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1 Education

Doctor of Philosophy (3/99, Cumulative GPA: 4.00)

University of California, Irvine
Department of Information and Computer Science
Advisor: Dr. Richard N. Taylor
Dissertation: *Architecture-Based Specification-Time Software Evolution*

Master of Science (6/95, Cumulative GPA: 4.00)

University of California, Irvine
Department of Information and Computer Science
Major Emphasis: Software

Bachelor of Science, Summa Cum Laude (8/92, Cumulative GPA: 4.00)

Arizona State University
Major: Computer Science

2 Employment History

3/05 - present Associate Professor, Computer Science Department
University of Southern California, Los Angeles, CA
1/99 - 3/05 Assistant Professor, Computer Science Department
University of Southern California, Los Angeles, CA
9/94 - 12/98 Graduate Student Researcher, Software Architecture Group
University of California, Irvine, CA
9/93 - 8/94 Teaching Assistant
University of California, Irvine, CA
6/93 - 8/93 Research Assistant, Software Engineering Group
Arizona State University, Tempe, AZ and Rupp Technology, Phoenix, AZ
8/92 - 8/93 Teaching Assistant
Arizona State University, Tempe, AZ

3 Honors, Awards, Fellowships

2008	Most Influential Paper Award, International Conference on Software Engineering
2007	IBM Real-Time Innovation Faculty Award
2007	Most cited software engineering paper published in a scientific journal in 2000
August 2006	3,269 th most cited author in Computer Science out of 790,329, CiteSeer
2005	Okawa Foundation Research Grant
2000-2005	National Science Foundation (NSF) CAREER Award
1999, 2000	USC, School of Engineering Teaching Honor Roll
1993-94	UC Irvine, Department of Information and Computer Science Fellowship
1992	Arizona State University, Moeur Award (top student in the graduating class)
1991-93	UPE National Honor Society for the computing sciences
1990-93	Golden Key National Honor Society
1990-92	Arizona Regents International Student Scholarship
1989-92	Dean's Honor List

4 Publications

Authored Books

AB1 Richard N. Taylor, Nenad Medvidovic, and Eric M. Dashofy. "Software Architecture: Foundations, Theory, and Practice." In print. *John Wiley & Sons*, 2008. ISBN-10: 0470167742. ISBN-13: 978-0470167748.

Edited Books

EB2 Robert Nord, Nenad Medvidovic, Rene Krikhaar, Judith Stafford, Jan Bosch, eds. "Proceedings of the 5th Working IEEE/IFIP Conference on Software Architecture." *IEEE Computer Society*, March 2006.

Refereed Journal Articles

- J1** 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*, special issue on Software Components, Architectures, and Reuse. Accepted – to appear.
- J2** Nenad Medvidovic, Eric M. Dashofy, and Richard N. Taylor. "Moving Architectural Description from Under the Technology Lamppost." *Journal of Information and Software Technology*, vol. 49, no. 1, pages 12-31 (January 2007).
- J3** Nenad Medvidovic and Vladimir Jakobac. "Using Software Evolution to Focus Architectural Recovery." *Journal of Automated Software Engineering*, vol. 13, no. 2, pages 225-256 (April 2006).
- J4** Sam Malek, Marija Mikic-Rakic, and Nenad Medvidovic. "A Style-Aware Architectural Middleware for Resource-Constrained, Distributed Systems." *IEEE Transactions on Software Engineering*, vol. 31, no. 3, pages 256-272 (March 2005).
- J5** Roshanak Roshandel, Andre van der Hoek, Marija Mikic-Rakic, and Nenad Medvidovic. "Mae – A System Model and Environment for Managing Architectural Evolution." *ACM Transactions on Software Engineering and Methodology*, vol. 11, no. 2, pages 240-276 (April 2004).

- J6** Paul Gruenbacher, Alexander Egyed, and Nenad Medvidovic. "Reconciling Software Requirements and Architectures with Intermediate Models." *Springer Journal of Software and System Modeling*, vol. 3, no. 3, pages 235-253 (August 2004).
Published online on *SpringerLink*, December 10, 2003, <http://www.springerlink.com/openurl.asp?genre=article&id=doi:10.1007/s10270-003-0038-6>
- J7** Nenad Medvidovic, Paul Gruenbacher, Alexander Egyed, and Barry W. Boehm. "Bridging Models across the Software Lifecycle." *Journal of Systems and Software*, vol. 68, no. 3, pages 199-215 (December 2003).
Listed on *Journal of Systems and Software, Most Downloaded Articles January - December 2003*, <http://www1.elsevier.com/homepage/sac/downloads/01641212.htm>
- J8** Nenad Medvidovic, Marija Mikic-Rakic, Nikunj Mehta, and Sam Malek. "Software Architectural Support for Handheld Computing." *IEEE Computer, Special Issue on Handheld Computing*, vol. 36, no. 9, pages 66-73 (September 2003).
Acceptance rate 5 of 87.
- J9** Nenad Medvidovic, Eric M. Dashofy, and Richard N. Taylor. "The Role of Middleware in Architecture-Based Software Development." *International Journal of Software Engineering and Knowledge Engineering*, vol. 13, no. 4, pages 367-393 (August 2003).
- J10** Nenad Medvidovic, David S. Rosenblum, David F. Redmiles, and Jason E. Robbins. "Modeling Software Architectures in the Unified Modeling Language." *ACM Transactions on Software Engineering and Methodology*, vol. 11, no. 1, pages 2-57 (January 2002).
- J11** Alexander Egyed, Nenad Medvidovic, and Cristina Gacek. "A Component-Based Perspective on Software Mismatch Detection and Resolution." *IEE Proceedings – Software Engineering*, vol. 147, no. 6, pages 225-236 (December 2000).
- J12** Nenad Medvidovic and Richard N. Taylor. "A Classification and Comparison Framework for Software Architecture Description Languages." *IEEE Transactions on Software Engineering*, vol. 26, no. 1, pages 70-93 (January 2000).
Reprinted in *Rational Developer Network: Seminal Papers on Software Architecture*. Rational Software Corporation, <http://www.rational.net/> (July 2001). Selected by the *Journal of Information and Software Technology* as the most widely cited software engineering paper published in a scientific journal in 2000 (January 2007).
- J13** Peyman Oreizy, Michael M. Gorlick, Richard N. Taylor, Dennis Heimbigner, Gregory Johnson, Nenad Medvidovic, Alex Quilici, David S. Rosenblum, and Alexander L. Wolf. "Self-Adaptive Software." *IEEE Intelligent Systems and Their Applications*, vol. 14, no. 3, pages 54-62 (May/June 1999).
- J14** Nenad Medvidovic and Richard N. Taylor. "Exploiting Architectural Style to Develop a Family of Applications." *IEE Proceedings – Software Engineering*, vol. 144, no. 5-6, pages 237-248 (October-December 1997).
- J15** Richard N. Taylor, Nenad Medvidovic, Kenneth M. Anderson, E. James Whitehead, Jr., Jason E. Robbins, Kari A. Nies, Peyman Oreizy, and Deborah L. Dubrow. "A Component- and Message-Based Architectural Style for GUI Software." *IEEE Transactions on Software Engineering*, vol. 22, no. 6, pages 390-406 (June 1996).

In Submission

- J16** David Woollard, Nenad Medvidovic, Yolanda Gil, and Chris A. Mattmann. “Scientific Software as Workflows: From Discovery to Distribution.” Submitted to *IEEE Software*, special issue on Developing Scientific Software.
- J17** Sam Malek, Nenad Medvidovic, and Marija Mikic-Rakic. “A Framework for Improving the Deployment Architectures of Distributed Software Systems.” Submitted to *IEEE Transactions on Software Engineering*.

