley, MSc, *Viusal recommender technology for exploratory analytics: predicting forests futures* 2018
(with David Pearce and Ralf Gommers)
 - Jonathan Carr, Summer Research Assistant, *Visualizing Network Traffic* (with Chris Vallyon) 2017
 - Ben Selwyn-Smith, Summer Research Assistant, *Virtual Reality Simulation for Radiation Therapy Education* 2017
(with Brian Robinson)
 - Ben Selwyn-Smith, MCompSci, *Tabletop Grace* (with Michael Homer) 2017
 - Aaron Pang, BE(Hons), *Why do programmers do what they do?* (with James Noble) 2017
 - Jiaheng Wang, BE(Hons), *Understanding SDAZ – Mouse vs. Touch vs. 3D Gestures* 2017
- Department of Computer Science, University of Oxford** 2017 - present
- Alai Johannes, MSc, *Mob Programming in Practice* 2017
- Department of Computer Science, Middlesex University** 2015 - 2016
I assisted the following students on projects with William Wong and Kai Xu: London, UK
- Junayed Islam, PhD, *Visualization for Analytic Provenance* 2015-2016
 - Celeste Groenewald, PhD, *3D Mid-Air Gestures Literature Review* 2015-2016
- Department of Computer Science, University of Calgary** 2014 - 2017
I co-supervised the following students with Frank Maurer: Calgary, Canada
- S M Sohan, PhD, *Web Services API Evolution* 2014-2017
 - Mahshid Marbouti, PhD, *Emergency Management Analytics* 2014-2017
 - Rahul Bhaskar, MSc, *Exploring a Process for Developing Usable Web APIs: A Case Study* 2014-2015
 - Simon Fay, PhD Candidacy Examiner, *Algorithmic performance system for the improvisation of computer music* 2014
- School of Engineering and Computer Science, Victoria University of Wellington** 2008 - 2013
I assisted the following students with James Noble and Stuart Marshall: Wellington, New Zealand
- Fahmi Abdulhamid, ME Thesis, *SpEx: A Tool for Visualising and Navigating Speech Audio* 2013
 - Daniel Cope, ME Thesis, *A Multi-Touch Explorer Environment for Eclipse* 2013
 - Yi-jing Chung, MSc Thesis, *Improving Accuracy and Efficiency of Hand Gestures on Multi-Touch Devices* 2012
 - Daniel Cope, BE(Hons), *Navigating 3D Worlds via 2D Multi-Touch Interfaces* 2011
 - Matthew Crisp, BE(Hons), *e-Wall: a Multi-Touch Agile Story Wall* 2011
 - Marco Costantini, BE(Hons), *Multi-touch Real Time Strategy Games* 2011
 - Haowei Ruan, Post-Grad Diploma, *Exploring the Inventor's Paradox: Applying Jigsaw to Software Visualization* 2010
 - Amy Chard, BSc(Hons), *Multi-Display Environments: S.M.L.XL* 2010
 - Hien Tran, BE(Hons), *Automated Analysis of Map Labelling for GIS Users with Tabletops* 2010
 - Nicholas Vause, BE(Hons), *Visualizing Information on the Surface of a Planet* 2010
 - Joshua Lindsay, BIT(Hons), *Software Corpus Analysis: Why are Java Classes Big?* 2009
 - Esther Ng, BIT(Hons), *Visualization of Cyber Security Time Series Data* 2008
 - Jeremy Shipman, BIT(Hons), *3D Visualization of Cyber Security Time Series Data* 2008

PUBLICATIONS

Edited Books

1. **Craig Anslow**, Pedro Campos, and Joaquim Jorge (Book Editors). *Collaboration Meets Interactive Spaces (CMIS)*. Springer, 2016.

Book Chapters

2. Martin Kropp, Judith Brown, **Craig Anslow**, Magdalena Mateescu, and Robert Biddle. Interactive Surfaces for Agile Software Development. In *Collaboration Meets Interactive Spaces (CMIS)*, Springer, 2016.
3. Alexander Nolte, Ross Brown, **Craig Anslow**, and Artem Polyvyanyy. Collaborative Process Modeling in Interactive Spaces. In *Collaboration Meets Interactive Spaces (CMIS)*, Springer, 2016.
4. Edwin Chan, **Craig Anslow**, Teddy Seyed, and Frank Maurer. Envisioning the Emergency Operations Centre of the Future. In *Collaboration Meets Interactive Spaces (CMIS)*, Springer, 2016.

