

# GEORGE EDWARDS

## Computer Scientist

Quandary Peak Research  
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## Lecturer of Computer Science

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## EDUCATION

- **Ph.D. in Computer Science**, *University of Southern California* **Aug 2010**
- **M.S. in Computer Science**, *University of Southern California* **May 2006**
- **B.S. in Computer Science** with Minor in Mathematics, *Vanderbilt University* **Aug 2003**

## EMPLOYMENT

- **Expert Witness and Consultant** **June 2012 – Present**  
*Quandary Peak Research, Los Angeles, CA*
  - Providing software analysis and expert witness testimony in software-related litigation, including patent and copyright infringement, theft of trade secrets, breach-of-contract, and other matters.
  - Analyzing software intellectual property and patent portfolios for validity and infringement in the context of licensing and brokering negotiations, startup investments, and M&A.
  - Investigating software failures to determine the root cause and help clients understand whether and how the failure could have been avoided.
  - Applying advanced analytic techniques based on calibrated parametric models for valuation of software products and estimation of software development costs.
  - Documenting the architecture of software systems to identify structural similarities and differences among competing products and services and deduce the origin of software designs and code.
- **Lecturer of Computer Science** **Jan 2012 – Present**  
*Computer Science Department, University of Southern California, Los Angeles, CA*
  - Teaching a graduate-level software engineering course for M.S. and Ph.D. students and practicing software and aerospace engineers (CSCI 568).
  - Previously taught an undergraduate-level course on programming fundamentals, algorithms, and data structures (CSCI 102).
- **Co-Founder and CEO** **Aug 2010 – June 2012**  
*Blue Cell Software, Los Angeles, CA*
  - Led and managed the development of a next-generation modeling and analysis platform for complex software-intensive systems.
  - Developed advanced model-based algorithms for reliability, efficiency, and risk analysis.
  - Conceived and implemented the business development strategy and produced and presented investment proposals.

- **Post-Doctoral Researcher** **Feb 2011 – Sept 2011**  
*Center for Systems and Software Engineering, University of Southern California, Los Angeles, CA*

  - Conducted research on enterprise integration mechanisms to support net-centric operations.
  - Investigated methods, processes, and tools for decomposition and refinement of SoS capability needs into detailed requirements and integration architectures for an NSA-funded research project.
  - Designed key components of PATFrame, a decision support system for planning test events of networks of unmanned and autonomous vehicles.
  - Applied lessons learned from large-scale corporate mergers, including the HP-Compaq merger, to software and systems integration challenges faced by the DoD and NSA.
  
- **Graduate Fellow** **Aug 2004 – Aug 2010**  
*Computer Science Department, University of Southern California, Los Angeles, CA*

  - Designed and implemented XTEAM, a model-driven software design, analysis, and code generation toolset. XTEAM allows software architects to create domain-specific software architecture models, evaluate those models with respect to quality metrics, and automatically synthesize custom code. XTEAM has been utilized by more than a dozen software engineering projects in academia and industry.
  - Built key components of Prism-MW, a novel Java-based implementation platform for mobile and handheld devices that enables rapid development of event-based applications.
  - Invented the adaptive layered style, an architectural style for autonomous systems, and designed the corresponding implementation support in Prism-MW.
  - Developed iterative redundancy, an algorithm for reliably distributing and replicating computation on untrusted networks of faulty and malicious nodes.
  - Contributed as an architect and developer to a diverse set of experimental software systems, such as computer simulations of volunteer computing networks and collaboration tools for geographically distributed teams of engineers.
  
- **Research Associate** **May 2009 – Jan 2010**  
*Intelligent Systems Technology, Inc., Los Angeles, CA*

  - Designed and implemented an instructional game for US Army vehicle maintenance technicians that teaches techniques for making decisions in the presence of uncertainty.
  - Developed research grant proposals for DoD and DHS funding through the Small Business Innovation Research (SBIR) program and Broad Agency Announcements (BAAs).
  - Briefed managers of research funding programs at DoD and DHS on critical research challenges and opportunities in computer science and software engineering.
  
- **Graduate Research Intern** **May 2008 – Aug 2008**  
*T.J. Watson Research Center, IBM, Yorktown Heights, NY*

  - Developed elements of BlueStar, a scalable mobile device management and provisioning system. BlueStar allows system administrators to easily manage the configuration of thousands of mobile devices.
  - Co-designed Proxima, a context-aware search service for mobile devices. Proxima provides image-based search capabilities for finding people in a large database by leveraging contextual information associated with an image, such as location, time, and the unique characteristics of the user.
  - Developed requirements for a mobile application for insurance adjusters and managed a team of overseas programmers.