Refereed Book Chapters

- B1** Sam Malek, Nels Beckman, Marija Mikic-Rakic, and Nenad Medvidovic. “A Framework for Ensuring and Improving Dependability in Highly Distributed Systems.” In R. de Lemos, C. Gacek, and A. Romanowski, eds., *Architecting Dependable Systems III*, Springer Verlag, October 2005.
- B2** Paris Avgeriou, Nicolas Guelfi, and Nenad Medvidovic. “Software Architecture Description and UML.” In Nuno Jardim Nunes, Bran Selic, Alberto Rodrigues da Silva, eds., *UML Modeling Languages and Applications*, LNCS 3297, Springer Verlag, pages 23-32, February 2005.
- B3** Roshanak Roshandel and Nenad Medvidovic. “Multi-View Software Component Modeling for Dependability.” In R. de Lemos, C. Gacek, and A. Romanowski, eds., *Architecting Dependable Systems II*, Lecture Notes in Computer Science 3069, Springer Verlag, pages 286-306, June 2004.
- B4** Nenad Medvidovic and Nikunj Mehta. “Java Beans and Software Architecture.” In Hossein Bidgoli, ed., *The Internet Encyclopedia*, John Wiley & Sons, Inc., vol. 2, pages 388-400, December 2003.
- B5** Nenad Medvidovic, Marija Mikic-Rakic, and Nikunj Mehta. “Improving Dependability of Component-Based Systems via Multi-Versioning Connectors.” In R. de Lemos, C. Gacek, and A. Romanowski, eds., *Architecting Dependable Systems*, Lecture Notes in Computer Science (LNCS 2677), pages 37-60, Springer Verlag, August 2003.

Refereed Conference Publications

- C1** Leslie Cheung, Roshanak Roshandel, Nenad Medvidovic, and Leana Golubchik. “Early Prediction of Software Component Reliability.” In *Proceedings of the 30th International Conference on Software Engineering (ICSE 2008)*, Leipzig, Germany, May 2008.
- C2** Marija Mikic-Rakic, Sam Malek, and Nenad Medvidovic. “Architecture-Driven Software Mobility in Support of QoS Requirements.” In *Proceedings of the International Workshop on Software Architectures and Mobility (SAM 2008)*, Leipzig, Germany, May 2008.
- C3** Chris Mattmann, David Woollard, and Nenad Medvidovic. “Exploiting Connector Knowledge To Efficiently Disseminate Highly Voluminous Data Sets.” In *Proceedings of the 3rd Workshop on SHaring and Reusing architectural Knowledge (SHARK 2008)*, Leipzig, Germany, May 2008.
- C4** Chiyoung Seo, Sam Malek, and Nenad Medvidovic. “Estimating the Energy Consumption in Pervasive Java-Based Systems.” In *Proceedings of the 6th IEEE International Conference on Pervasive Computing and Communications (PerCom 2008)*, Hong Kong, March 2008.

- C5** Chiyoung 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.” In *Proceedings of the 7th Working IEEE/IFIP Conference on Software Architecture (WICSA 2008)*, Vancouver, BC, Canada, February 2008.
- C6** George Edwards, Chiyoung Seo, Daniel Popescu, Sam Malek, and Nenad Medvidovic. “Self-* Software Architectures and Component Middleware in Pervasive Environments.” In *Proceedings of the 5th International Workshop on Middleware for Pervasive and Ad-Hoc Computing (MPAC 2007)*, Newport Beach, CA, November 2007.
- C7** Chiyoung Seo, Sam Malek, and Nenad Medvidovic. “An Energy Consumption Framework for Distributed Java-Based Systems.” In *Proceedings of the 22nd IEEE/ACM International Conference on Automated Software Engineering (ASE 2007)*, Atlanta, GA, November 2007.
- C8** Daniel Popescu, Spencer Rugaber, Nenad Medvidovic, and Daniel M. Berry. “Improving the Quality of Requirements Specifications via Automatically Created Object-Oriented Models.” In *Proceeding of the 14th Monterey Workshop on Requirements Analysis*, Monterey, CA, September 2007.
- C9** Yuriy Brun and Nenad Medvidovic. “Fault and Adversary Tolerance as an Emergent Property of Distributed Systems’ Software Architectures.” In *Proceedings of the 2nd International Workshop on Engineering Fault Tolerant Systems (EFTS 2007)*, Dubrovnik, Croatia, September 4, 2007.
- C10** Nenad Medvidovic and Sam Malek. “Software Deployment Architecture and Quality-of-Service in Pervasive Environments”. In *Proceedings of the International Workshop on the Engineering of Software Services for Pervasive Environments (ESSPE 2007)*, Dubrovnik, Croatia, September 4, 2007.
- C11** George Edwards, Chiyoung Seo, and Nenad Medvidovic. “Construction of Analytic Frameworks for Component-Based Architectures.” In *Proceedings of the Brazilian Symposium on Software Components, Architectures, and Reuse (SBCARS 2007)*, Campinas, Brazil, August 2007.
- C12** Vito Perrone, Chris A. Mattmann, Sean Kelly, Daniel J. Crichton, Anthony Finkelstein, and Nenad Medvidovic. “A Reference Framework for Requirements and Architecture in Biomedical Grid Systems.” In *Proceedings of the IEEE International Conference on Information Reuse and Integration (IEEE IRI-2007)*, Las Vegas, NV, August 13-15, 2007.
- C13** Roshanak Roshandel, Nenad Medvidovic, and Leana Golubchik. “A Bayesian Model for Predicting Reliability of Software Systems at the Architectural Level.” In *Proceedings of the 3rd International Conference on Quality of Software Architectures (QoSA 2007)*, Boston, MA, July 2007.
- C14** Roshanak Roshandel and Nenad Medvidovic. “A Classification of Architectural Reliability Models” In *Proceedings of the International Workshop on Software Architecture Research and Practice*, Silicon Valley, CA, July 2007.
- C15** Yuriy Brun and Nenad Medvidovic. “An Architectural Style for Solving Computationally Intensive Problems on Large Networks.” In *Proceedings of the 2nd Workshop on Software Engineering for Adaptive and Self-Managing Systems (SEAMS 2007)*, Minneapolis, MN, May 26-27, 2007.

- C16** Sam Malek, Chiyoung Seo, Sharmila Ravula, Brad Petrus, and Nenad Medvidovic. "Reconceptualizing a Family of Heterogeneous Embedded Systems via Explicit Architectural Support." In *Proceedings of the 29th International Conference on Software Engineering (ICSE 2007)*, Minneapolis, MN, May 20-26, 2007.
- C17** Chiyoung Seo, Sam Malek, George Edwards, Daniel Popescu, Nenad Medvidovic, Brad Petrus, and Sharmila Ravula. "Exploring the Role of Software Architecture in Dynamic and Fault-Tolerant Pervasive Systems." In *Proceedings of the Workshop on Software Engineering of Pervasive Computing Applications, Systems, and Environments (SEPCASE 2007)*, Minneapolis, MN, May 2007.
- C18** Chris A. Mattmann, David Woollard, Nenad Medvidovic, and Reza Mahjourian. "Software Connector Classification and Selection for Data-intensive Systems." In *Proceedings of the 2nd Workshop on Incorporating COTS Software into Software Systems: Tools and Techniques (IWICSS 2007)*, Minneapolis, MN, May 22, 2007.
- C19** George Edwards, Sam Malek, and Nenad Medvidovic. "Scenario-Driven Dynamic Analysis of Distributed Architecture." In *Proceedings of the 10th International Conference on Fundamental Approaches to Software Engineering (FASE 2007)*, Braga, Portugal, March 24 - April 1, 2007.
- C20** Chris A. Mattmann and Nenad Medvidovic. "The GridLite DREAM: Bringing the Grid to Your Pocket." In *Proceedings of the 12th Monterey Workshop*, pages 70-87, LNCS 4322, Springer Verlag, February 2007.
- C21** Jesal Bhuta, Chris A. Mattmann, Nenad Medvidovic, and Barry Boehm. "A Framework for the Assessment and Selection of Software Components and Connectors in COTS-based Architectures." In *Proceedings of the 2007 IEEE/IFIP Working Conference on Software Architecture (WICSA-6)*, Mumbai, India, January 6-9, 2007.
- C22** Sam Malek, Chiyoung Seo, Sharmila Ravula, Brad Petrus, and Nenad Medvidovic. "Providing Middleware-Level Facilities to Support Architecture-Based Development of Software Systems in Pervasive Environments." In *Proceedings of the 4th International Workshop on Middleware for Pervasive and Ad-Hoc Computing (MPAC 2006)*, Melbourne, Australia, November 27 - December 1, 2006.
- C23** Sam Malek, Chiyoung Seo, and Nenad Medvidovic. "Tailoring an Architectural Middleware Platform to a Heterogeneous Embedded Environment." In *Proceedings of the 6th International Workshop on Software Engineering and Middleware (SEM 2006)*, Portland, Oregon, November 10-11, 2006.
- C24** Marija Mikic-Rakic and Nenad Medvidovic. "A Classification of Disconnected Operation Techniques." In *Proceedings of the 32nd EUROMICRO Conference on Software Engineering and Advanced Applications (EUROMICRO'06)*, pages 144-151, Dubrovnik, Croatia, August 29 - September 1, 2006.
- C25** Chris A. Mattmann, Daniel J. Crichton, Nenad Medvidovic, and Steven Hughes. "A Software Architecture-Based Framework for Highly Distributed and Data Intensive Scientific Applications." In *Proceedings of the 28th International Conference on Software Engineering (ICSE 2006)*, Shanghai, China, May 20-28, 2006.
- C26** Roshanak Roshandel, Somo Banerjee, Leslie Cheung, Nenad Medvidovic, and Leana Golubchik. "Estimating Software Component Reliability by Leveraging Architectural Models." In *Proceedings of the 28th International Conference on Software Engineering (ICSE 2006)*, Shanghai, China, May 20-28, 2006.