Peer Reviewed Conferences

5. James R. Wallace, Saba Oji, and **Craig Anslow**. Technologies, Methods and Values: Changes in Empirical Research at CSCW 1990-2015. In *Proceedings of the ACM Conference on Computer Supported Cooperative Work & Social Computing (CSCW)*, New York City, New York, USA, 2018.
6. Karsten Lundqvist, **Craig Anslow**, Michael Homer, Kris Bubendorfer, and Dale Carnegie. An Agile Conversion Masters Degree Programme in Software Development. In *Proceedings of the ACM Special Interest Group on Computer Science Education (SIGCSE)*, Baltimore, Maryland, USA, 2018.
7. Mahshid Marbouti, **Craig Anslow**, and Frank Maurer. Evaluation Results for a Social Media Analyst Reporting Tool. In *Proceedings of the International Conference on Information Systems for Crisis Response and Management (ISCRAM)*, Rochester, New York, USA, 2018.
8. SM Sohan, **Craig Anslow**, Frank Maurer, and Martin Robillard. A Study of the Effectiveness of Usage Examples in REST API Documentation. In *Proceedings of IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC)*, Raleigh, North Carolina, USA, 2017.
9. Leonel Merino, Johannes Fuchs, Michael Hund, **Craig Anslow**, Mohammad Ghafari, Oscar Nierstrasz, Michael Behrisch, and Daniel Keim. On the Impact of the Medium in 3D City Visualizations for Software Comprehension. In *Proceedings of IEEE Working Conference on Software Visualization (VISSOFT)*, Shanghai, China, 2017.
10. Leonel Merino, Mohammad Ghafari, **Craig Anslow**, and Oscar Nierstrasz. CityVR: Gameful Software Visualization. In *Proceedings of the IEEE International Conference on Software Maintenance and Evolution (ICSME)*, Shanghai, China, 2017.
11. Angela Martin, **Craig Anslow**, David Johnson, and Robert Biddle. Teaching Agile Methods to Software Engineering Professionals: 10 Years, 1000 Release Plans. In *Proceedings of International Conference on Agile Software Development (XP)*, Cologne, Germany, 2017.
12. Martin Kropp, **Craig Anslow**, Magdalena Mateescu, and Carmen Zahn. aWall: a Large Digital Multi-touch Cardward Display for Agile Software Development. In *Proceedings of International Conference on Agile Software Development (XP)*, Cologne, Germany, 2017.
13. SM Sohan, **Craig Anslow**, and Frank Maurer. Automated Example Oriented REST API Documentation at Cisco. In *Proceedings of ACM/IEEE International Conference on Software Engineering (ICSE) (SEIP Track)*, Buenos Aires, Argentina, 2017.
14. **Craig Anslow**, John Brosz, Mike Boyes, and Frank Maurer. Datathons: An Experience Report of Data Hackathons. In *Proceedings of the ACM Special Interest Group on Computer Science Education (SIGCSE)*, Memphis, Tennessee, USA, 2016.
15. Celeste Groenewald, **Craig Anslow**, Junayed Islam, Chris Rooney, and William Wong. Understanding Mid-Air Hand Gestures for Interactive Surfaces: A Systematic Literature Review. In *Proceedings of the British Human Computer Interaction Conference (BritishHCI)*, Bournemouth, UK, 2016.
16. Junayed Islam, **Craig Anslow**, Chris Rooney, Kai Xu, and William Wong. Towards Analytical Provenance Visualization for Criminal Intelligence Analysis. In *Proceedings of the Conference on Computer Graphics & Visual Computing (CGVC)*, Bournemouth, UK, 2016.
17. Rahul Bhaskar, **Craig Anslow**, John Brosz, and Frank Maurer. Developing Usable APIs with XP and Cognitive Dimensions Framework. In *Proceedings of the IEEE International Symposium on Visual Languages / Human Centric Computing (VL/HCC)*, Cambridge, UK, 2016. (Short Paper)

