

Cameron Kiddle

September 14, 2011

Curriculum Vitae

Department of Computer Science
University of Calgary
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Research Interests

Distributed Systems, High Performance Computing, Grid Computing, Cloud Computing, Virtualization, Web 2.0, Social Networking, Semantic Web, Parallel Discrete Event Simulation, Network Simulation

Education

Ph.D. in Computer Science (GPA 4.00/4.00) June 2005
University of Calgary, CANADA (Defended in 2004)
Thesis: *Scalable Network Emulation*
Supervisor: Dr. Brian W. Unger

B.Sc. in Computer Science (with distinction) (GPA 3.94/4.00) June 2000
University of Calgary, CANADA
Awarded Computer Science Silver Medallion (highest GPA in Computer Science graduating class)

B.Sc. in Physics (with distinction) (GPA 3.94/4.00) June 2000
University of Calgary, CANADA
Awarded Physics Venkatesan Silver Medallion (highest GPA in Physics graduating class)

Experience

Technical Director May 2011 – Present
Grid Research Centre, Department of Computer Science, University of Calgary

- Technical Lead on CANARIE funded CyberSKA project (<http://www.cyberska.org>), aimed at developing scalable cyberinfrastructure that will be necessary to support evolving science of the Square Kilometre Array, which will be the largest radio telescope ever built when completed in 2023.
 - The project began in January 2010 and is a partnership between CANARIE, Cornell University, Cybera, IBM Canada, McGill University, National Research Council Canada, University of British Columbia and University of Calgary.
 - I lead a technical development team consisting of 20 members at 7 institutions/organizations.
- Research Lead on CANARIE funded GreenStar Network project (<http://www.greenstarnetwork.com>) aimed at establishing a computer network powered by renewable resources and exploring scheduling and migration of applications/services to make effective use of those resources and reduce greenhouse gas emissions.
 - The project began in January 2010 and is a partnership between 6837247 CANADA Inc., BastionHost, Canadian Standards Association, CANARIE, Communications Research Centre, Cybera, Ecole de Technologie Superieure, Grid Research Centre at the University of Calgary, Innocybe Technologies, Prompt, Rack Force Networks, Universite du Quebec a Montreal and various international partners.
 - I am lead of the research team consisting of over 10 members at 3+ organizations that is exploring information models for “green” resources, effective scheduling, performance of virtual machine migration, power measurement and management and more.
 - I am participating in the development of a carbon protocol, being led by the Canadian Standards Association, that will establish procedures and measurements

that need to take place in order for organizations to receive carbon credits for IT projects they undertake to reduce the emission of greenhouse gases.

- I am involved in relocating the GeoChronos platform from a coal powered data centre in Calgary to a green (hydro) powered data centre in British Columbia as an example enactment of the carbon protocol being developed as part of the project.
- Technical Lead on Carbon Management Canada funded Carbon Commons project (<http://www.carboncommons.ca>) aimed at establishing a collaborative portal for members of academic, industry and government communities that are working on methods and technologies to reduce carbon emissions. The portal is ultimately intended to be a one stop shop for members of this community serving all of their collaboration, data and computational needs.
 - A project started in February 2011 that is a partnership between Carbon Management Canada, the International Performance Assessment Centre for Geologic Storage of CO₂ (IPAC-CO₂), and the Grid Research Centre at the University of Calgary.
 - I lead the technical development team consisting of 4 members from the Grid Research Centre

Distributed Systems Architect

May 2009 – Present

WestGrid, a High Performance Computing consortium of 14 institutions in Western Canada

- Represent WestGrid on Compute Canada committees (Access to Resources)
 - Access to Resources group explores issues around how to provide Canadian researchers with access to high performance computing resources across the whole of Canada
- Support WestGrid technical staff in aspects of distributed computing (i.e., grid middleware)
- Consult with users on large scale projects
- Provide input into WestGrid planning
- Give tutorials and presentations on behalf of WestGrid as necessary
- Support WestGrid CTO in his role