- **Software Engineer** **Jun 2005 – Aug 2006**  
*The Boeing Company, Huntington Beach, CA*

  - Advised, coordinated, and assisted C4ISR software architecture modeling and analysis efforts leveraging state-of-the-art model-driven engineering technologies.
  - Developed the architecture for a mobile (handheld) device for controlling unmanned autonomous air and ground robots.
  - Integrated multiple independent simulations of interactions among military vehicles and networks to create test harnesses for subcontractor-supplied software components.
  - Created and evaluated software architecture descriptions, guidance memoranda, requirements specifications, design models, trade studies, risk analyses, and development schedules.
  
- **Graduate Research Assistant** **Sept 2003 – May 2004**  
*Computer Science Department, Vanderbilt University, Nashville, TN*

  - Developed a CORBA Component Model framework that supports application access to highly optimized and scalable event-based (publish-subscribe) communication services.
  - Created a specification language and supporting toolset for configuring QoS policies in component-based DRE systems.
  - Designed regression tests and enhanced support for key capabilities in a real-time CORBA implementation.
  
- **Network Technician** **Oct 2002 – Mar 2003**  
*CTC Networks, Nashville, TN*

  - Administered Windows-based small business networks and performed network and PC upgrades, troubleshooting, and repair.
  - Advised business clients on software purchasing and technology infrastructure investment decisions.
  
- **e-Business Consultant** **May 2001 – Aug 2001**  
*Nebraska e-Commerce Association, Lincoln, NE*

  - Advised small businesses on e-commerce development and implementation strategies.
  
- **Web Developer** **May 1998 – Aug 2000**  
*Nebraska Educational Telecommunications, Lincoln, NE*

  - Developed front-end HTML and JavaScript and secure grade assessment software for CLASS, the first web-delivered, fully accredited high school.
  - Implemented a multimedia publishing system for web-based distribution of television programs.

#### LITIGATION CONSULTING

- **Sound View Innovations, LLC v. Facebook, Inc.** **Aug 2016 – Present**

  - Jurisdiction: U.S. District Court for the District of Delaware
  - Counsel: Desmarais LLP
  - Nature of Suit: Patent
  
- **Farmers Edge, Inc., et al. v. Farmobile LLC, et al.** **Jul 2016 – Present**

  - Jurisdiction: U.S. District Court for the District of Nebraska
  - Counsel: Husch Blackwell LLP
  - Nature of Suit: Trade Secret and Breach of Contract

- **Synca Direct Inc. v. Scil Animal Care Company and Vet Novations, Inc.** **Mar 2016 – Present**  
 - Jurisdiction: U.S. District Court for the Northern District of New York  
 - Counsel: White and Williams LLP  
 - Nature of Suit: Breach of Contract
- **TiVo, Inc. v. Samsung Electronics Co., Ltd., et al.** **Mar 2016 – Present**  
 - Jurisdiction: U.S. District Court for the Eastern District of Texas  
 - Counsel: Irell & Manella LLP  
 - Nature of Suit: Patent
- **Backflip Software, Inc. v. Cisco Systems, Inc.** **Feb 2016 – Present**  
 - Jurisdiction: Superior Court of California, County of Santa Clara  
 - Counsel: Hosie Rice LLP  
 - Nature of Suit: Breach of Contract
- **Cellular Communications Equipment, LLC v. HTC Corporation and ZTE Corp.** **Dec 2015 – Present**  
 - Jurisdiction: U.S. District Court for the Eastern District of Texas  
 - Counsel: Pillsbury Winthrop Shaw Pittman LLP  
 - Nature of Suit: Patent
- **Ericsson Inc., et al. v TCL Communication Technology Holdings, Ltd., et al.** **Sep 2015 – Dec 2015**  
 - Jurisdiction: U.S. District Court for the Eastern District of Texas  
 - Counsel: Sheppard Mullin Richter & Hampton LLP  
 - Nature of Suit: Patent
- **Chipp'd Ltd. v. Crush & Lovely LLC** **Jul 2015 – Sep 2015**  
 - Jurisdiction: American Arbitration Association  
 - Counsel: White and Williams LLP  
 - Nature of Suit: Breach of Contract
- **Seymore Levine v. The Boeing Company** **Jul 2015 – Jan 2016**  
 - Jurisdiction: U.S. District Court for the Central District of California  
 - Counsel: Quinn Emanuel Urquhart & Sullivan LLP  
 - Nature of Suit: Patent
- **Global Cash Access, Inc. v. NRT Technology Corp. et al.** **Jul 2015 – Present**  
 - Jurisdiction: U.S. District Court for the District of Nevada  
 - Counsel: Pillsbury Winthrop Shaw Pittman LLP  
 - Nature of Suit: Patent
- **Anthony Johnson v. Storix, Inc.** **Jun 2015 – Dec 2015**  
 - Jurisdiction: U.S. District Court for the Southern District of California  
 - Counsel: Eastman & McCartney LLP  
 - Nature of Suit: Copyright