18. Mahshid Marbouti, Rahul Bhaskar, Zahra Shakeri, **Craig Anslow**, Leland Jackson, and Frank Maurer. WaterVis: GeoVisual Analytics for Exploring Hydrological Data. In *Proceedings of the International Symposium on Big Data Management and Analytics (BIDMA)*, Calgary, Canada, 2016.
19. **Craig Anslow** and Frank Maurer. An Experience Report at Teaching Group Based Agile Software Engineering Teams. In *Proceedings of the ACM Special Interest Group on Computer Science Education (SIGCSE)*, Kansas City, Missouri, USA, 2015.
20. Nathan Hawes, Stuart Marshall, and **Craig Anslow**. CodeSurveyor: Mapping Large-Scale Software to Aid in Code Comprehension. In *Proceedings of the IEEE International Working Conference on Software Visualization (VISOFT)*, Bremen, Germany, 2015.
21. SM Sohan, **Craig Anslow**, and Frank Maurer. SpyREST: Automated Example Based Documentation for RESTful Web APIs. In *Proceedings of ACM/IEEE International Conference on Automated Software Engineering (ASE)*, Lincoln, Nebraska, USA, 2015. (New Ideas)
22. SM Sohan, **Craig Anslow**, and Frank Maurer. A Case Study of the Evolution of Web APIs. In *Proceedings of the IEEE International Conference on Services Computing (SERVICES)*, New York, USA, 2015.
23. Leliel Trethowen, **Craig Anslow**, Stuart Marshall, and Ian Welch. VisRAID: Visualizing Remote Access for Intrusion Detection. In *Proceedings of the Australasian Conference on Information Security and Privacy (ACISP)*, Brisbane, Australia, 2015.
24. Zahra Shakeri, **Craig Anslow**, and Frank Maurer. Multi Surface Interactions with Geospatial Data: A Systematic Review. In *Proceedings of the ACM Conference on Interactive Tabletops and Surfaces (ITS)*, Dresden, Germany, 2014.
25. Julia Paredes, **Craig Anslow**, and Frank Maurer. Information Visualization for Agile Software Development Teams. In *Proceedings of the IEEE International Working Conference on Software Visualization (VISOFT)*, Victoria, BC, Canada, 2014.
26. **Craig Anslow**, Stuart Marshall, James Noble, and Robert Biddle. SourceVis: Collaborative Software Visualization for Co-Located Environments. In *Proceedings of the IEEE International Working Conference on Software Visualization (VISOFT)*, Eindhoven, The Netherlands, 2013.
27. Hien Tran, **Craig Anslow**, Stuart Marshall, Alex Potanin, and Mairead De Roiste. Lessons Learnt from Collaboratively Creating Maps on a Touch Table. In *Proceedings of the ACM New Zealand Conference on Computer-Human Interaction (CHINZ)*, Hamilton, New Zealand, 2011. (Short Paper)
28. Keith Cassell, **Craig Anslow**, Lindsay Groves, and Peter Andreae. Visualizing the Refactoring of Classes via Clustering. In *Proceedings of the Australasian Computer Science Conference (ACSC)*, Perth, Australia, 2011.
29. Ewan Tempero, **Craig Anslow**, Jens Dietrich, Ted Han, Jing Li, Markus Lumpe, Hayden Melton, and James Noble. Qualitas Corpus: A Curated Collection of Java Code for Empirical Studies. In *Proceedings of the Asia Pacific Software Engineering Conference (APSEC)*, Sydney, Australia, 2010. ***Best Paper Award**.
30. **Craig Anslow**, James Noble, Stuart Marshall, Ewan Tempero, and Robert Biddle. User Evaluation of Polymetric Views Using a Large Visualization Wall. In *Proceedings of the ACM Symposium on Software Visualization (SoftVis)*, Salt Lake City, UT, USA, 2010.
31. Haowei Ruan, **Craig Anslow**, Stuart Marshall, and James Noble. Exploring the Inventor's Paradox: Applying Jigsaw to Software Visualization. In *Proceedings of the ACM Symposium on Software Visualization (SoftVis)*, Salt Lake City, UT, USA, 2010.
32. **Craig Anslow**, Stuart Marshall, Robert Biddle, James Noble, and Kirk Jackson. XML Database Support for Program Trace Visualization. In *Proceedings of the Australasian Symposium on Information Visualization (INVIS)*, Christchurch, New Zealand, 2004.
33. Stuart Marshall, Kirk Jackson, **Craig Anslow**, and Robert Biddle. Aspects to Visualizing Reusable Components. In *Proceedings of the Australasian Symposium on Information Visualization (INVIS)*, Adelaide, Australia, 2003.