Adjunct Assistant Professor

July 2008 – Present

Department of Computer Science, University of Calgary

- Co-supervision of graduate students
 - Deepti Williams, M.Sc. student. Applying Temporality to the Resource Description Framework. Co-supervisor: August 2008 – November 2009. (Supervisor: Dr. Diwakar Krishnamurthy)
- Co-supervision of undergraduate student internships/projects
 - Sukhpreet Dhaliwal, CPSC 502 Project - Optimizing Energy Used by Distributed Computing Applications. Co-supervisor: September 2011 – Present. (Supervisor: Dr. Mea Wang)
 - Sukhpreet Dhaliwal. Summer Internship - Modelling Energy Usage of Volunteer Computing Applications. Co-supervisor: May 2011 – Aug 2011. (Supervisor: Dr. Mea Wang)

Research Fellow

January 2006 – April 2011

Grid Research Centre, Department of Computer Science, University of Calgary

- Technical Lead on CyberSKA and Carbon Commons projects and Research Lead on GreenStar Network projects as described for my current Technical Director position above.
- Technical Lead on CANARIE funded GeoChronos project (<http://geochronos.org>), aimed at the development of a social networking/cloud-based platform to enable earth observation scientists to share data and applications.
 - A project from June 2008 to February 2011 that was a partnership between CANARIE, the Center for Earth Observation Science at the University of Alberta, Cybera, and the Grid Research Centre at the University of Calgary. The GeoChronos portal continues to be run and maintained. Technologies developed during GeoChronos have been adopted by more than 5 other projects and are continuing to be developed / extended as part of those projects.
 - I led the technical development team consisting of 5 members from 2 institutions.

- Worked on collaborative projects with HP Labs exploring automation and sustainability of virtualized data centres.
- Helped develop a model-based dynamic job reconfiguration service.
- Helped develop a GridFTP Overlay Network Service that was deployed in WestGrid, ACEnet and HP CCN Grid and has been integrated into the Globus Toolkit 4.2 by the Globus team.
- Aid in supervision of graduate students and employees.

Grid Systems Architect

November 2005 – April 2009

WestGrid, a High Performance Computing consortium of 14 institutions in Western Canada

- Participate on a Compute Canada technical working group (TECC Access to Resources) which explores how to access and share high performance computing resources across Canada.
- Collaborated with ACEnet, a High Performance Computing consortium of 7 institutions in Atlantic Canada, in the construction of a Canada wide grid environment based on the Globus Toolkit v4 (GT4) middleware. Incorporated single sign-on (GSISSE), data management (GridFTP, RFT), information management (WS-MDS) and execution management (WS-GRAM, Condor-G) services.
- Helped develop a grid level solution for automating molecular dynamics simulations.
- Provide tutorials on grid computing to WestGrid members.

Postdoctoral Fellow

October 2004 – December 2005

Grid Research Centre/TeleSim Group, Department of Computer Science, University of Calgary

- Participant in a collaborative project with HP Labs to develop an automated monitoring system for grid computing environments.
- Explored techniques to improve file transfer performance in grid computing environments.
- Explored the use of parallel simulation techniques to improve sequential simulation performance.
- Aided in supervision graduate students and employees.

Graduate Research Assistant

September 2000 – September 2004

TeleSim Group, Department of Computer Science, University of Calgary

- Helped develop and maintain network simulation and modeling tools including a parallel discrete event simulation kernel called CCTKit and a network simulator/emulator called IP-TNE (Internet Protocol Traffic and Network Simulator/Emulator).

Research Programmer

May 1999 – August 2000

TeleSim Group, Department of Computer Science, University of Calgary

- Designed a modelling language called ANML (ANother Modelling Language) for describing network simulation models.
- Developed the ANML Processor which compiles ANML models.

Tutorial Assistant

September 1998 – April 1999

Department of Mathematics and Statistics, University of Calgary

- Continuous tutorial assistant for 1st year calculus courses (Math 251, Math 253).