- **Custom Media Technologies LLC v. AT&T Services, Inc., et al.** **Apr 2015 – Jun 2015**  
 - Jurisdiction: U.S. District Court for the District of Delaware  
 - Counsel: Freitas Angell & Weinberg LLP  
 - Nature of Suit: Patent
- **Huricks et al. v. Shopkick, Inc.** **Apr 2015 – Aug 2015**  
 - Jurisdiction: U.S. District Court for the Northern District of California  
 - Counsel: Newman DuWors, LLP  
 - Nature of Suit: Telephone Consumer Protection Act (TCPA)
- **Fox Television Stations, Inc. v. FilmOn X, LLC, et al.** **Mar 2015 – Jul 2015**  
 - Jurisdiction: U.S. District Court for the District of Columbia  
 - Counsel: Baker Marquart LLP  
 - Nature of Suit: Copyright
- **e-Watch, Inc. et al. v. ZTE Solutions, Inc., ZTE (USA) Inc. and ZTE Corp.** **Mar 2015 – Present**  
 - Jurisdiction: U.S. District Court for the Eastern District of Texas  
 - Counsel: Pillsbury Winthrop Shaw Pittman LLP  
 - Nature of Suit: Patent
- **Novatel Wireless, Inc., et al. v. ZTE Corp. and ZTE (USA) Inc.** **Jan 2015 – Jul 2015**  
 - Jurisdiction: U.S. District Court for the Southern District of California  
 - Counsel: Pillsbury Winthrop Shaw Pittman LLP  
 - Nature of Suit: Patent
- **Essociate, Inc. v. Clickbooth.com, LLC** **Oct 2014 – Feb 2015**  
 - Jurisdiction: U.S. District Court for the Central District of California  
 - Counsel: Newman DuWors, LLP  
 - Nature of Suit: Patent
- **Adaptix, Inc. v. ZTE Corporation, ZTE Solutions, Inc., and ZTE (USA) Inc.** **Sep 2014 – Jul 2016**  
 - Jurisdiction: U.S. District Court for the Eastern District of Texas  
 - Counsel: Pillsbury Winthrop Shaw Pittman LLP  
 - Nature of Suit: Patent
- **VStream Technologies, LLC v. ZTE Corporation and ZTE (USA) Inc., et al.** **Sep 2014 – Jul 2015**  
 - Jurisdiction: U.S. District Court for the Eastern District of Texas  
 - Counsel: Pillsbury Winthrop Shaw Pittman LLP  
 - Nature of Suit: Patent
- **State of California v. Burlena King** **Aug 2014 – Sep 2014**  
 - Jurisdiction: Superior Court of California, County of Los Angeles  
 - Counsel: Law Offices of the Los Angeles County Public Defender  
 - Nature of Suit: Criminal

- **Hill-Rom Company, Inc., et al. v. General Electric Company** **Jul 2014 – Sep 2014**

  - Jurisdiction: U.S. District Court for the Eastern District of Virginia
  - Counsel: Schiff Hardin LLP
  - Nature of Suit: Patent
  
- **Personal Audio LLC v. ZTE Corporation, et al.** **Jul 2014 – May 2015**

  - Jurisdiction: U.S. District Court for the Eastern District of Texas
  - Counsel: Pillsbury Winthrop Shaw Pittman LLP
  - Nature of Suit: Patent
  
- **Yardi Systems, Inc. v. Property Solutions International, Inc.** **May 2014 – Present**

  - Jurisdiction: U.S. District Court for the Central District of California
  - Counsel: Morrison & Foerster, LLP
  - Nature of Suit: Copyright and Trade Secret
  
- **AgJunction, LLC v. Agrian, Inc. et al.** **Apr 2014 – Feb 2015**

  - Jurisdiction: U.S. District Court for the District of Kansas
  - Counsel: Husch Blackwell LLP
  - Nature of Suit: Copyright and Trade Secret
  
- **Davies v. L.A. Checker Cab** **Apr 2014 – Jun 2014**

  - Jurisdiction: Superior Court of California, County of Los Angeles
  - Counsel: Cheong, Denove, Rowell & Bennett
  - Nature of Suit: Negligence
  
- **Inter Partes Review of U.S. Patent No. 8,466,795** **Feb 2014 – Jul 2014**

  - Jurisdiction: U.S. Patent and Trademark Office
  - Counsel: Pillsbury Winthrop Shaw Pittman LLP
  - Nature of Suit: Patent
  
- **Certain Wireless Devices, Including Mobile Phones And Tablets II** **Feb 2014 – Jul 2014**

  - Jurisdiction: U.S. International Trade Commission
  - Counsel: Pillsbury Winthrop Shaw Pittman LLP
  - Nature of Suit: Patent
  