- C27** David Woollard and Nenad Medvidovic. “An Architectural Style for High-Performance Asymmetrical Parallel Computations.” In *Proceedings of the 28th International Conference on Software Engineering (ICSE 2006)*, Shanghai, China, May 20-28, 2006.
- C28** Sam Malek, Marija Mikic-Rakic, and Nenad Medvidovic. “A Decentralized Redeployment Algorithm for Improving the Availability of Distributed Systems.” In *Proceedings of the 3rd International Working Conference on Component Deployment (CD 2005)*, Grenoble, France, November 28-29, 2005.
- C29** Marija Mikic-Rakic, Sam Malek, and Nenad Medvidovic. “Improving Availability in Large, Distributed Component-Based Systems via Redeployment.” In *Proceedings of the 3rd International Working Conference on Component Deployment (CD 2005)*, Grenoble, France, November 28-29, 2005.
- C30** Somo Banerjee, Chris A. Mattmann, Nenad Medvidovic, and Leana Golubchik. “Leveraging Architectural Models to Inject Trust into Software Systems.” In *Proceedings of the ICSE 2005 Workshop on Software Engineering for Secure Systems – Building Trustworthy Applications (SESS’05)*, St. Louis, MO, May 15th-16th, 2005.
- C31** Omer Erdem Demir, Prem Devanbu, Nenad Medvidovic, and Eric Wohlstadter. “DISCOA: Architectural Adaptations for Security and QoS.” In *Proceedings of the ICSE 2005 Workshop on Software Engineering for Secure Systems – Building Trustworthy Applications (SESS’05)*, St. Louis, MO, May 15th-16th, 2005.
- C32** Vladimir Jakobac, Nenad Medvidovic, and Alexander Egyed. “Separating Architectural Concerns to Ease Program Understanding.” In *Proceedings of the ICSE 2005 Workshop on the Modeling and Analysis of Concerns in Software (MACS)*, St. Louis, MO, May 16, 2005.
- C33** Chris A. Mattmann, Nenad Medvidovic, Paul M. Ramirez, and Vladimir Jakobac. “Unlocking the Grid.” In *Proceedings of the 8th International Symposium on Component Based Software Engineering (CBSE-8)*, St. Louis, MO, May 14-15, 2005.
- C34** David Woollard, Nenad Medvidovic, Walter Yamada, and Theodore Berger. ADaPT: An Event-Passing Protocol for Reducing Delivery Costs in Scatter-Gather Parallel Processes. In *Proceedings of the Workshop for Patterns in High Performance Computing*, Urbana, IL, May 2005.
- C35** Vladimir Jakobac, Alexander Egyed, and Nenad Medvidovic. “Improving System Understanding via Interactive, Tailorable, Source Code Analysis.” In *Proceedings of the 2005 Conference on Fundamental Approaches to Software Engineering (FASE 2005)*, Edinburgh, UK, April 2-10, 2005.
- C36** Chris A. Mattmann, Sam Malek, Nels Beckman, Marija Mikic-Rakic, Nenad Medvidovic, and Daniel J. Crichton. “GLIDE: A Grid-based Light-weight Infrastructure for Data-intensive Environments.” In *Proceedings of the 2005 European Grid Conference (EGC 2005)*, Amsterdam, the Netherlands, February 14-16, 2005.
- C37** Sam Malek, Marija Mikic-Rakic, Nenad Medvidovic. “An Extensible Framework for Autonomic Analysis and Improvement of Distributed Deployment Architectures.” In *Proceedings of the ACM SIGSOFT Workshop on Self-Managed Systems (WOSS 2004)*, Newport Beach, CA, October 31 - November 1, 2004.
- C38** Nikunj Mehta, Nenad Medvidovic, Marjan Sirjani, and Farhad Arbab. “Modeling Behavior in Compositions of Software Architectural Primitives.” To appear in *Proceedings of the 19th IEEE International Conference on Automated Software Engineering (ASE 2004)*, Linz, Austria, September 21-25, 2004.

- C39** Barry Boehm, Jesal Bhuta, David Garlan, Eric Gradman, LiGuo Huang, Alexander Lam, Ray Madachy, Nenad Medvidovic, Kenneth Meyer, Steven Meyers, Gustavo Perez, Kirk Reinholtz, Roshanak Roshandel, and Nicolas Rouquette. "Using Testbeds to Accelerate Technology Maturity and Transition: The SCROver Experience." In *Proceedings of the ACM-IEEE 2004 International Symposium on Empirical Software Engineering (ISESE 2004)*, Redondo Beach, CA, August 19-20, 2004.
- C40** Roshanak Roshandel, Bradley Schmerl, Nenad Medvidovic, David Garlan, and Dehua Zhang. "Understanding Tradeoffs among Different Architectural Modeling Approaches." In *Proceedings of the 4th Working IEEE/IFIP Conference on Software Architecture (WICSA-4)*, pages 47-56, Oslo, Norway, June 12-15, 2004.
- C41** Roshanak Roshandel and Nenad Medvidovic. "Toward Architecture-Based Reliability Estimation." In *Proceedings of Twin Workshops on Architecting Dependable Systems (WADS 2004)*, Edinburgh, UK, May 25, 2004 and Florence, Italy, June 30, 2004.
- C42** Marija Mikic-Rakic, Sam Malek, Nels Beckman, and Nenad Medvidovic. "Improving Availability of Distributed Event-Based Systems via Run-Time Monitoring and Analysis." In *Proceedings of Twin Workshops on Architecting Dependable Systems (WADS 2004)*, Edinburgh, UK, May 25, 2004 and Florence, Italy, June 30, 2004.
- C43** Nikunj Mehta, Ramakrishna Soma, and Nenad Medvidovic. "Style-Based Software Architectural Compositions as Domain-Specific Models." In *Proceedings of the Workshop on Directions in Software Engineering Environments (WoDiSEE 2004)*, pages 42-49, Edinburgh, UK, May 25, 2004.
- C44** Marija Mikic-Rakic, Sam Malek, Nels Beckman, and Nenad Medvidovic. "A Tailorable Environment for Assessing the Quality of Deployment Architectures in Highly Distributed Settings." In *Proceedings of the 2nd International Working Conference on Component Deployment (CD 2004)*, pages 1-17, Edinburgh, UK, May 20-21, 2004.
- C45** Marija Mikic-Rakic and Nenad Medvidovic. "Software Architectural Support for Disconnected Operation in Highly Distributed Environments." In *Proceedings of the 7th International Symposium on Component Based Software Engineering (CBSE-7)*, pages 23-39, Edinburgh, UK, May 24-25, 2004.
- C46** Marija Mikic-Rakic and Nenad Medvidovic. "Support for Disconnected Operation via Architectural Self-Reconfiguration." In *Proceedings of the First International Conference on Autonomic Computing (ICAC-04)*, pages 114-121, New York, NY, May 17-18, 2004.
- C47** Nenad Medvidovic, Sam Malek, and Marija Mikic-Rakic. "Software Architectures and Embedded Systems." In *Proceedings of the Monterey Workshop on Software Engineering for Embedded Systems (SEES 2003)*, pages 65-71, Chicago, IL, September 24-26, 2003.
- C48** Andre van der Hoek, Ebru Dincel, and Nenad Medvidovic. "Using Service Utilization Metrics to Assess the Structure of Product Line Architectures." In *Proceedings of the Ninth International Software Metrics Symposium*, pages 298-308, Sydney, Australia, September 3-5, 2003.
- C49** Nikunj R. Mehta and Nenad Medvidovic. "Composing Architectural Styles from Architectural Primitives." In *Proceedings of the Joint 9th European Software Engineering Conference and 11th ACM Symposium on the Foundations of Software Engineering (ESEC/FSE 2003)*, pages 347-350, Helsinki, Finland, September 1-5, 2003.