Honors and Awards

Honors and Awards held during Graduate Studies

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|---|------------------|
| • NSERC PGS B + iCORE Graduate Student Scholarship (\$36,000) | 2003/04 |
| • Honorary University of Calgary Silver Anniversary Graduate Fellowship (\$5,000) | 2003/04 |
| • NSERC PGS A + iCORE Graduate Student Scholarship (\$31,100/yr) | 2001/02, 2002/03 |
| • Province of Alberta Graduate Scholarship + Graduate Studies Top-Up (\$8,000) | 2000/01 |
| • Computer Science Excellence Award (\$4,000) | 2000/01 |

Honors and Awards held during Undergraduate Studies

- Alberta Heritage Scholarship (Louise McKinney) (\$1,500 - \$2,500/yr) 1997/98, 1998/99, 1999/00
- Physics Book Prize for Academic Excellence (Book) 1998, 1999, 2000
- O. George Fritz Scholarship (\$800) 1998/99
- Canadian Information Processing Society Scholarship (\$500) 1998/99
- University of Calgary Undergraduate Merit Award (\$200) 1998/99
- Canada Scholarship (\$1,000 - \$1,250/semester) 1992/93, 1996 (3 semesters)
- CRC Press Freshman Chemistry Achievement Award (CRC Handbook) 1993
- University of Calgary Academic Scholarship for Frosh Students (\$1,000) 1992/93
- Alberta Heritage Scholarship (Rutherford) (\$1,500) 1992/93

Publications & Presentations**Refereed Journal Publications**

1. SpecNet Revisited: Bridging Flux and Remote Sensing Communities.
J. Gamon, C. Coburn, L. Flanagan, K. Huemrich, **C. Kiddle**, G. Sanchez-Azofeifa, D. Thayer, L. Vescovo, D. Gianelle, D. Sims, A. Rahman, G. Pastorello.
Canadian Journal of Remote Sensing, 36(S2):S376-S390, 2010.
2. Performance of a GridFTP Overlay Network.
P. Rizk, **C. Kiddle**, R. Simmonds and B. Unger.
Future Generation Computer Systems, 24(5):442–451, 2008.
3. Advances in Network Emulation.
C. Kiddle, R. Simmonds and B. Unger.
Annual Review of Communications, 58:611–620, 2005.

Refereed Conference Publications

1. A Framework for Automated Learning of Application Memory Usage Behaviour.
T. Elahi, C. Kiddle and R. Simmonds.
In *Proceedings of the 13th IEEE International Conference on High Performance Computing and Communications*, 2011.
2. Energy Cost-aware Scheduling of HPC Workloads.
D. Aikema, **C. Kiddle** and R. Simmonds.
In *Proceedings of the 1st International Workshop on Sustainable Internet and Internet for Sustainability*, 2011.
3. An On-line Collaborative Data Management System.
R. Curry, **C. Kiddle**, R. Simmonds and G. Z. Pastorello Jr.
In *Proceedings of the Gateway Computing Environments Workshop*, 2010.
4. A Generic Execution Management Framework for Scientific Applications.
T. Elahi, **C. Kiddle** and R. Simmonds.
In *Proceedings of the International Symposium on Advances of High Performance Computing and Networking*, 2010.
5. A Cloud-based Interactive Application Service.
N. Markatchev, R. Curry, **C. Kiddle**, A. Mirtchovski, R. Simmonds and T. Tan.
In *Proceedings of the 5th IEEE International Conference on e-Science*, 2009.
6. Social Networking and Scientific Gateways.
R. Curry, **C. Kiddle** and R. Simmonds.
In *Proceedings of the Grid Computing Environments Workshop*, 2009.