- **Pragmatus Mobile, LLC v. ZTE Corporation** **Feb 2014 – Jul 2014**

  - Jurisdiction: U.S. District Court for the District of Delaware
  - Counsel: Pillsbury Winthrop Shaw Pittman LLP
  - Nature of Suit: Patent
  
- **Intellectual Ventures, LLC v. AT&T Mobility, LLC, et al.** **Oct 2013 – May 2015**  
**Intellectual Ventures, LLC v. T-Mobile USA, Inc., et al.**  
**Intellectual Ventures, LLC v. Nextel Operations, Inc., et al.**  
**Intellectual Ventures, LLC v. United States Cellular Corporation**

  - Jurisdiction: U.S. District Court for the District of Delaware
  - Counsel: Dechert LLP
  - Nature of Suit: Patent

- **Front Row Technologies, LLC v. NBA Media Ventures, LLC, et al.** **Oct 2013 – July 2016**

  - Jurisdiction: U.S. District Court for the District of New Mexico
  - Counsel: Shore Chan DePumpo LLP
  - Nature of Suit: Patent
  
- **Nokia Corporation and Nokia Inc. v. HTC Corporation and HTC America, Inc.** **Dec 2013 – Feb 2014**

  - Jurisdiction: U.S. District Court for the District of Delaware
  - Counsel: Desmarais LLP
  - Nature of Suit: Patent
  
- **Certain Portable Electronic Communications Devices, Including Mobile Phones and Components Thereof** **Aug 2013 – Feb 2014**

  - Jurisdiction: U.S. International Trade Commission
  - Counsel: Desmarais LLP
  - Nature of Suit: Patent
  
- **SecurityBase.com v. Jeffrey Essick, et al.** **Aug 2013 – Jun 2015**

  - Jurisdiction: Superior Court of California, County of Orange
  - Counsel: Younesi & Yoss, LLP
  - Nature of Suit: Copyright and Trade Secret
  
- **Nokia Corp. and Intellisync Corp. v. HTC America, Inc., and Exedeia, Inc.** **Feb 2013 – May 2013**

  - Jurisdiction: U.S. District Court for the District of Delaware
  - Counsel: Desmarais LLP
  - Nature of Suit: Patent
  
- **Certain Electronic Devices, Including Mobile Phones and Tablet Computers, and Components Thereof** **Feb 2013 – May 2013**

  - Jurisdiction: U.S. International Trade Commission
  - Counsel: Desmarais LLP
  - Nature of Suit: Patent
  
- **Essociate, Inc. v. Azoogole.com, Inc. and Epic Media Group, Inc.** **Nov 2012 – Oct 2013**

  - Jurisdiction: U.S. District Court for the Western District of Wisconsin
  - Counsel: Newman DuWors, LLP
  - Nature of Suit: Patent
  
- **John Doe v. Passageway School** **Oct 2012 – Dec 2012**

  - Jurisdiction: Superior Court of California, County of Ventura
  - Counsel: Stone & Hiles, LLP
  - Nature of Suit: Negligence
  
- **Essociate, Inc. v. Neverblue Media, Inc.** **Sep 2012 – Jul 2013**

  - Jurisdiction: U.S. District Court for the Central District of California
  - Counsel: Newman DuWors, LLP
  - Nature of Suit: Patent

- **Porto Technology Co., Ltd. v. Cellco Partnership d/b/a Verizon Wireless** **Sep 2012 – Feb 2014**

  - Jurisdiction: U.S. District Court for the Eastern District of Virginia
  - Counsel: Fox Rothschild LLP
  - Nature of Suit: Patent
  
- **Flashpoint Technology, Inc. v. ZTE Corporation** **Aug 2012 – Mar 2013**

  - Jurisdiction: U.S District Court for the District of Delaware
  - Counsel: Goodwin Procter LLP
  - Nature of Suit: Patent
  
- **Certain Electronic Imaging Devices** **Aug 2012 – Mar 2013**

  - Jurisdiction: U.S International Trade Commission
  - Counsel: Goodwin Procter LLP
  - Nature of Suit: Patent
  
- **MobileMedia Ideas, LLC v. HTC Corporation and HTC America, Inc.** **Jul 2012 – May 2013**

  - Jurisdiction: U.S. District Court for the Eastern District of Texas
  - Counsel: Desmarais LLP
  - Nature of Suit: Patent
  
- **Golden Archer Investments, LLC v. SkyNet Financial Systems, LLC** **Jul 2012 – Dec 2012**

  - Jurisdiction: U.S. District Court for the Southern District of New York
  - Counsel: Goldman Ismail Tomaselli Brennan & Baum LLP
  - Nature of Suit: Breach of Contract
  
- **Inter Partes Re-examination of U.S. Patent No. 7,702,669** **May 2012 – Jul 2012**