Peer Reviewed Demos, Films, Posters, Tutorials, and Workshops

34. Ben Selwyn-Smith, Michael Homer, and **Craig Anslow**. Towards Collaborative Block-Based Programming on Digital Tabletops. In *Proceedings of the Workshop on Lessons and Directions for First Programming Environments (Blocks and Beyond)*, Raleigh, North Carolina, USA, 2017.
35. **Craig Anslow** and B. L. William Wong. Effects of the Display Angle and Physical Size on Large Touch Displays in the Work Place. In *Proceedings of the ACM International Conference on Interactive Surfaces and Spaces (ISS)*, Brighton, UK, 2017.
36. **Craig Anslow**, Stuart Marshall, James Noble, and Robert Biddle. Hacking with Multi-touch for Java (MT4j). In *Proceedings of the International Workshop on Mobile Development (Mobile!)* at SPLASH, Amsterdam, The Netherlands, 2016.
37. Patrick Lambrix, Zlatan Dragisic, Valentina Ivanova, and **Craig Anslow**. Visualization for Ontology Evolution. In *Proceedings of the International Workshop on Visualization and Interaction for Ontologies and Linked Data (VOILA)*, Kobe, Japan, 2016.
38. SM Sohan, **Craig Anslow**, and Frank Maurer. SpyREST in Action: An Automated RESTful API Documentation Tool. In *Proceedings of IEEE/ACM International Conference on Automated Software Engineering (ASE)*, Lincoln, Nebraska, USA, 2015. (Tool Demo)
39. **Craig Anslow**, Chris Rooney, Neesha Kodagoda, and William Wong. Police Analyst Workstation: A Multi-Surface User Interface. In *Proceedings of ACM Conference on Interactive Tabletops and Surfaces (ITS)*, Madeira, Portugal, 2015. (Poster)
40. Alexander Nolte, Ross Brown, and **Craig Anslow**. Towards Modelling Business Processes on Large Interactive Touch Display Walls. In *Proceedings of ACM Conference on Interactive Tabletops and Surfaces (ITS)*, Madeira, Portugal, 2015. (Poster)
41. Eelco Visser, Elmer van Chastelet, and **Craig Anslow**. Conf.Researchr.Org: Towards a Domain-Specific Content Management System for Managing Large Conference Websites. In *Proceedings of the ACM Conference on Systems, Programming, Languages and Applications: Software for Humanity (SPLASH)*, Pittsburgh, PA, USA, 2015. (Poster)
42. **Craig Anslow**, Brian Jackel, Khalid Mehmood, Paul Fairie, Adam D'Souza, Michael Underwood, and Katherine Teh. CommuterVis: Towards Understanding Commuter Behaviour. In *Proceedings of the IEEE VIS Workshop on Business Visualization (BusinessVis)*, Paris, France, 2014.
43. Rahul Kamal Bhaskar, Mahshid Marbouti, Julia Paredes, Waliur Rahmann, Ostap Orobets, Amir Karbalaee, Xuezhong Xu, **Craig Anslow**, and Frank Maurer. LibraryVis: Towards Understanding Library Resource Usage. In *Proceedings of the IEEE VIS Workshop on Business Visualization (BusinessVis)*, Paris, France, 2014.
44. Rahul Kamal Bhaskar, Julia Paredes, Zahra Shakeri, Zahra Sahaf, Haleh Alemasoom, **Craig Anslow**, and Frank Maurer. VACI: Towards Visual Analytics for Criminal Investigation. In *Proceedings of the IEEE Visual Analytics Science and Technology (VAST) Challenge Workshop*, Paris, France, 2014.
45. Zahra Sahaf, Haleh Alemasoom, Rahul Kamal Bhaskar, Julia Paredes, Zahra Shakeri, **Craig Anslow**, and Frank Maurer. TrackVis: A Visualization Tool for Analyzing Movement and Tracking Data of Criminal Activities. In *Proceedings of the IEEE Visual Analytics Science and Technology (VAST) Challenge Workshop*, Paris, France, 2014.
46. **Craig Anslow** and Frank Maurer. First Experience at Teaching Group Based Agile Software Engineering Teams. In *Proceedings of the Educators Symposium (SPLASH-E) at ACM Conference on Systems, Programming, Languages and Applications: Software for Humanity (SPLASH)*, Portland, Oregon, USA, 2014.
47. **Craig Anslow**. Reflections on Collaborative Software Visualization in Co-located Environments. In *Proceedings of the Postdoctoral Symposium at IEEE International Conference on Software Maintenance and Evolution (ICSME)*, Victoria, BC, Canada, 2014.
48. **Craig Anslow**, Stuart Marshall, James Noble, and Robert Biddle. Exploring Collaborative Software Visualization with Multi-touch Tables. In *Proceedings of the Workshop on Collaboration meets Interactive Surfaces: Walls, Tables, Tablets, and Phones at the ACM Conference on Interactive Tabletops and Surfaces (ITS)*, St Andrews, Scotland, 2013.

49. **Craig Anslow**, Stuart Marshall, James Noble, and Robert Biddle. Interactive Multi-touch Surfaces for Software Visualization. In *Proceedings of the Workshop on Data Exploration for Interactive Surfaces (DEXIS) at the ACM Conference on Interactive Tabletops and Surfaces (ITS)*, Kobe, Japan, 2011.
50. **Craig Anslow**, Stuart Marshall, James Noble, and Robert Biddle. SourceVis: A Tool for Multi-touch Software Visualization. In *Proceedings of the ACM Conference on Interactive Tabletops and Surfaces (ITS)*, Kobe, Japan, 2011. (Poster)
51. **Craig Anslow**, Stuart Marshall, James Noble, and Robert Biddle. Co-located Collaborative Software Visualization. In *Proceedings of the Workshop on Human Aspects of Software Engineering (HAoSE), at ACM Conference on Systems, Programming, Languages and Applications: Software for Humanity (SPLASH)*, Reno, NV, USA, 2010.
52. **Craig Anslow**. Multi-touch Table User Interfaces for Co-located Collaborative Software Visualization. In *Proceedings of the Doctoral Symposium at the ACM Conference on Interactive Tabletops and Surfaces (ITS)*, Saarbrücken, Germany, 2010.
53. **Craig Anslow**, James Noble, Stuart Marshall, and Ewan Tempero. Visualizing the Size of the Java Standard API. In *Proceedings of the New Zealand Computer Science Research Student Conference (NZCSRSC)*, Wellington, New Zealand, 2010.
54. John Rankin, **Craig Anslow**, James Noble, Donald Gordon, and Brenda Chawner. Wikipublisher: A Print-on-Demand Wiki. In *Proceedings of the ACM Symposium on Wikis and Open Collaboration (WikiSym)*, Orlando, FL, USA, 2009. (Poster)
55. **Craig Anslow**, James Noble, Stuart Marshall, and Ewan Tempero. Towards Visual Software Analytics. In *Proceedings of the Australasian Computing Doctoral Consortium (ACDC)*, Wellington, New Zealand, 2009.
56. **Craig Anslow**, James Noble, Stuart Marshall, and Ewan Tempero. Web Software Visualization Via Google's Visualization API. In *Proceedings of the New Zealand Computer Science Research Student Conference (NZCSRSC)*, Auckland, New Zealand, 2009.
57. **Craig Anslow** and Dirk Riehle. Towards End-User Programming with Wikis. In *Proceedings of the Workshop on End-User Software Engineering (WEUSE), at the International Conference on Software Engineering (ICSE)*, Leipzig, Germany, 2008.
58. **Craig Anslow**, James Noble, Stuart Marshall, and Ewan Tempero. Towards End-User Web Software Visualization. In *Proceedings of the Graduate Consortium at the IEEE Symposium on Visual Languages and Human Centric Computing (VLHCC)*, Herrsching am Ammersee, Germany, 2008.
59. **Craig Anslow**, James Noble, Stuart Marshall, and Ewan Tempero. Visualizing the Word Structure of Java Class Names. In *Companion of the ACM Conference on Object-Oriented Programming, Systems, Languages, and Applications (OOPSLA)*, Nashville, TN, USA, 2008. (Poster)
60. **Craig Anslow**, James Noble, Stuart Marshall, and Robert Biddle. Web Software Visualization Using Extensible 3D (X3D) Graphics. In *Proceedings of the ACM Symposium on Software Visualization (SoftVis)*, Herrsching am Ammersee, Germany, 2008. (Poster)
61. Bennett Thompson, David J. Pearce, Gary Haggard, and **Craig Anslow**. Visualizing the Computation Tree of the Tutte Polynomial. In *Proceedings of the ACM Symposium on Software Visualization (SoftVis)*, Herrsching am Ammersee, Germany, 2008. (Poster)
62. Jeremy Shipman, **Craig Anslow**, Stuart Marshall, and James Noble. Visualizing Building Evacuation Traces with EvacTrac. In *Proceedings of the IEEE Visual Analytics Science and Technology (VAST) Challenge Workshop*, Columbus, Ohio, USA, 2008.
63. **Craig Anslow** and Don Brutzman. Interactive Introduction to X3D Graphics. In *Proceedings of the European Association for Computer Graphics (Eurographics)*, Crete, Greece, 2008. (Tutorial)
64. **Craig Anslow** and Dirk Riehle. Lightweight End-User Programming with Wikis. In *Proceedings of the Workshop on Wikis for Software Engineering (Wikis4SE), at the ACM Symposium on Wikis (WikiSym)*, Montreal, QC, Canada, 2007.
65. **Craig Anslow**, James Noble, Stuart Marshall, and Robert Biddle. X3D Software Visualization in Action! In *Companion of the ACM Conference on Object-Oriented Programming, Systems, Languages, and Applications (OOPSLA)*, Montreal, QC, Canada, 2007. (Film)