- C50** Roshanak Roshandel and Nenad Medvidovic. “Modeling Multiple Aspects of Software Components.” In *Proceedings of the Workshop on Specification and Verification of Component-Based Systems*, pages 88-92, Helsinki, Finland, September 1, 2003.
- C51** Marija Mikic-Rakic and Nenad Medvidovic. “Adaptable Architectural Middleware for Programming-in-the-Small-and-Many.” In *Proceedings of the ACM/IFIP/USENIX International Middleware Conference (Middleware 2003)*, pages 162-181, Rio de Janeiro, Brazil, June 16-20, 2003.
- C52** Marija Mikic-Rakic and Nenad Medvidovic. “A Connector-Aware Middleware for Distributed Deployment and Mobility.” In *Proceedings of the First International Workshop on Mobile Computing Middleware (MCM’03)*, pages 388-393, Providence, RI, May 19, 2003.
- C53** Nenad Medvidovic, Alexander Egyed, and Paul Gruenbacher. “Stemming Architectural Erosion by Coupling Architectural Discovery and Recovery.” In *Proceedings of the Second International Software Requirements to Architectures Workshop*, pages 61-68, Portland, OR, May 3, 2003.
- C54** Marija Mikic-Rakic and Nenad Medvidovic. “Toward a Framework for Classifying Disconnected Operation Techniques.” In *Proceedings of the Second International Workshop on Software Architectures for Dependable Systems*, pages 59-64, Portland, OR, May 3, 2003.
- C55** Nikunj Mehta and Nenad Medvidovic. “Understanding Software Connector Compatibilities Using A Connector Taxonomy.” In *Proceedings of the First Workshop on Software Design and Architecture (SoDA’02)*, Bangalore, India, December 21-22, 2002.
- C56** Marija Mikic-Rakic, Nikunj Mehta, and Nenad Medvidovic. “Architectural Style Requirements for Self-Healing Systems.” In *Proceedings of the First International Workshop on Self-Healing Systems (WOSS’02)*, pages 49-54, Charleston, SC, November 2002.
- C57** Nenad Medvidovic, Nikunj Mehta, and Marija Mikic-Rakic. “A Family of Software Architecture Implementation Frameworks.” In *Proceedings of the 2002 Working IEEE/IFIP Conference on Software Architectures (WICSA-3)*, pages 221-235, Montreal, Canada, August 25-30, 2002.
- C58** Nenad Medvidovic. “On the Role of Middleware in Architecture-Based Software Development.” In *Proceedings of the 14th International Conference on Software Engineering and Knowledge Engineering (SEKE 2002)*, pages 299-306, Ischia, Italy, July 15-19, 2002.
 “Fast-tracked” for journal publication as one of the best papers of the conference.
- C59** Marija Mikic-Rakic and Nenad Medvidovic. “Architecture-Level Support for Software Component Deployment in Resource Constrained Environments.” In *Proceedings of the IFIP/ACM Working Conference on Component Deployment*, pages 31-50, Berlin, Germany, June 20-21, 2002.
- C60** Nenad Medvidovic and Marija Mikic-Rakic. “Programming-in-the-Many: A Software Engineering Paradigm for the 21st Century.” In *Proceedings of the Workshop on New Visions for Software Design and Productivity: Research and Applications*. Nashville, TN, December 13-14, 2001.

- C61** Roshanak Roshandel and Nenad Medvidovic. “Coupling Static and Dynamic Semantics in an Architecture Description Language.” In *Proceedings of the Working Conference on Complex and Dynamic Systems Architecture (CDSA 2001)*, Brisbane, Australia, December 12-14, 2001.
- C62** Ebru Dincel, Nenad Medvidovic, and Andre van der Hoek. “Measuring Product Line Architectures.” In *Proceedings of the 4th International Workshop on Product Family Engineering (PFE-4)*, pages 346-352, Bilbao, Spain, October 3-5, 2001.
- C63** Andre van der Hoek, Marija Mikic-Rakic, Roshanak Roshandel, and Nenad Medvidovic. “Taming Architectural Evolution.” In *Proceedings on the Joint 8th European Software Engineering Conference and 9th ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE 2001)*, Vienna, Austria, September 10-14, 2001.
“Fast-tracked” for journal publication as one of the best papers of the conference.
- C64** Paul Gruenbacher, Alexander Egyed, and Nenad Medvidovic. “Reconciling Software Requirements and Architectures: The CBSP Approach.” In *Proceedings of the 5th IEEE International Symposium on Requirements Engineering (RE’01)*, pages 202-211, Toronto, Canada, August 27-31, 2001.
- C65** Lei Ding and Nenad Medvidovic. “Focus: A Light-Weight, Incremental Approach to Software Architecture Recovery and Evolution.” In *Proceedings of the 2001 Working IEEE/IFIP Conference on Software Architectures (WICSA-2)*, pages 191-200, Amsterdam, the Netherlands, August 27-29, 2001.
- C66** Nenad Medvidovic, Paul Gruenbacher, Alexander Egyed, and Barry W. Boehm. “Software Model Connectors: Bridging Models across the Software Lifecycle.” In *Proceedings of the 13th International Conference on Software Engineering and Knowledge Engineering (SEKE 2001)*, pages 387-396, Buenos Aires, Argentina, June 13-15, 2001.
“Fast-tracked” for journal publication as one of the best papers of the conference.
- C67** Marija Rakic and Nenad Medvidovic. “Increasing the Confidence in Off-the-Shelf Components: A Software Connector-Based Approach.” In *Proceedings of the 2001 Symposium on Software Reusability (SSR 2001)*, pages 11-18, Toronto, Canada, May 17-19, 2001.
- C68** Alexander Egyed and Nenad Medvidovic. “Consistent Architectural Refinement and Evolution Using the Unified Modeling Language.” In *Proceedings of the Workshop on Describing Software Architecture with UML*, pages 83-87, Toronto, Canada, May 15, 2001.
- C69** Alexander Egyed, Paul Gruenbacher, and Nenad Medvidovic. “Refinement and Evolution Issues in Bridging Requirements and Architecture – The CBSP Approach.” In *Proceedings of the First International Software Requirements to Architectures Workshop (STRAW 2001)*, pages 42-47, Toronto, Canada, May 14, 2001.
- C70** Marija Rakic and Nenad Medvidovic. “Runtime Support for Architecture-Level Configuration Management.” In *Proceedings of the Tenth International Workshop on Software Configuration Management (SCM-10)*, pages 7-12, Toronto, Canada, May 14-15, 2001.
- C71** Nenad Medvidovic and Marija Rakic. “Exploiting Software Architecture Implementation Infrastructure in Facilitating Component Mobility.” In *Proceedings of the Workshop on Software Engineering and Mobility*, Toronto, Canada, May 13-14, 2001.