  - Jurisdiction: U.S. Patent and Trademark Office
  - Counsel: Hickman Palermo Truong Becker Bingham Wong LLP
  - Nature of Suit: Patent
  
- **Denise Black v. Prowess, Inc.** **Mar 2012 – May 2012**

  - Jurisdiction: State of New York, Supreme Court, County of Ontario
  - Counsel: Smith, Sovik, Kendrick & Sugnet, PC
  - Nature of Suit: Breach of Contract
  
- **Essociate, Inc. v. Direct ROI, LLC** **Mar 2012 – Jun 2012**

  - Jurisdiction: U.S. District Court for the Central District of California
  - Counsel: Newman DuWors, LLP
  - Nature of Suit: Patent
  
- **EchoStar Technologies, Corp. v. TiVo Inc. and Humax USA, Inc.** **Mar 2011 – Apr 2011**

  - Jurisdiction: U.S. District Court for the Eastern District of Texas
  - Counsel: Morrison & Foerster, LLP
  - Nature of Suit: Patent



## JOURNAL AND MAGAZINE ARTICLES

- Yuriy Brun, Jae young Bang, George Edwards, and Nenad Medvidovic, ***Self-Adapting Reliability in Distributed Software Systems***, IEEE Transactions on Software Engineering, 2015.
- Chris A. Mattmann, Nenad Medvidovic, Sam Malek, George Edwards and Somo Banerjee, ***A Middleware Platform for Providing Mobile and Embedded Computing Instruction to Software Engineering Students***, IEEE Transactions on Education, 2012.
- Nenad Medvidovic, Hossein Tajalli, Joshua Garcia, Yuriy Brun, Ivo Krka, and George Edwards, ***Engineering Heterogeneous Robotics Systems: A Software Architecture-Based Approach***, IEEE Computer, 2011.
- Nenad Medvidovic and George Edwards, ***Software Architecture and Mobility: A Roadmap***, Journal of Systems and Software (JSS): Special Issue on Software Architecture and Mobility, 2010.
- Nenad Medvidovic, Hossein Tajalli, Joshua Garcia, Yuriy Brun, Ivo Krka, George Edwards, Marija Mikic-Rakic, Sam Malek, and Gaurav Sukhatme, ***An Architecture-Driven Software Mobility Framework***, Journal of Systems and Software (JSS): Special Issue on Software Architecture and Mobility, 2010.
- George Edwards, Chiyong Seo, and Nenad Medvidovic, ***Model Interpreter Frameworks: A Foundation for the Analysis of Domain-Specific Software Architectures***, Journal of Universal Computer Science (JUICS): Special Issue on Software Components, Architectures and Reuse, 2008.
- Aniruddha Gokhale, Krishnakumar Balasubramanian, Jaiganesh Balasubramanian, Arvind Krishna, George T. Edwards, Gan Deng, Emre Turkay, Jeffrey Parsons, and Douglas C. Schmidt, ***Model-Driven Middleware: A New Paradigm for Deploying and Provisioning Distributed Real-time and Embedded Applications***, Elsevier Journal of the Science of Computer Programming: Special Issue on Model Driven Architecture, 2005.

## CONFERENCE PAPERS

- Christoph Dorn, George Edwards, and Nenad Medvidovic, ***Analyzing Design Tradeoffs in Large-scale Socio-Technical Systems through Simulation of Dynamic Collaboration Patterns***, Proceedings of the 20th International Conference on Cooperative Information Systems (CoopIS), September 2012.
- George Edwards, Nenad Medvidovic, and Yuriy Brun, ***Automated Analysis and Code Generation for Domain-Specific Models***, Proceedings of the Joint 10th Working IEEE/IFIP Conference on Software Architecture & 6th European Conference on Software Architecture (WICSA/ECSA), August 2012.
- George Edwards, Yuriy Brun, and Nenad Medvidovic, ***Isomorphism in Model Tools and Editors***, Proceedings of the 26th IEEE/ACM International Conference on Automated Software Engineering (ASE), November 2011.
- Yuriy Brun, George Edwards, Jae young Bang and Nenad Medvidovic, ***Smart Redundancy for Distributed Computation***, Proceedings of 31st International Conference on Distributed Computing Systems (ICDCS), June 2011.