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66. **Craig Anslow**, Stuart Marshall, James Noble, and Robert Biddle. X3D Software Visualization. In *Proceedings of the New Zealand Computer Science Research Student Conference (NZCSRSC)*, Hamilton, New Zealand, 2007.
 67. **Craig Anslow**, Stuart Marshall, James Noble, and Robert Biddle. VET3D: A Tool for Execution Trace Web 3D Visualization. In *Companion of the ACM Conference on Object-Oriented Programming, Systems, Languages, and Applications (OOPSLA)*, Portland, OR, USA, 2006. (Poster)
 68. **Craig Anslow**, Stuart Marshall, James Noble, and Robert Biddle. Evaluating X3D For Use in Software Visualization. Poster. In *Proceedings of the ACM Symposium on Software Visualization (SoftVis)*, Brighton, UK, 2006. (Poster)

Technical Reports

69. Mahshid Marbouti, Rahul Kamal Bhaskar, Zahra Shakeri, **Craig Anslow**, Frank Maurer, and Leland Jackson. Designing Geovisual Analytics Applications for Exploring Hydrological Data. Department of Computer Science, University of Calgary, Technical Report, 2015.
70. Keith Cassell, **Craig Anslow**, Lindsay Groves, and Peter Andreae. Visualizing Class Refactoring via Clustering. School of Engineering and Computer Science, Technical Report, ECSTR10-17, 2010.
71. **Craig Anslow**, James Noble, Robert Biddle, and Stuart Marshall. X3D Web Based Algorithm Animation. School of Mathematics, Statistics, and Computer Science, Technical Report, CS-TR-07-1, 2007.
72. **Craig Anslow**, Stuart Marshall, Robert Biddle, James Noble, Kirk Jackson, and Mike McGavin. Program Trace Formats for Software Visualization. School of Mathematics, Statistics, and Computer Science, Technical Report, CS-TR-06-1, 2006.
73. **Craig Anslow**, Stuart Marshall, Robert Biddle, James Noble, and Kirk Jackson. Program Trace Visualization, School of Mathematics, Statistics and Computer Science, Technical Report, CS-TR-04-1, 2004.
74. Stuart Marshall, Kirk Jackson, **Craig Anslow**, and Robert Biddle. Aspects to Visualizing Reusable Components, School of Mathematics, Statistics and Computer Science, Technical Report, CS-TR-02-29, 2002.