- C72** Nicolas Rouquette, Nenad Medvidovic, and David Garlan. “Dependable Autonomous Systems = knowing well what to do + knowing how to do it well.” In *Proceedings of the NASA High Dependability Computing Consortium Workshop*, NASA AMES, Moffet Field, CA, January 10-12, 2001.
- C73** Rohit Khare, Michael Guntersdorfer, Peyman Oreizy, Nenad Medvidovic, Richard N. Taylor. “xADL: Enabling Architecture-Centric Tool Integration With XML.” In *Proceedings of the 34th Hawaii International Conference on System Sciences (HICSS-34)*, Maui, Hawaii, January 3-6, 2001.
- C74** Nikunj R. Mehta, Nenad Medvidovic, and Sandeep Phadke. “Towards a Taxonomy of Software Connectors.” In *Proceedings of the 22nd International Conference on Software Engineering (ICSE 2000)*, pages 178-187, Limerick, Ireland, June 4-11, 2000.
- C75** Paul Gruenbacher, Alexander Egyed, and Nenad Medvidovic. “Dimensions of Concerns in Requirements Negotiation and Architecture Modeling.” In *Proceedings of the Workshop on Multi-Dimensional Separation of Concerns in Software Engineering*, Limerick, Ireland, June 6, 2000.
- C76** Nenad Medvidovic, Rose F. Gamble, and David S. Rosenblum. “Towards Software Multioperability: Bridging Heterogeneous Software Interoperability Platforms.” In *Proceedings of the Fourth International Software Architecture Workshop (ISAW-4)*, pages 77-83, Limerick, Ireland, June 4-5, 2000.
- C77** Alexander Egyed and Nenad Medvidovic. “A Formal Approach to Heterogeneous Software Modeling.” In *Proceedings of the 2000 Conference on the Fundamental Approaches to Software Engineering (FASE 2000)*, pages 178-192, Berlin, Germany, March 27 - April 1, 2000.
- C78** Alexander Egyed, Nikunj R. Mehta, and Nenad Medvidovic. “Software Connectors and Refinement in Family Architectures.” In *Proceedings of the Third International Workshop on Software Architectures for Product Families (IW-SAPF3)*, Las Palmas de Gran Canaria, Spain, March 15-17, 2000.
- C79** Alexander Egyed and Nenad Medvidovic. “Extending Architectural Representation in UML with View Integration.” In *Proceedings of the 2nd International Conference on The Unified Modeling Language (UML’99)*, pages 2-16, Fort Collins, CO, October 28-30, 1999.
- C80** Marwan Abi-Antoun and Nenad Medvidovic. “Enabling the Refinement of a Software Architecture into a Design.” In *Proceedings of the 2nd International Conference on The Unified Modeling Language (UML’99)*, pages 17-31, Fort Collins, CO, October 28-30, 1999.
- C81** Nenad Medvidovic, Alexander Egyed, and David S. Rosenblum. “Round-Trip Software Engineering Using UML: From Architecture to Design and Back.” In *Proceedings of the Second International Workshop on Object-Oriented Reengineering (WOOR’99)*, pages 1-8, Toulouse, France, September 6, 1999.
- C82** Eric M. Dashofy, Nenad Medvidovic, and Richard N. Taylor. “Using Off-the-Shelf Middleware to Implement Connectors in Distributed Software Architectures.” In *Proceedings of the 21st International Conference on Software Engineering (ICSE’99)*, pages 3-12, Los Angeles, CA, May 16-22, 1999.

- C83** Nenad Medvidovic, David S. Rosenblum, and Richard N. Taylor. "A Language and Environment for Architecture-Based Software Development and Evolution." In *Proceedings of the 21st International Conference on Software Engineering (ICSE'99)*, pages 44-53, Los Angeles, CA, May 16-22, 1999.
- C84** Nenad Medvidovic and David S. Rosenblum. "Assessing the Suitability of a Standard Design Method for Modeling Software Architectures." In *Proceedings of the First Working IFIP Conference on Software Architecture (WICSA-1)*, pages 161-182, San Antonio, TX, February 22-24, 1999.
- C85** Nenad Medvidovic and Richard N. Taylor. "Separating Fact from Fiction in Software Architecture." In *Proceedings of the Third International Software Architecture Workshop (ISAW-3)*, pages 105-108, Orlando, FL, November 1-2, 1998.
- C86** Nenad Medvidovic, Eric M. Dashofy, and Richard N. Taylor. "Employing Off-the-Shelf Connector Technologies in C2-Style Architectures." In *Proceedings of the California Software Symposium (CSS'98)*, pages 21-30, Irvine, CA, October 23, 1998.
- C87** Jason E. Robbins, Nenad Medvidovic, David F. Redmiles, and David S. Rosenblum. "Integrating Architecture Description Languages with a Standard Design Method." In *Proceedings of the 20th International Conference on Software Engineering (ICSE'98)*, pages 209-218, Kyoto, Japan, April 19-25, 1998.
- C88** Peyman Oreizy, Nenad Medvidovic, and Richard N. Taylor. "Architecture-Based Runtime Software Evolution." In *Proceedings of the 20th International Conference on Software Engineering (ICSE'98)*, pages 177-186, Kyoto, Japan, April 19-25, 1998.
- C89** Nenad Medvidovic, Richard N. Taylor, and David S. Rosenblum. "An Architecture-Based Approach to Software Evolution." In *Proceedings of the International Workshop on the Principles of Software Evolution (IWPSE-1)*, pages 11-15, Kyoto, Japan, April 20-21, 1998.
- C90** Peyman Oreizy, Nenad Medvidovic, Richard N. Taylor, and David S. Rosenblum. "Software Architecture and Component Technologies: Bridging the Gap." In *Proceedings of the Workshop on Compositional Software Architectures*, Monterey, CA, January 6-8, 1998.
- C91** Nenad Medvidovic and David S. Rosenblum. "Domains of Concern in Software Architectures and Architecture Description Languages." In *Proceedings of the USENIX Conference on Domain-Specific Languages (DSL'97)*, pages 199-212, Santa Barbara, CA, October 15-17, 1997.
- C92** Nenad Medvidovic and Richard N. Taylor. "A Framework for Classifying and Comparing Architecture Description Languages." In *Proceedings of the Sixth European Software Engineering Conference together with the Fifth ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC-FSE'97)*, pages 60-76, Zurich, Switzerland, September 22-25, 1997.
- C93** Nenad Medvidovic, Peyman Oreizy, and Richard N. Taylor. "Reuse of Off-the-Shelf Components in C2-Style Architectures." In *Proceedings of the 1997 Symposium on Software Reusability (SSR'97)*, pages 190-198, Boston, MA, May 17-19, 1997. Also in *Proceedings of the 1997 International Conference on Software Engineering (ICSE'97)*, pages 692-700, Boston, MA, May 17-23, 1997.

- C94** Nenad Medvidovic and Richard N. Taylor. “Reusing Off-the-Shelf Components to Develop a Family of Applications in the C2 Architectural Style.” In *Proceedings of the First International Workshop on Software Architectures for Product Families (IW-SAPF-1)*, Las Navas del Marques, Avila, Spain, November 18-19, 1996.
- C95** Nenad Medvidovic, Peyman Oreizy, Jason E. Robbins, and Richard N. Taylor. “Using Object-Oriented Typing to Support Architectural Design in the C2 Style.” In *Proceedings of the Fourth ACM SIGSOFT Symposium on the Foundations of Software Engineering (FSE4)*, pages 24-32, San Francisco, CA, October 16-18, 1996.
- C96** Nenad Medvidovic. “ADLs and Dynamic Architecture Changes.” In Alexander L. Wolf, ed., *Proceedings of the Second International Software Architecture Workshop (ISAW-2)*, pages 24-27, San Francisco, CA, October 14-15, 1996.
- C97** Nenad Medvidovic, Richard N. Taylor, and E. James Whitehead, Jr. “Formal Modeling of Software Architectures at Multiple Levels of Abstraction.” In *Proceedings of the California Software Symposium 1996*, pages 28-40, Los Angeles, CA, April 17, 1996.
- C98** Richard N. Taylor, Nenad Medvidovic, Kenneth M. Anderson, E. James Whitehead Jr. and Jason E. Robbins. “A Component- and Message-Based Architectural Style for GUI Software.” In *Proceedings of the Seventeenth International Conference on Software Engineering (ICSE17)*, pages 295-304, Seattle, WA, April 23-30, 1995.
“Fast-tracked” journal publication as one of the best papers of the conference.
- C99** E. James Whitehead, Jr., Jason E. Robbins, Nenad Medvidovic, and Richard N. Taylor. “Software Architecture: Foundation of a Software Component Marketplace.” In *Proceedings of the First International Workshop on Architectures for Software Systems (ISAW-1)*, pages 276-282, Seattle, WA, April 24-25, 1995.