- Hossein Tajalli, Joshua Garcia, George Edwards, and Nenad Medvidovic, ***PLASMA: A Plan-based Layered Architecture for Software Model-driven Adaptation***, Proceedings of the 25th IEEE/ACM International Conference on Automated Software Engineering (ASE), September 2010.
- Jae young Bang, Daniel Popescu, George Edwards, Nenad Medvidovic, Naveen Kulkarni, Girish M. Rama, and Srinivas Padmanabhuni, ***CoDesign - A Highly Extensible Collaborative Software Modeling Framework***, Research Demonstrations Track, Proceedings of the ACM/IEEE 32nd International Conference on Software Engineering (ICSE), May 2010.
- Ivo Krka, George Edwards, Yuriy Brun and Nenad Medvidovic, ***Synthesizing Partial Component-Level Behavior Models from System Specifications***, Proceedings of the 7th Joint Meeting of the European Software Engineering Conference and ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE), August 2009.
- Joshua Garcia, Daniel Popescu, George Edwards and Nenad Medvidovic, ***Toward a Catalogue of Architectural Bad Smells***, Proceedings of the 5<sup>th</sup> International Conference on the Quality of Software Architectures (QoSA), June 2009.
- Ivo Krka, George Edwards, Yuriy Brun and Nenad Medvidovic, ***From System Specifications to Component Behavioral Models***, New Ideas and Emerging Results Track, Companion Volume of the 31st International Conference on Software Engineering (ICSE), May 2009.
- Joshua Garcia, Daniel Popescu, George Edwards and Nenad Medvidovic, ***Identifying Architectural Bad Smells***, Proceedings of the 13<sup>th</sup> European Conference on Software Maintenance and Reengineering (CSMR), March 2009.
- Steve Mastrianni, David Bantz, Terrence Buechner, Tom Chefalas, George Edwards, Song Jinho, Dong Jun Lan, Gary Leonardi, Leslie Liu, Randy Moulic, Dennis G. Shea, Andrew Wyskida, ***BlueStar: Managed Services for Enterprise Mobility***, Proceedings of the IEEE International Conference on e-Business Engineering (ICEBE), October 2008.
- George Edwards, Leslie S. Liu, and Randy Moulic, ***Proxima: A Mobile Augmented-Image Search System***, Proceedings of the ACM International Conference on Multimedia (ACMMM), October 2008.
- George Edwards and Nenad Medvidovic, ***A Methodology and Framework for Creating Domain-Specific Development Infrastructures***, Proceedings of the 23<sup>rd</sup> IEEE ACM International Conference on Automated Software Engineering (ASE), September 2008.
- Chiyong Seo, George Edwards, Sam Malek and Nenad Medvidovic, ***A Framework for Estimating the Impact of a Distributed Software System's Architectural Style on its Energy Consumption***, Proceedings of the Working International Conference on Software Architecture (WICSA), February 2008.
- George Edwards, Chiyong Seo, and Nenad Medvidovic, ***Construction of Analytic Frameworks for Component-Based Architectures***, Proceedings of the Brazilian Symposium on Software Components, Architectures and Reuse (SBCARS), August 2007.

- Gan Deng, Ming Xiong, Aniruddha Gokhale, and George Edwards, ***Evaluating Real-time Publish/Subscribe Service Integration Approaches in QoS-enabled Component Middleware***, Proceedings of the 10<sup>th</sup> IEEE International Symposium on Object-oriented Real-time Distributed Computing (ISORC), May 2007.
- George Edwards, Sam Malek, and Nenad Medvidovic, ***Scenario-Driven Dynamic Analysis of Distributed Architectures***, Proceedings of the 10<sup>th</sup> International Conference on Fundamental Approaches to Software Engineering (FASE), March 2007.
- George Edwards, Gan Deng, Douglas C. Schmidt, Aniruddha Gokhale, and Balachandran Natarajan, ***Model-Driven Configuration and Deployment of Component Middleware Publisher/Subscriber Services***, Proceedings of the 3<sup>rd</sup> ACM International Conference on Generative Programming and Component Engineering (GPCE), October 2004.
- George Edwards, Douglas C. Schmidt, Aniruddha Gokhale, and Bala Natarajan, ***Integrating Publisher/Subscriber Services in Component Middleware for Distributed Real-time and Embedded Systems***, Proceedings of the 42<sup>nd</sup> Annual ACM Southeast Conference (ACMSE), April 2004.