Workshop Proceedings

75. James Wallace, Steven Houben, **Craig Anslow**, Andres Lucero, Yvonne Rogers, and Stacey Scott. *Workshop on Disappearing Tabletop Social and Technical Challenges for Cross-Surface Collaboration*. In Proceedings of the ACM International Conference on Interactive Surfaces and Spaces (ISS), Brighton, UK, 2017.
76. **Craig Anslow**, Thomas LaToza, and Joshua Sunshine. *Workshop on Evaluation and Usability of Programming Languages and Tools (PLATEAU)*. In Proceedings of ACM SPLASH. Amsterdam, The Netherlands, 2016.
77. **Craig Anslow**, Pedro Campos, Andres Lucero, Laurent Grisoni, Mirjam Augstein, and Jim Wallace. *Workshop on Collaboration Meets Interactive Surfaces and Spaces (CMIS): Walls, Tabletops, Mobiles, Wearables*. In Proceedings of the ACM International Conference on Interactive Surfaces and Spaces (ISS). Niagara Falls, Canada, 2016.
78. Thomas LaToza, Joshua Sunshine, and **Craig Anslow**. *Workshop on Evaluation and Usability of Programming Languages and Tools (PLATEAU)*. In Proceedings of ACM SPLASH. Pittsburgh, PA, USA, 2015.
79. **Craig Anslow**, Pedro Campos, Andres Lucero, and Laurent Grisoni. *Workshop on Collaboration Meets Interactive Surfaces (CMIS): Walls, Tabletops, Mobiles, Wearables*. In Proceedings of the ACM International Conference on Interactive Surfaces and Spaces (ISS). Madeira, Portugal, 2015.
80. **Craig Anslow**, Pedro Campos, and Alfredo Ferreira. *Workshop on Collaboration Meets Interactive Surfaces (CMIS): Walls, Tabletops, Tablets, Phones*. In Proceedings of the ACM International Conference on Interactive Surfaces and Spaces (ITS). Dresden, Germany, 2014.
81. Joshua Sunshine, Thomas LaToza, and **Craig Anslow**. *Workshop on Evaluation and Usability of Programming Languages and Tools (PLATEAU)*. In Proceedings of ACM SPLASH. Portland, OR, USA, 2014.
82. Shane Markstrum, Emerson Murphy-Hill, and **Craig Anslow**. *Workshop on Evaluation and Usability of Programming Languages and Tools (PLATEAU)*. In Proceedings of ACM SPLASH. Portland, OR, USA, 2011.

83. Emerson Murphy-Hill, Shane Markstrum, and **Craig Anslow**. *Workshop on Evaluation and Usability of Programming Languages and Tools (PLATEAU)* In Proceedings of ACM SPLASH. Reno, NV, USA, 2010.
84. **Craig Anslow**, Shane Markstrum, and Emerson Murphy-Hill. *Workshop on Evaluation and Usability of Programming Languages and Tools (PLATEAU)* In Proceedings of ACM OOPSLA. Orlando, FL, USA, 2009. School of Engineering and Computer Science, Technical Report, ECSTR10-12, 2010.
85. **Craig Anslow** and Stuart Marshall. *Workshop on Visual Analytics in Software Engineering (VASE)*. In Proceedings of the IEEE/ACM International Conference on Automated Software Engineering (ASE). Auckland, New Zealand. 2009. School of Engineering and Computer Science, Technical Report, ECSTR10-11, 2010.

Theses

86. **Craig Anslow**. *Collaborative Software Visualization in Co-located Environments*. School of Engineering and Computer Science, Victoria University of Wellington. Doctor of Philosophy (PhD) Thesis, 2013.
87. **Craig Anslow**. *Evaluating X3D For Use in Software Visualization*. School of Mathematics, Statistics and Computer Science, Computer Science, Victoria University of Wellington. Masters (MSc) Thesis, 2007.
88. **Craig Anslow**. *XML Database Support for Program Trace Visualization*. School of Mathematics, Statistics, and Computer Science, Victoria University of Wellington. Honours Report, 2002.

PROFESSIONAL SERVICE

Program Committee

IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC)	2017-2018
IEEE Working Conference on Software Visualization (VISSOFT)	2014-2018
ACM Technical Symposium on Computer Science Education (SIGCSE)	2017-2018
ACM Conference on Interactive Surfaces and Spaces (ISS)	2016-2017
ACM Conference on Interactive Tabletops and Surfaces (ITS)	2014 (Posters), 2015
ACM Conference on Object Oriented Programming Systems Languages and Applications (OOPSLA), ERC	2015
Asia Pacific Software Engineering Conference (APSEC)	2016
Australasian User Interface Conference (AUIC)	2015-17
International Conference on Live Coding (ICLC)	2015 & 2017
ACM SPLASH Workshop on Evaluation and Usability of Programming Languages and Tools (PLATEAU)	2009-17
Interact Workshop on Human Work Interaction Design Meets International Development	2017
IEEE RE Workshop on Requirements for Visualizations in Systems Engineering (ReVISE)	2016
ACM ITS Workshop on Visual Data Exploration on Interactive Surfaces (DEXIS)	2015
ACM OOPSLA Artifact Evaluation Committee (AEC)	2013
ECOOP Artifact Evaluation Committee (AEC)	2013
IEEE Workshop on Visualizing Software for Understanding and Analysis (VISSOFT)	2011
Workshop on Visual Analytics in Software Engineering (VASE)	2009
Workshop on Wikis For Software Engineering (Wikis4SE)	2009
Conference on Image and Vision Computing New Zealand (IVCNZ)	2009
New Zealand Computer Science Research Student Conference (NZCSRSC)	2007-10