7. Modelling Memory Requirements for Grid Applications.
T. Elahi, **C. Kiddle** and R. Simmonds.
In *Proceedings of the Sixth High-Performance Grid Computing Workshop*, 2009.
8. An Account Policy Model for Grid Environments.
D. Aikema, **C. Kiddle** and R. Simmonds.
In *Proceedings of the 4th IEEE International Conference on Grid and Pervasive Computing*, 2009.
9. Facebook Meets the Virtualized Enterprise.
R. Curry, **C. Kiddle**, N. Markatchev, R. Simmonds, T. Tan, M. Arlitt and B. Walker.
In *Proceedings of the 12th International IEEE Enterprise Distributed Object Computing Conference*, pages 286-292, 2008.
10. An Automated Resource Provisioning Framework for Data Centres.
R. Curry, **C. Kiddle**, N. Markatchev, R. Simmonds, T. Tan, M. Arlitt and B. Walker.
In *Proceedings of the 15th HP Software University Association Workshop*, pages 189-200, 2008.
11. Models for Grid Applications and Jobs.
T. Elahi, **C. Kiddle** and R. Simmonds.
In *Proceedings of the 22nd International Symposium on High Performance Computing Systems and Applications*, pages 52-58, 2008.
12. A Framework for Executing Long Running Jobs in Grid Environments
N. Markatchev, **C. Kiddle** and R. Simmonds.
In *Proceedings of the 22nd International Symposium on High Performance Computing Systems and Applications*, pages 69-75, 2008.
13. Model-driven Automation in Grid Environments.
C. Kiddle, D. Kivi and R. Simmonds.
In *Proceedings of the Fourth International Symposium on Frontiers in Networking with Applications*, pages 92-99, 2008.
14. RAASP: Resource Allocation Analysis Service and Portal.
R. Curry, **C. Kiddle** and R. Simmonds.
In *Proceedings of the 13th International Conference on Parallel and Distributed Systems*, 2007.
15. Dynamic Job Reconfiguration in Grid Computing Environments.
T. Elahi, **C. Kiddle**, D. Kivi, N. Markatchev and R. Simmonds.
In *Proceedings of the 14th HP Software University Association Workshop*, pages 17-28, 2007.
16. Policy Based Job Analysis.
R. Curry, **C. Kiddle** and R. Simmonds.
In *Proceedings of the 21st International Symposium on High Performance Computing Systems and Applications*, 2007.
17. A GridFTP Overlay Network Service.
P. Rizk, **C. Kiddle** and R. Simmonds.
In *Proceedings of the 7th IEEE/ACM International Conference on Grid Computing*, pages 41-48, 2006.
18. Replay: A Model-Based Service for Supporting Transparent Cluster Analysis Tools.
D. Krishnamurthy, **C. Kiddle**, J. Rolia and R. Simmonds.
In *Proceedings of the IEEE International Conference on Cluster Computing*, 2006.
19. Running Molecular Dynamics Simulations in a Grid Environment.
C. Kiddle, M. Fox and R. Simmonds.
In *Proceedings of the 20th International Symposium on High Performance Computing Systems and Applications*, pages 157-163, 2006.