#### WORKSHOP PAPERS

- Arman Shahbazian, George Edwards and Nenad Medvidovic, ***An End-to-End Domain Specific Modeling and Analysis Platform***, 8th Workshop on Modelling in Software Engineering (MiSE), May 2016.
- Chiyong Seo, George Edwards, Daniel Popescu, Sam Malek and Nenad Medvidovic, ***A Framework for Estimating the Energy Consumption Induced by a Distributed System's Architectural Style***, 8<sup>th</sup> Workshop on Specification and Verification of Component-Based Systems (SAVCBS), August 2009.
- George Edwards, Joshua Garcia, Hossein Tajalli, Daniel Popescu, Nenad Medvidovic, Gaurav Sukhatme, and Brad Petrus, ***Architecture-Driven Self-Adaptation and Self-Management in Robotics Systems***, Proceedings of the Workshop on Software Engineering for Adaptive and Self-Managing Systems (SEAMS), May 2009.
- Ivo Krka, Leslie Cheung, George Edwards, Leana Golubchik and Nenad Medvidovic, ***Architecture-Based Software Reliability Estimation: Problem Space, Challenges, and Strategies***, Proceedings of the Workshop on Architecting Dependable Systems (WADS), June 2008.
- George Edwards, Chiyong Seo, Daniel Popescu, Sam Malek, and Nenad Medvidovic, ***Self-\* Software Architectures and Component Middleware in Pervasive Environments***, Proceedings of the 5<sup>th</sup> International Workshop on Middleware for Pervasive and Ad-Hoc Computing (MPAC), November 2007.
- Chiyong Seo, Sam Malek, George Edwards, Daniel Popescu, Nenad Medvidovic, Brad Petrus, and Sharmila Ravula, ***Exploring the Role of Software Architecture in Fault-Tolerant and Dynamic Pervasive Systems***, Proc. of 1<sup>st</sup> Workshop on Software Engineering of Pervasive Computing Applications, Systems and Environments (SEPCASE), May 2007.

## BOOK CHAPTERS

- Ivo Krka, George Edwards, Leslie Cheung, Leana Golubchik, and Nenad Medvidovic, ***A Comprehensive Exploration of Challenges in Architecture-Based Reliability Estimation***, Architecting Dependable Systems 6, R. de Lemos, J.-C. Fabre, C. Gacek, F. Gadducci, M. ter Beek (Eds.), 2009.

## POSTERS AND DEMONSTRATIONS

- ***BlueStar Mobile Management Services***, IBM Research Technology Fair, June 2008.
- ***The Extensible Tool-chain for Evaluation of Architectural Models***, USC Center for Software and Systems Engineering Convocation, October 2006.
- ***A Model-Driven Framework for Architectural Evaluation of Mobile Software Systems***, UCI Institute for Software Research Forum, April 2006.

## INVITED TALKS

- ***Metamodeling-Enabled Model-Checking for Complex Systems***, Systems Engineering Research Center (SERC) Annual Research Review, November 2010.
- ***XTEAM: Automated Synthesis of Domain-Specific Code Generators***, Northrop Grumman Technology Day Research Showcase, Information Systems Track, May 2010.
- ***Domain-Specific Model Analysis and Code-Generation Frameworks***, Ground Systems Architecture Workshop (GSAW), Architecture-Centric Evolution (ACE) Working Group, March 2010.
- ***Automated Analysis and Code Generation for Domain-Specific Models***, USC Computer Science Department Annual Research Review, March 2010.
- ***Automated Analysis and Code Generation for Domain-Specific Models***, USC Center for Software and Systems Engineering Annual Research Review, March 2010.
- ***Model-Driven Analysis Frameworks for Embedded Systems***, USC Center for Software and Systems Engineering Annual Research Review, March 2009.
- ***Creating Domain-Specific Development Infrastructures***, USC Center for Software and Systems Engineering Annual Research Review, March 2008.
- ***Weighing Architectural Trade-offs with XTEAM***, USC Center for Software and Systems Engineering Annual Research Review, February 2007.

## TECHNICAL REPORTS

- George Edwards, Yuriy Brun, and Nenad Medvidovic, ***Automated Analysis and Code Generation for Domain-Specific Models***, Technical Report USC-CSSE-2010-517, Center for Software and Systems Engineering, University of Southern California, August 2010.

- George Edwards and Nenad Medvidovic, **Model Interpreter Frameworks**, Technical Report USC-CSSE-2009-514, USC Center for Software and Systems Engineering, Center for Software and Systems Engineering, University of Southern California, July 2009.
- George Edwards and Nenad Medvidovic, **A Highly Extensible Simulation Framework for Domain-Specific Architectures**, Technical Report USC-CSSE-2009-511, Center for Software and Systems Engineering, Univ. of Southern California, May 2009.
- Yuriy Brun, George Edwards, and Nenad Medvidovic, **Injecting Robustness into Autonomic Grid Systems**, Technical Report USC-CSSE-2009-510, USC Center for Software and Systems Engineering, University of Southern California, May 2009.