Invited, Weakly Refereed, and Non-Refereed Publications

- I1** Nenad Medvidovic. “Foreword” to Rogerio De Lemos, Cristina Gacek, and Alexander Romanovsky, eds., *Architecting Dependable Systems*, LNCS 4615, Springer Verlag, 2007.
- I2** Leslie Cheung, Leana Golubchik, Nenad Medvidovic, and Gaurav Sukhatme. “Identifying and Addressing Uncertainty in Architecture-Level Software Reliability Modeling.” In *Proceedings of the NSF Next Generation Software Program (NSFNGS) Workshop*, Long Beach, CA, February 2007.
- I3** Nenad Medvidovic, Rene Krikhaar, Robert Nord, and Judith Stafford. Understanding the Past, Improving the Present, and Mapping out the Future of Software Architecture. *Journal of Systems and Software*, vol. 79, no. 12 (December 2006).
- I4** Nenad Medvidovic. “Moving Architectural Description from Under the Technology Lamppost.” In *Proceedings of the 32nd EUROMICRO Conference on Software Engineering and Advanced Applications (EUROMICRO’06)*, pages 2-3, Dubrovnik, Croatia, August 29 - September 1, 2006.
- I5** David Woollard and Nenad Medvidovic. “High Performance Software Architectures: A Connector-Oriented Approach.” In *Proceedings of the Institute for Software Research Graduate Research Symposium*, Irvine, CA, June, 2006.
- I6** Somo Banerjee, Leslie Cheung, Leana Golubchik, Nenad Medvidovic, Roshanak Roshandel, and Gaurav Sukhatme. “Engineering Reliability into Hybrid Systems via Rich Design Models: Recent Results and Current Directions.” In *Proceedings of the NSF Next Generation Software Program (NSFNGS) Workshop*, Rhodes Island, Greece, April 2006.

- I7 Nenad Medvidovic. Software Architectures and Embedded Systems: A Match Made in Heaven? *IEEE Software*, pages 83-86, September-October 2005.
- I8 Nenad Medvidovic and Vladimir Jakobac. "A Focused Approach to Architectural Recovery." In *Proceedings of the 7th Ground System Architectures Workshop (GSAW 2003)*, Manhattan Beach, CA, March 4-6, 2003.
- I9 Nenad Medvidovic. "Coupling Architectural Discovery and Recovery to Stem Architectural Erosion." Invited paper for the *Dagstuhl Workshop on Software Architecture Recovery and Modeling (SWARM)*, Dagstuhl, Germany, February 2-7, 2003.
- I10 Andre van der Hoek, Ebru Dincel, and Nenad Medvidovic. "Using Service Utilization Metrics to Assess and Improve Product Line Architectures." In *Proceedings of the 6th Ground System Architectures Workshop (GSAW 2002)*, El Segundo, CA, March 2002.
- I11 Roshanak Roshandel and Nenad Medvidovic. "Static and Dynamic Modeling of Software Architecture." In *Proceedings of the 6th Ground System Architectures Workshop (GSAW 2002)*, El Segundo, CA, March 2002.
- I12 Nikunj R. Mehta, Nenad Medvidovic, and Sandeep Phadke. "Rich Software Interconnections." In *Proceedings of the Fourth Ground System Architectures Workshop (GSAW 2000)*, El Segundo, CA, February 23-25, 2000.
- I13 Nenad Medvidovic. "Modeling Software Architectures in UML." Invited paper for the *Workshop on Software Architectures and the Unified Modeling Language*, Rational Software Corporation, Denver, CO, April 1999.
- I14 Nenad Medvidovic. "An Approach to Architecture-Based Software Integration." In *Proceedings of the Ground System Architectures Workshop (GSAW 99)*, El Segundo, CA, March 3-5, 1999.
- I15 Richard N. Taylor, Nenad Medvidovic, and Peyman Oreizy. "Architectural Implications of Common Operator Interfaces." In *Proceedings of the Ground System Architectures Workshop (GSAW 98)*, El Segundo, CA, February 25-27, 1998.
- I16 Jeffrey J. Blevins, Deborah L. Dubrow, Nancy Eickelmann, Rebecca Grinter, Nenad Medvidovic, Ronald Reimer, Jonathan Shaw, Clark S. Turner, and Gary Wong. "Report on the Software Project Management Technical Research Review." In *Proceedings of the California Software Symposium (CSS'95)*, pages 127-145, Irvine, CA, March 30, 1995.

Non-Refereed Technical Reports

- N1 Yuriy Brun and Nenad Medvidovic. "Discreetly Distributing Computation via Self-Assembly." USC Center for Software Engineering Technical Report, USC-CSSE-2007-714, April 2007.
- N2 D. Woollard, C. Mattmann, and N. Medvidovic. "Injecting Software Architectural Constraints into Legacy Scientific Applications." USC Center for Software Engineering Technical Report, USC-CSE-2007-701, January 2007.
- N3 Chiyong Seo, Sam Malek, and Nenad Medvidovic. An Energy Consumption Framework for Distributed Java-Based Software Systems. Technical Report USC-CSE-2006-604, Center for Software Engineering, University of Southern California, December 2006.
- N4 Sam Malek, Marija Mikic-Rakic, and Nenad Medvidovic. "A Decentralized Redeployment Algorithm for Improving the Availability of Distributed Systems." Technical Report USC-CSE-2004-506, Center for Software Engineering, University of Southern California, March 2004.

- N5** Nikunj Mehta and Nenad Medvidovic. "Checking Style Conformance of Software Architectural Compositions." Technical Report USC-CSE-2004-504, Center for Software Engineering, University of Southern California, February 2004.
- N6** Nikunj Mehta and Nenad Medvidovic. "Composition of Style-Based Software Architectures from Architectural Primitives." Technical Report USC-CSE-2004-503, Center for Software Engineering, University of Southern California, February 2004.
- N7** Nikunj Mehta and Nenad Medvidovic. "Toward Composition Of Style-Conformant Software Architectures." Technical Report USC-CSE-2004-500, Center for Software Engineering, University of Southern California, January 2004.
- N8** Marija Mikic-Rakic, Sam Malek, and Nenad Medvidovic. "Improving Availability in Large, Distributed, Component-Based Systems via Redeployment." Technical Report USC-CSE-2003-515, Center for Software Engineering, University of Southern California, December 2003.
- N9** Nikunj Mehta and Nenad Medvidovic. "Concise Composition of Architectural Styles from Architectural Primitives." Technical Report USC-CSE-2003-510, Center for Software Engineering, University of Southern California, October 2003
- N10** Roshanak Roshandel and Nenad Medvidovic. "Relating Software Component Models." Technical Report USC-CSE-2003-504, Center for Software Engineering, University of Southern California, March 2003.
- N11** Nikunj R. Mehta and Nenad Medvidovic. "Distilling Software Architecture Primitives from Architectural Styles." Technical Report USC-CSE-2002-509, Center for Software Engineering, University of Southern California, September 2002.
- N12** Marija Mikic-Rakic and Nenad Medvidovic. "Software Architecture-Based Development Support for Ubiquitous Systems." Technical Report USC-CSE-2002-508, Center for Software Engineering, University of Southern California, September 2002.
- N13** Ebru Dincel, Nenad Medvidovic, and Andre van der Hoek. "An Example Product Line Architecture: The Library System." Technical Report USC-CSE-2002-507, Center for Software Engineering, University of Southern California, September 2002.
- N14** Ebru Dincel, Nenad Medvidovic, and Andre van der Hoek. "An Example Product Line Architecture: Troops Deployment System." Technical Report USC-CSE-2002-506, Center for Software Engineering, University of Southern California, September 2002.
- N15** Ebru Dincel, Nenad Medvidovic, and Andre van der Hoek. "An Example Product Line Architecture: Digital Library Projects." Technical Report USC-CSE-2002-505, Center for Software Engineering, University of Southern California, September 2002.
- N16** Marija Mikic-Rakic, Nenad Medvidovic, and Vladimir Jakobac. "Middleware for Software Architecture-Based Development in Distributed, Mobile, and Resource-Constrained Environments." Technical Report USC-CSE-2002-501, Center for Software Engineering, University of Southern California, February 2002.
- N17** Nenad Medvidovic and Marija Mikic-Rakic. "Architectural Support for Programming-in-the-Many." Technical Report USC-CSE-2001-506, Center for Software Engineering, University of Southern California, September 2001.
- N18** Ebru Dincel, Roshanak Roshandel, and Nenad Medvidovic. "ADL-Independent Architectural Representation in XML." Technical Report USC-CSE-00-519, Center for Software Engineering, University of Southern California, May 2000.