Organizing Committee

IEEE Working Conference on Software Visualization (VISSOFT)	Steering Committee	2015-
ACM Conference on Systems, Programming, Languages and Applications: Software for Humanity (SPLASH), Publicity and Web Co-Chair, Workshops Co-Chair		2014-17
ACM Technical Symposium on Computer Science Education (SIGCSE)	International Committee	2016-17
ACM Conference on Interactive Tabletops and Surfaces (ITS), Publicity Chair		2015-16
IEEE Working Conference on Software Visualization (VISSOFT), NIER/Tool Demos Co-Chair		2015
ACM ISS Workshop on Collaboration Meets Interactive Surfaces (CMIS): Walls, Tabletops, Mobiles and Wearables		2014-16
ACM SPLASH Workshop on Evaluation and Usability of Programming Languages and Tools (PLATEAU)		2009-16
Conference on Software Language Engineering (SLE), Publicity Chair		2014
ACM Symposium on Software Visualization (SoftVis), Posters and Tools Demo Chair		2010
New Zealand Computer Science Research Student Conference (NZCSRSC), General Chair		2010

Australasian Computer Science Week (ACSW), Publicity and Web Chair	2009
Workshop on Visual Analytics in Software Engineering (VASE), General Chair	2009
New Zealand Computer Science Research Student Conference (NZCSRSC)	2007

Reviewer - Conferences

ACM Conference on Human Factors in Computing Systems (CHI)	2010-18
ACM Conference on Computer Supported Cooperative Work (CSCW)	2011-18
ACM Conference on Interactive Tabletops and Surfaces (ITS)	2011-14
ACM Symposium on User Interface Software and Technology (UIST)	2017
ACM Conference on Human-Computer Interaction with Mobile Devices and Services (MobileHCI)	2015-17
ACM Conference on Intelligent User Interfaces (IUI)	2015
ACM Conference on Interactive Experiences for Television and Online Video (TVX)	2015
ACM Conference on Tangible, Embedded and Embodied Interaction (TEI)	2012-13
ACM Symposium on Engineering Interactive Computing Systems (EICS)	2015
ACM Symposium on Spatial User Interaction (SUI)	2014-15
ACM Nordic Conference on Human-Computer Interaction (NordiCHI)	2014
IEEE Conference on Information Visualization (InfoVis)	2013-16
IEEE Conference on Visual Analytics Science and Technology (VAST)	2013-16
IFIP Conference on Human-Computer Interaction (INTERACT)	2011-17
Canada Graphics Interface Conference (GI)	2013 & 2017
Australasian Software Engineering Conference (ASWEC)	2014
Australasian Computer Science Conference (ACSC)	2011-12
New Zealand Conference on Image and Vision Computing (IVCNZ)	2008

Reviewer - Journals

Elsevier International Journal of Systems and Software (JSS)	2013-18
Elsevier International Journal of Information and Software Technology (IST)	2014-17
Elsevier International Journal of Computer Languages, Systems & Structures (CLSS)	2017
Elsevier International Journal of Human-Computer Studies (IJHCS)	2016
Taylor Francis International Journal of Human-Computer Interaction (IJHCI)	2015-17
Wiley Journal of Software: Evolution and Process (JSEP)	2017-18
ACM Transactions on Computing Education (TOCE)	2014-16
ACM Transactions on Software Engineering and Methodology (TOSEM)	2014
Journal of Graphics Tools (JGT)	2014
The Handbook of Technology Management, 3 Volume Set	2008

Community Service

Host for the Calgary Data For Good (DFG) Meetup	2014
Host for Canadian Open Data Experience (CODE) at the University of Calgary	2014
Co-organizer of meetings for the Wellington Java User Group (JUG)	2008-13

INVITED TALKS, TUTORIALS, AND DEMONSTRATIONS

Invited Talks

<i>Human Aspects of Software Engineering</i>	
Singapore Management University, Singapore	2017
University of Berne, Switzerland	2017
University of Applied Sciences and Arts Northwestern Switzerland	2017
University of Edinburgh, UK	2016
University of Bristol, UK	2016
<i>Understanding Data with Visual Analytics and Interactive Surfaces</i>	
University of Nottingham, UK	2016
University of Edinburgh, UK	2016
Royal Holloway, University of London, UK	2016
Brunel University London, UK	2016
Vrije University of Brussels, Belgium	2016
University of Adelaide, Australia	2016
Victoria University of Wellington, New Zealand	2016
FXPal, Palo Alto, CA, USA	2015
Middlesex University, UK	2015

University of Waikato, New Zealand	2014
University of Victoria, Canada	2014
University of Glasgow, UK	2014
Imperial College, Data Science Institute, UK	2014
Data For Good, Calgary, Canada	2014

Co-located Collaborative Software Visualization

University of Victoria, Canada	2014
University of Canterbury, New Zealand	2013
Massey University, New Zealand	2013
Oracle Research Labs, Brisbane, Australia	2013
University of Trier, Germany	2010