#### PATENT APPLICATIONS

- **Method and Apparatus for Simulation of Domain-Specific Models**. U.S. Provisional Patent Application 61/513,357, filed July 29, 2011. (abandoned)
- **Extensible Collaborative Software Modeling**. U.S. Patent Application 13/271,008, filed October 11, 2011. (abandoned)

#### HONORS AND AWARDS

- **2008 USC Computer Science Outstanding Student Research Award**
  - Awarded each year for exceptional research achievement by a graduate student in computer science.
- **Annenberg Graduate Fellowship**, Aug 2007
  - Supports highly qualified graduate students to conduct cutting-edge communication and digital media research and advance important new programs in the communications arena.
- **USC Viterbi School of Engineering Dean's Doctoral Fellowship**, May 2004
  - Supports world-class students for four years in the pursuit and publication of research leading to the doctoral degree.
- **Vanderbilt Summa Cum Laude graduate**, Aug 2003
  - Awarded to graduates whose grade point average equals or exceeds that of the top 5 percent of the previous year's graduating seniors.
- **NSF Research Experiences for Undergraduates Grant**, June 2003
  - Supports active research participation by undergraduate students in any of the areas of research funded by the National Science Foundation.
- **Vanderbilt Dean's List with High Honors**, Dec 2000, May '01, Dec '01, May '02, Dec '02, May '03
  - Recognizes outstanding academic performance in a semester. Students are named to the Dean's List when they earn a grade point average of at least 3.500.

- **Vanderbilt School of Engineering Merit Scholarship**, May 2000
  - Awarded to approximately 5 percent of all applicants based on exceptional accomplishment and high promise in intellectual endeavors.
- **National Merit Scholar**, May 2000
  - Awarded for academic achievement to 8,200 high school students each year out of 1.5 million entrants.

## TEACHING

- **Lecturer**, CSCI 102 – Data Structures, Fall 2012
- **Lecturer**, CSCI 568 – Requirements Engineering, Spring 2012, Spring 2013, Spring 2014, Spring 2015, Spring 2016
- **Teaching Assistant**, Infosys Intensive Course on Software Architecture, December 2009.
- **Guest Lecturer**, CSCI 589 – Software Engineering for Embedded Systems, Fall 2007, Fall 2008.
- **Guest Lecturer**, CSCI 377 – Introduction to Software Engineering, Fall 2007, Fall 2008, Fall 2009.
- **Guest Lecturer**, SAE 599 – Model-Driven Systems Architecture, Summer 2007, Spring 2008.
- **Teaching Assistant**, CSCI 589 – Software Engineering for Embedded Systems, Fall 2006.

## RESEARCH COMMUNITY SERVICE

- Reviewer for the **Journal of Systems and Software**, Elsevier, 2010 – 2013.
- Reviewer for **IEEE Transactions on Software Engineering (TSE)**, 2010 – 2012.
- Reviewer for the **50th International Conference on Objects, Models, Components, Patterns (TOOLS Europe)**, Prague, Czech Republic, May 28 – June 1, 2012.
- Program Committee Member for the **Research in Applied Computation Symposium (RACS)**, Miami, FL, November 2 – 5, 2011.
- Reviewer for the **Workshop on Software Engineering for Adaptive and Self-Managing Systems (SEAMS), Cape Town**, South Africa, May 3 – 4, 2010.
- Reviewer for the **24th IEEE/ACM International Conference on Automated Software Engineering (ASE)**, Auckland, New Zealand, November 16 – 20, 2009.
- Reviewer for **DSN 2009 Workshop on Architecting Dependable Systems (WADS)**, Lisbon, Portugal, June 29, 2009.
- Reviewer for **Architecting Dependable Systems 6**, Springer Publishing, 2009.

- Reviewer for the **6th IEEE International Conference on Autonomic Computing (ICAC)**, June 15 – 19, 2009.
- Reviewer for **IEEE Software Special Issue: Domain-Specific Languages & Modeling**, July/August, 2009.
- Reviewer for the **23rd International Conference on Automated Software Engineering (ASE)**, L'Aquila, Italy, Sept. 15 – 19, 2008.
- Reviewer for the **Working IEEE/IFIP Conference on Software Architecture (WICSA)**, Vancouver, Canada, February 18 – 21, 2008.
- Program Committee Member for the **Institute for Software Research (ISR) Graduate Student Research Symposium (GSRs)**, Irvine, CA, June 1, 2007.
- Reviewer for the **3rd International Conference on the Quality of Software Architectures (QoSA)**, Boston, MA, July 12 – 13, 2007.
- Reviewer for the **10th International ACM SIGSOFT Symposium on Component-Based Software Engineering (CBSE)**, Boston, MA, July 9 – 11, 2007.
- Reviewer for the **First IEEE International Conference on Self-Adaptive and Self-Organizing Systems (SASO)**, Boston, MA, July 9 – 11, 2007.
- Reviewer for the **Second Workshop on Sharing and Reusing Architectural Knowledge - Architecture, Rationale, and Design Intent (SHARK/ADI)**, Minneapolis, MN, May 19 – 20, 2007.
- Reviewer for the **Workshop on Tools, Operating Systems and Programming Models for Developing Reliable Systems (TOPMoDeS)**, Long Beach, CA, March 26 – 30, 2007.

#### PROFESSIONAL ASSOCIATIONS

- **Member**, Association for Computer Machinery (ACM) and ACM Special Interest Group on Simulation and Modeling
- **Member**, IEEE Computer Society