- N19** Nenad Medvidovic. “On the Role of Middleware in Architecture-Based Software Development.” Available as Technical Report USC-CSE-00-517, Center for Software Engineering, University of Southern California, April 2000.
- N20** Nenad Medvidovic, Peyman Oreizy, Richard N. Taylor, Rohit Khare, and Michael Guntersdorfer. “An Architecture-Centered Approach to Software Environment Integration.” Technical Report USC-CSE-00-516, Center for Software Engineering, University of Southern California, March 2000.
- N21** Nikunj R. Mehta, Nenad Medvidovic, and Marija Rakic. “Why Consider Implementation-Level Decisions in Software Architectures?” Technical Report USC-CSE-00-514, Center for Software Engineering, University of Southern California, February 2000.
- N22** Alexander Egyed, Paul Gruenbacher, and Nenad Medvidovic. “Refinement and Evolution Issues between Requirements and Product Line Architectures.” Technical Report USC-CSE-00-515, Center for Software Engineering, University of Southern California, February 2000.
- N23** Nenad Medvidovic, David S. Rosenblum, and Richard N. Taylor. “A Type Theory for Software Architectures.” Technical Report, UCI-ICS-98-14, Department of Information and Computer Science, University of California, Irvine, April 1998.
- N24** Nenad Medvidovic and Richard N. Taylor. “Reuse of Off-the-Shelf Constraint Solvers in C2-Style Architectures.” Technical Report UCI-ICS-96-28, Department of Information and Computer Science, University of California, Irvine, July 1996.
- N25** Nenad Medvidovic. “Formal Definition of the Chiron-2 Software Architectural Style.” Technical Report UCI-ICS-95-24, Department of Information and Computer Science, University of California, Irvine, August 1995.
- N26** Jason E. Robbins, E. James Whitehead Jr., Nenad Medvidovic, and Richard N. Taylor. “A Software Architecture Design Environment for Chiron-2 Style Architectures.” Arcadia Technical Report UCI-95-01, University of California, Irvine, January 1995.

5 Research Grants

- G1** Robert Bosch (sole PI)
 “Software Architectural Support for Embedded Systems”
 Duration: 3/1/06-12/31/08
 Award Amount: \$420,000
- G2** U.S. Army (co-PI)
 “Future Combat Systems Software Definition, Design, Development, and Deployment”
 Duration: 1/1/08-12/31/08
 Co-PIs: Barry Boehm (lead PI)
 Award Amount: \$425,000
- G3** IBM Real-Time Innovation (sole PI)
 “Prism-RT: A Java-Based Architectural Middleware Platform for Real-Time Embedded Systems”
 Duration: 12/1/2007-12/31/08
 Award Amount: \$20,000

- G4** National Science Foundation — Science of Design (co-PI)
 “Value-Based Science of Design”
 Duration: 12/15/04-11/30/08
 Award Amount: \$400,000
 Co-PIs: Barry W. Boehm, USC (lead PI)
 Grant Number: 0438931
- G5** National Science Foundation — Information Technology Research (sole PI)
 “Software Architectural Support for Programming-in-the-Small-and-Many”
 Duration: 9/1/03-8/31/08
 Award Amount: \$448,000
 Grant Number: 0312780
- G6** National Science Foundation — Computer Systems Research (lead PI)
 “Engineering Reliability into Hybrid Systems: A Compositional and Hierarchical Approach”
 Duration: 8/01/07-7/31/08
 Award Amount: \$40,000
 Co-PIs: Leana Golubchik, USC
 Grant Number: 0720612
- G7** National Science Foundation — Computer Systems Research (lead PI)
 “Engineering Reliability Into Hybrid Systems via Rich Design Models”
 Duration: 7/1/05-6/30/07
 Award Amount: \$100,000
 Co-PIs: Leana Golubchik, USC
 Grant Number: 0509539
- G8** National Science Foundation — Federal Cyber Service: Scholarship for Service (co-PI)
 “An Innovative Information Assurance and Security Technology Capacity Development and Outreach Program”
 Duration: 8/1/04-7/31/07
 Award Amount: \$300,000
 Co-PIs: Leana Golubchik, USC (lead PI)
 B. Clifford Neuman, USC
 Gerard Medioni, USC
 Grant Number: 0417274
- G9** Okawa Research Foundation (sole PI)
 “The GridLite DREAM: Bringing the Grid to Your Pocket”
 Duration: 10/1/05-9/30/06
 Award Amount: \$10,000
- G10** Boeing (sole PI)
 “C4ISR SADD Development Assistance (FCS)”
 Duration: 10/1/05-3/31/06
 Award Amount: \$100,000
- G11** Jet Propulsion Laboratory (sole PI)
 “Software Connectors for Data Distribution”
 Duration: 7/1/05-8/31/05
 Award Amount: \$18,144

- G12** NASA High-Dependability Computing Consortium (co-PI)
 “Empirical Research on High Dependability Computing”
 Duration: 4/1/01-3/31/06
 Award Amount: \$2,500,000
 Co-PIs: Barry W. Boehm, USC (lead PI)
- G13** National Science Foundation — CAREER (sole PI)
 “Architecture-Based Support for Software Application Families”
 Duration: 7/1/00-6/30/05
 Award Amount: \$241,000
 Grant Number: 9985441
- G14** Boeing (sole PI)
 “Software Architecture-Based Development of Product Lines for the Tactical Radio Domain”
 Duration: 1/1/04-12/31/04
 Award Amount: \$57,500
- G15** Jet Propulsion Laboratory (sole PI)
 “Extensible Architectural Technology for Managing Complex Space Data Systems”
 Duration: 11/1/03-8/31/04
 Award Amount: \$50,000
 Contract Number: 579951
- G16** DARPA/ISO — DASADA (lead PI)
 “Dynamic Assembly, Assessment, Assurance, and Adaptation via Heterogeneous Software Connectors”
 Duration: 7/1/00-10/31/03
 Award Amount: \$460,000
 Co-PIs: Barry W. Boehm, USC
 Contract Number: F30602-00-2-0615
- G17** Jet Propulsion Laboratory (sole PI)
 “Relating State-Based and Component/Connector-Based Architectural Styles”
 Duration: 8/1/00-8/31/03
 Award Amount: \$95,672
 Contract Number: 1219801
- G18** U.S. Army Tank-Automotive and Armaments Command (sole PI)
 “COTS Components and Connectors”
 Duration: 9/1/01-3/31/03
 Award Amount: \$68,350
 Contract Number: 1400508
- G19** Xerox Corporation (sole PI)
 “Architecting Application Families”
 Duration: 9/1/00-8/31/02
 Award Amount: \$60,000
- G20** Intel Corporation (lead PI)
 “Embedded Systems Lab: A Teaching and Research Facility”
 Award Date: July 2001, July 2002
 Award Amount: \$95,000 (in equipment and cash)
 Co-PIs: Gaurav Sukhatme, USC

- G21** DARPA/ITO — RENES (sole PI; subcontract to UC Irvine)
“Architecture-Centric Dynamic Adaptation of Deeply Networked Embedded Systems”
Duration: 9/23/99-1/22/01
Subcontract Amount: \$92,500
Co-PIs: Richard N. Taylor, UC Irvine
David Rosenblum, UC Irvine
Michael Gorlick, Aerospace Corporation
Dennis Heimbigner, University of Colorado at Boulder
Contract Number: F30602-99-C-0174

6 Patents

- 10/2007 “Tile Architectural Style.” U.S. Provisional Patent Application 60/982,617

7 Teaching

University of Southern California

Courses Developed and Taught

- T1** CSCI 578 — Software Architectures
Graduate-level course (Spring 1999, 2000, 2001, 2002, 2004, 2005, 2007, 2008)
Added as a core course for the M.S. degree with specialization in Software Engineering
Syllabus available at http://sunset.usc.edu/classes/cs578_2008/
- T2** CSCI 589 — Software Engineering for Embedded Systems
Graduate-level course (Fall 2001, 2002, 2003, 2004, 2006, 2007)
Syllabus available at http://sunset.usc.edu/classes/cs589_2007/
- T3** CSCI 377 — Introduction to Software Engineering
Junior-level undergraduate course (Fall 2004, 2006, 2007)
Added as a required course for the CS and CECS B.S. degrees
Syllabus available at http://sunset.usc.edu/classes/cs377_2007/
- T4** CSCI 599 — Formal Methods in Software Architectures
Graduate-level seminar (Fall 2000)
Syllabus available at http://sunset.usc.edu/classes/cs599_2000/
- T5** CSCI 599 — Current Issues in Software Architectures
Graduate-level seminar (Fall 1999)
Syllabus available at http://sunset.usc.edu/classes/cs599_99b/