20. Optimization Aspects in Network Simulation.
J. Siadat, R. J. Walker and **C. Kiddle**.
In *Proceedings of the Fifth International Conference on Aspect-Oriented Software Development*, pages 122-133, 2006.
21. Improving GridFTP Performance with Split TCP Connections.
P. Rizk, **C. Kiddle** and R. Simmonds.
In *Proceedings of the 1st IEEE International Conference on e-Science and Grid Computing*, pages 263-270, 2005.
22. Channel Based Sequential Simulation.
C. Kiddle, R. Simmonds and B. Unger.
In *Proceedings of the 2005 Winter Simulation Conference*, pages 637-647, 2005.
23. Automated Monitoring of WestGrid. (Poster)
M. Arlitt, R. Curry, K. Farkas, M. Fox, S. Iyer, **C. Kiddle**, D. Krishnamurthy, D. Milojicic, A. Mirtchovski, J. Rolia, R. Simmonds and V. Talwar.
In *Proceedings of the 12th HP OpenView University Association Workshop*, 2005.
24. Sequential Performance of Asynchronous Conservative PDES Algorithms.
R. Curry, **C. Kiddle**, R. Simmonds and B. Unger.
In *Proceedings of the 2005 Workshop on Principles of Advanced and Distributed Simulation*, pages 217-226, 2005.
25. Improving Scalability of Network Emulation through Parallelism and Abstraction.
C. Kiddle, R. Simmonds and B. Unger.
In *Proceedings of the 38th Annual Simulation Symposium*, pages 119-129, 2005.
26. Performance of a Mixed Shared/Distributed Memory Parallel Network Simulator.
C. Kiddle, R. Simmonds and B. Unger.
In *Proceedings of the 18th Workshop on Parallel and Distributed Simulation*, pages 17-25, 2004.
27. Hybrid Packet/Fluid Flow Network Simulation.
C. Kiddle, R. Simmonds, C. Williamson and B. Unger.
In *Proceedings of the 17th Workshop on Parallel and Distributed Simulation*, pages 143-152, 2003.
28. Addressing Blocking and Scalability in Critical Channel Traversing.
R. Simmonds, **C. Kiddle** and B. Unger.
In *Proceedings of the 16th Workshop on Parallel and Distributed Simulation*, pages 17-24, 2002.
29. Controlling Buffer Usage in Critical Channel Traversing.
R. Simmonds, **C. Kiddle**, K. Wong and B. Unger.
In *Proceedings of the 35th Annual Simulation Symposium*, pages 53-62, 2002.
30. ANML: A Language for Describing Networks.
C. Kiddle, R. Simmonds, D. K. Wilson and B. Unger.
In *Proceedings of the Ninth International Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems*, pages 135-141, 2001.

Non-refereed Conference Publications

1. On-line Access and Visualization of Multi-dimensional FITS Data.
P. Federl, A. Grimstrup, **C. Kiddle** and A. R. Taylor.
In *Proceedings of the Astronomical Data Analysis Software and Systems Conference (ADASS)*, 2010.

2. Looking Towards the Future of Radio Astronomy with the CyberSKA Collaborative Portal.
C. Kiddle, M. Andreucut, A. Brazier, S. Chatterjee, E. Chen, J. Cordes, R. Curry, R. A. Este, O. Eymere, P. Federl, B. Fong, A. Grimstrup, S. Guram, V. Kaspi, R. Klodzinski, P. Lazarus, V. Mahadevan, A. Mourad, S. Mourad, P. Pragides, E. Rosolowsky, D. Said, A. Samoilov, C. Smith, I. Stairs, T. Tan, M. Tan, A. R. Taylor, and A. G. Willis.
In *Proceedings of the Astronomical Data Analysis Software and Systems Conference (ADASS)*, 2010.
3. GeoChronos: An On-line Collaborative Platform for Earth Observation Scientists.
J. Gamon, **C. Kiddle**, R. Curry, N. Markatchev, G. Pastorello Jr, B. Rivard, A. Sanchez-Azofeifa, R. Simmonds and T. Tan.
In *Proceedings of the AGU Fall Meeting*, San Francisco, CA, December 14-18, 2009. (Abstract)