Multi-touch User Interfaces

CPSC 319 Data Structures, Algorithms, and Their Applications, University of Calgary	2014
Wellington Java User Group (JUG), New Zealand	2012
MDDN 352 Ubiquitous Computing, Victoria University of Wellington	2011
ENGR 101 Engineering Technology, Victoria University of Wellington	2011
SWEN 422 Human Computer Interaction, Victoria University of Wellington	2010

Using Vision to Think: With Web-Based Information Visualization Tools

Datacom, Wellington, New Zealand	2009
Wellington Java User Group (JUG), New Zealand	2009

Extensible 3D (X3D) Graphics Web Based Software Visualization

University of Sydney, Sydney, Australia	2008
University of California at Davis, CA, USA	2007
SAP Research, Palo Alto, CA, USA and Montreal, Canada	2007
University of Auckland, New Zealand	2007

Program Trace Visualisation

Imperial College, London, UK	2004
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Student Talks

IEEE Wellington: Multi-touch Table User Interfaces for Co-located Collaborative Software Visualization	2011
IEEE Wellington: Visual Software Analytics for Multi-touch Tables	2009
IEEE Wellington: Towards Web-Based Web Software Visualization	2008
IET Wellington: X3D Software Visualization	2006
What we did for our Computer Science Honours Projects. Victoria University of Wellington	2003

Invited Tutorials

Hacking with MT4j and Touch Toolkits. NSERC SurfNet Workshop, Calgary, Canada	2014
Introduction to Visualization and Effective Use of Visual Variables. Cybera Summit, Banff, Canada	2014

Invited Multi-touch Table Demonstrations

New Zealand Tertiary ICT conference, Wellington	2011
Wellington Secondary School Tertiary Engineering Launch	2011
New Zealand Ministry of Science and Innovation Launch, Wellington	2011
Victoria University of Wellington, School of Engineering and Computer Science Industry Day	2009-2011
Victoria University of Wellington, ICT Careers Expo	2011
Victoria University of Wellington, Study at Vic Day	2009-2011
UCONZ Hi-tech Innovations Networking and Industry Event, Te Papa National Museum, Wellington	2010

RESEARCH GRANTS, SCHOLARSHIPS, AND AWARDS

Victoria University Research Fund (URF) <i>User Centered Secure Programming</i> (\$35,000 NZD) PI	2018
NSERC CRD Grant <i>Emergency Operations Centers of the Future</i> (\$378,000 CAD) CI	2014-17
Mitacs Accelerate Research Grant <i>CommuterVis - Visually Understanding Commuter Behaviour</i> (with Sustainable Alberta Association) (\$15,000 CAD) CI	2015
Mitacs Elevate Postdoctoral Fellowship (\$115,000 CAD)	2013
University of Calgary Eyes High Postdoctoral Fellowship (\$50,000 CAD)	2013
VicLink and KiwiNet Research Grant <i>Collaborative Software Visualization</i> (\$10,000 NZD) PI	2012

Victoria University of Wellington PhD Submission Scholarship (\$6,000 NZD)	2012
NZ Ministry of Science and Innovation, SPPI Scholarship (\$19,141.15 NZD)	2011
NZ Ministry of Science and Innovation, SPPI Scholarship (\$32,289.70 NZD)	2011
Third Place in IEEE NZ Central Section Postgraduate Student Event, Wellington	2011
Best Research Paper. Asia Pacific Software Engineering Conference (APSEC), Sydney, Australia	2010
Faculty of Engineering Strategic Research Grant (\$3500 NZD) PI	2010
Ministry of Science and Innovation BuildIT Conference Grant (\$20,000 NZD) general-chair	2010
NextWindow Commercial Research Grant (\$5000 NZD), co-investigator	2009
Faculty of Engineering Strategic Research Grant (\$5000 NZD) PI	2009
Ministry of Science and Innovation BuildIT Travel Consortium Grant (\$1200 NZD)	2009
Telstra Clear Postgraduate PhD Scholarship (\$75,000 NZD)	2008-10
Faculty of Science Strategic Research Travel Grant (\$3000 NZD)	2008
NSF Travel Grant for VLHCC Graduate Consortium (\$1500 USD)	2008
University of Auckland, Computer Science PhD Fellowship (Declined)	2007
Stratex Networks Graduate MSc Scholarship (\$5000 NZD)	2007
OOPSLA Student Volunteer Travel Grant (\$1500 USD)	2004, 2006, 2009
School of Mathematics, Statistics and Computer Science Research Grant (\$500 NZD)	2004
Faculty of Science Small Research Travel Grant (\$1500 NZD)	2003
School of Mathematics, Statistics and Computer Science Graduate Scholarship (\$7500 NZD)	2002-04

SELECTED PRESS COVERAGE

Learning to programme: To touch or not to touch? - Article in ECS, VUW	2017
Oversized tablet is a touch of magic! - Article in Wellington Dominion Post, PhD	2012
Smarter Software - Article in VUW, Alumni Magazine, PhD	2011
Bright Sparks, Dim Future? - Article in Your Weekend Edition of Wellington Dominion Post, PhD	2011
A Touch of Magic - Article in VUW, Alumni Magazine Victorious, PhD	2011
Business links prove beneficial - VicLink Demonstration Day, PhD	2010
Google talent search in Wellington - Article in Wellington Dominion Post	2010