Invited Talks and Tutorials

1. Looking Towards the Future of Radio Astronomy with the CyberSKA Collaborative Portal. *NRC Canadian Astronomy Data Centre*, Victoria, British Columbia, January 28, 2011.
2. Collaborative Science: Technologies and Examples. *Cybera Summit 2010*, Banff, Alberta, September 21-22, 2010.
3. CyberSKA: Architecture Overview. *GALFACTS/POSSUM 2010 Workshop*, Calgary, Alberta, August 16-20, 2010.
4. Enabling Collaboration Among Earth Observation Scientists with the GeoChronos Portal. *BCNET/CANARIE Conference 2010*, Vancouver, British Columbia, May 4-5, 2010.
5. GeoChronos: Challenges and Achievements.
OGF 28, Munich, Germany, March 15-18, 2010.
6. Integration and Management of Diverse Environmental Data Sets.
Summit 09: Partnerships in CI Development, Banff, Alberta, October 12-16, 2009.
7. Cyberinfrastructure and its Role in Science.
IAI International WSN Summer School, Edmonton, Alberta, July 6-18, 2009.
8. GeoChronos: An On-line Collaborative Environment for Earth Observation Scientists.
SpecNet Workshop (Part of the 30th Canadian Symposium on Remote Sensing), Lethbridge, Alberta, June 22, 2009.
9. Rendering on the Cloud: A Cybera Industry Pilot Project with EDM Studio.
Cybera Summit, Banff, Alberta. September 29-30, 2008.
10. Cloud Computing on the HP Labs Data Centre at the University of Calgary.
Cybera Summit, Banff, Alberta, September 29-30, 2008.
11. Cyberinfrastructure Technologies: What They Are and How They Can Benefit You.
34th Annual Meeting of the Canadian Geophysical Union. Banff, Alberta. May 12, 2008.
12. Introduction to Grid Technologies.
WestGrid Seminar Series. February 6, 2008.
13. Current Projects at the Grid Research Centre.
HP CCN Annual Meeting. Reno, Nevada. November 10, 2007.
14. Cyberinfrastructure in WestGrid
CFI 10th Anniversary Celebration at the University of Calgary. September 11, 2007.

15. Introduction to Grid Technologies.
WestGrid Seminar Series. October 25, 2006.
16. Monitoring and Data Management in Grid Environments.
Netera Days. Calgary, Alberta. October 13, 2005.
17. Grid Tutorial.
Western Grid Summit. Banff, Alberta. April 19, 2005.

Software/Platforms

ANML (ANother Modelling Language) Processor

A compiler for ANML models developed by the TeleSim group at the University of Calgary. ANML is a modelling language for describing systems such as networks. Developed in the C programming language and making use of the Flex and Bison compilation tools.

- Primary developer of this software tool.

ASPEN (Automated Service Provisioning Environment)

A cloud computing management tool developed by the Grid Research Centre at the University of Calgary that enables the dynamic allocation/deallocation of virtual machines. It makes use of Xen as the virtual machine hypervisor technology, Moab/Torque for scheduling/management of virtual machines and Solaris ZFS for efficient management and cloning of virtual machine images.

- Aided in design of ASPEN

Carbon Commons (<http://www.carboncommons.ca>)

An on-line environment for academic, industry and government members that are working on methods and technologies for reducing carbon emissions. The portal is intended to be a one stop shop for members of this community serving all of their collaboration, data and computational needs. Initially established from the Elgg-based GeoChronos portal technology (described below) with plans to integrate ASPEN cloud management software as well.

- Technical lead of a team of 4 developers

CCTKit

A parallel discrete event simulation kernel developed by the TeleSim group at the University of Calgary. Developed in the C/C++ programming languages.

- Implemented many changes to improve performance in shared memory environments.
- Ported it to a distributed memory environment.

CyberSKA (<http://www.cyberska.org>)

An on-line environment for radio astronomers aimed at enabling them to access and share data and computing resources, and collaborate more effectively with each other. Initially established from the Elgg-based GeoChronos portal technology (described below). Services developed to date include an on-line visualization tool for multi-dimensional FITS data, a visual data access tool allowing users to select and download data by regions of interest and frequency, many new collaboration features, data pipeline processing services and a third party application service enabling single sign-on to remote applications. Services currently under development include a distributed data management system based on iRODS, and ASPEN-based cloud computing environments for dynamic management of processing, analysis and visualization services based on demand.

- Technical lead of a team of about 20 developers at 7 institutions/organizations

GeoChronos (<http://geochronos.org>)

An on-line environment for Earth observation scientists aimed at enabling them to access and share data and computing resources, and collaborate with each other more effectively. It is built on top of the Elgg open source social networking platform that provides many Facebook-like features such as contacts, groups, blogs, wikis, status, media/document sharing, message boards, discussions, messaging, calendars and more. Several tools/services have been developed and integrated into the platform. One service is an interactive application service, that enables on-line access to scientific applications via remote desktop technologies (VNC) that are dynamically launched based on user demand in the ASPEN

cloud computing environment. Another service is a data management service that enables users to upload and share a wide variety of data (including spectral libraries and MODIS satellite data), associate metadata with records, browse and view plots of data, and establish new metadata schemas/standards in a collaborative manner. The MODIS workflow service is another service developed for GeoChronos that enables selection of region of interest via shapefiles, and automates the process of mosaicing, subsetting, reprojecting and masking of MODIS satellite data from that region. Workflow jobs/tasks are run in a Condor pool running on the ASPEN cloud computing environment.

- Technical lead of a team of 5 developers at 2 institutions

IP-TN/IP-TNE (Internet Protocol Traffic and Network Simulator/Emulator)

An IP packet level network simulator/emulator developed by the TeleSim group at the University of Calgary in collaboration with the University of Bath. Developed in the C/C++ programming languages.

- Developed code to input ANML network models and initialize the simulation.
- Ported it to a distributed memory environment.
- Implemented a technique enabling the mixture of packet and fluid based traffic flows.

Teaching

Current Supervision

- Sukhpreet Dhaliwal, B.Sc. Student – CPSC 502 Project. Optimizing Energy Used by Distributed Computing Applications. Co-supervisor: September 2011 – Present. (Supervisor: Dr. Mea Wang)

Past Supervision

- Deepti Williams, M.Sc. Student. Applying Temporality to the Resource Description Framework. Co-supervisor: August 2008 – November 2009. (Supervisor: Dr. Diwakar Krishnamurthy)

Professional Activities

Memberships

- ACM 1999 - present
- IEEE, IEEE Computer Society 2002 - present

Journal Editorial Board Member

- Simulation Modelling Practice and Theory 2007 - present

Conference Publicity Chair

- IEEE/ACM International Conference on Grid Computing 2011

Conference Program Committee Member

- International Conference on Cloud Computing and Services Science (CLOSER) 2011 - 2012
- International Conference on Advanced Information Networking and Applications (AINA) 2011
- International ICST Conference on Simulation Tools and Techniques (SIMUTools) 2010 - 2011
- Gateway Computing Environments (GCE) Workshop 2010 - 2011
- International Conference on Cloud Computing and Virtualization (CCV) 2010
- IEEE/ACM International Conference on Grid Computing (Grid) 2009
- Annual Simulation Symposium (ANSS) 2006 - 2008

Journal Paper Reviewer

- Simulation Modelling Practice and Theory 2005 – 2011
- IT Professional 2010
- Simulation: Transactions of The Society for Modeling and Simulation International 2003 - 2010
- International Journal of Communication Systems 2008
- Transactions on Modeling and Computer Simulation 2007

Conference Paper Reviewer

- Workshop on Principles of Advanced and Distributed Simulation (PADS) 2000 – 2010
- GreenMetrics Workshop 2009
- Symposium on High Performance Computing Systems and Applications (HPCS) 2007 - 2008
- International Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems (MASCOTS) 1999 - 2001, 2006, 2008
- Winter Simulation Conference (WSC) 2003, 2006
- International Workshop on Grid Computing (Grid) 2005
- Annual Simulation Symposium (ANSS) 2005

Service**Cub Scout Leader**

2010 - present

261st LDS Tuscany Ward 'A' Pack

- Lead weekly Cub Scout program activities

Graduate Student Representative

2002/03, 2003/04

Graduate Affairs Committee, Department of Computer Science, University of Calgary

- Helped develop new M.Sc. and Ph.D. programs for the Department of Computer Science.

Council Member

2002/03

Computer Science Graduate Society (CSGS), University of Calgary

- Helped establish the CSGS in its inaugural year and helped plan and run activities.

Married Student Representative

1997/98

Latter-Day Saints Students Association (LDSSA), University of Calgary

- Organized monthly activities for young married couples.

Missionary

1993 - 1995

The Church of Jesus Christ of Latter-Day Saints

- Served a two year mission to South Korea.

References

Available on request.