Courses Taught

- T6** CSCI 477 — Design and Construction of Large Software Systems
Undergraduate- and graduate-level course (Spring 2003)
Syllabus available at http://sunset.usc.edu/classes/cs477_2003/

Industry

Courses Developed and Taught

- T7** Software Architectures
Jet Propulsion Laboratory, Pasadena, CA
10-week Professional Development Course (Spring 2001, 2002; Summer 2001, 2002)

Teaching Assistantships

- T8** ICS 121 — Introduction to Software Engineering
Junior/senior-level undergraduate course (Summer 1994)
University of California, Irvine
- T9** ICS 141 — Programming Languages
Junior/senior-level undergraduate course (Spring 1994)
University of California, Irvine
- T10** ICS 52 — Systematic Software Construction
Sophomore-level undergraduate course (Fall 1993, Winter 1994)
University of California, Irvine
- T11** CSE 460/598 — Software Project Management and Development I
Senior-level undergraduate course (Fall 1992, Spring 1993, Summer 1993)
Arizona State University

8 Students

Undergraduate Students

- Nels Beckman (graduated)
- Morgan Brown (graduated)
- Vanessa Carson (graduated)
- Charles DeBergh (graduated)
- Joshua Garcia (graduated)
- Trevor Johns (graduated)
- Yi (Nick) Kuang (graduated)
- Jerry Lin

Masters Students

- Marwan Abi-Antoun (graduated)
- Raghbir Banwait (graduated)
- Miheer Bhachech (graduated)
- Ebru Dincel (graduated)
- Lei Ding (graduated)
- Brian D'Souza
- Prakash Gupta
- Himanshu Joshi (graduated)
- Vishal Kudchadkar (graduated)
- Suhas Mehta (graduated)
- Mahindra Pai (graduated)
- Sandeep Phadke (graduated)
- Aliasgar Rampurwala (graduated)
- Vinaynathan Viswanathan (graduated)
- Michael Wakerly (graduated)
- Dongwoo Won (graduated)
- David Woollard (graduated)

Doctoral Students – Advisor

- Yuriy Brun (passed Qualifying Examination in March 2007)
- George Edwards (passed Qualifying Examination in February 2008)

- Himanshu Joshi
- Ivo Krka
- *Sam Malek* (**graduated** in May 2007; currently at George Mason University)
- *Chris Mattmann* (**graduated** in August 2007; currently at JPL)
- *Nikunj R. Mehta* (**graduated** in September 2004; currently at Oracle)
- *Marija Mikic-Rakic* (**graduated** in July 2004; currently at Google)
- Daniel Popescu (screened in December 2007)
- *Roshanak Roshandel* (**graduated** in December 2006; currently at Seattle University)
- Chiyong Seo (passed Qualifying Examination in November 2006)
- David Woollard (passed Qualifying Examination in May 2007)

Doctoral Students – Dissertation Committee Member

- Marwan Abi-Antoun, CMU
- Mohamed Al Said (graduated)
- Jesper Andersson, Linkoping University, Sweden (graduated)
- Jongmoon Baik (graduated)
- Jesal Bhuta (graduated)
- Yue Chen (graduated)
- Zhihao Chen (graduated)
- Hugo Cheung
- Leslie Cheung
- Kun Young Chung
- Eric Dashofy, UC Irvine (graduated)
- Shirin Ebrahimi-Taghizadeh
- Alexander Egyed (graduated)
- Ragy Eleish
- I-De Huang (graduated)
- LiGuo Huang (graduated)
- Shahdad Irajpour (graduated)
- Hasan Kitapci (graduated)
- In-Young Ko (graduated)
- Alexander Lam (graduated)
- DeWitt Lattimer
- Yoon-Ju Lee
- Joo H. Lee (graduated)
- Keun Lee (graduated)
- Chris Miles, Naval Postgraduate School
- David Naffin
- Gustavo Perez
- Monvorath Phongpaibul
- Shideh Shahidi
- Barry W. Werger
- Dan Wu (graduated)
- Ye Yang (graduated)

9 Formal Presentations

Academic Conference Presentations

- P1** *An Introduction to Architecture-Level Reliability Analysis*. Tutorial, with Roshanak Roshandel, Working IEEE/IFIP Conference on Software Architecture (WICSA), Vancouver, Canada, February 2008.
- P2** *Software Architectures and Embedded Systems*. Korean Computer Scientists and Engineers Association in America, University of Southern California, Los Angeles, CA, December 2007.
- P3** *Moving Architectural Description from Under the Technology Lamppost — Keynote Talk*. Brazilian Symposium on Software Components, Architectures, and Reuse (SBCARS 2007), Campinas, Brazil, August 2007.
- P4** *Improving a Distributed Software System's Quality of Service via Architecture-Driven Dynamic Redeployment*. Tutorial, Brazilian Symposium on Software Components, Architectures, and Reuse (SBCARS 2007), Campinas, Brazil, August 2007.
- P5** *Construction of Analytic Frameworks for Component-Based Architectures*. Brazilian Symposium on Software Components, Architectures, and Reuse (SBCARS 2007), Campinas, Brazil, August 2007.
- P6** *From Dependable Architectures to Dependable Systems*. USC-CSSE Annual Research Review, Los Angeles, CA, February 2007.
- P7** *Moving Architectural Description from Under the Technology Lamppost — Keynote Talk*. 32nd EUROMICRO Conference on Software Engineering and Advanced Applications (EUROMICRO'06), Dubrovnik, Croatia, August, 2006.
- P8** *A Classification of Disconnected Operation Techniques*. 32nd EUROMICRO Conference on Software Engineering and Advanced Applications (EUROMICRO'06), Dubrovnik, Croatia, August, 2006.
- P9** *Improving a Distributed Software System's Quality of Service via Redeployment*. Workshop on State of the Art in Software Engineering, Rutgers University, New Brunswick, NJ, June 2006.
- P10** *The GridLite DREAM: Bringing the Grid to Your Pocket*. Monterey Workshop, Laguna Beach, CA, September 22-23, 2005.
- P11** *A View from the Trenches*. ICSE 2005 New Software Engineering Faculty Symposium, St. Louis, MO, May 2005.
- P12** *Modeling Behavior in Compositions of Software Architectural Primitives*. 19th IEEE International Conference on Automated Software Engineering (ASE 2004), Linz, Austria, September 2004.
- P13** *From Dependable Architectures to Dependable Systems — Keynote Talk*. Workshop on Architecting Dependable Systems (WADS 2004) held in conjunction with the International Conference on Dependable Systems and Networks (DSN 2004), Florence, Italy, June 2004.
- P14** *Toward Architecture-Based Reliability Estimation*. Workshop on Architecting Dependable Systems (WADS 2004) held in conjunction with the International Conference on Dependable Systems and Networks (DSN 2004), Florence, Italy, June 2004.

- P15** *Style-Based Software Architectural Compositions as Domain-Specific Models*. Workshop on Directions in Software Engineering Environments (WoDiSEE 2004), Edinburgh, UK, May 2004.
- P16** *Software Architectures and Embedded Systems*. Monterey Workshop on Software Engineering for Embedded Systems: From Requirements to Implementation, Chicago, IL, September 2003.
- P17** *Coupling Architectural Discovery and Recovery to Stem Architectural Erosion*. Dagstuhl Workshop on Software Architecture Recovery and Modeling (SWARM), Dagstuhl, Germany, February 2003.
- P18** *A Family of Software Architecture Implementation Frameworks*. 2002 Working IEEE/IFIP Conference on Software Architectures (WICSA-3), Montreal, Canada, August 2002.
- P19** *On the Role of Middleware in Architecture-Based Software Development*. 14th International Conference on Software Engineering and Knowledge Engineering (SEKE 2002), Ischia, Italy, July 2002.
- P20** *Architecture-Level Support for Software Component Deployment in Resource Constrained Environments*. IFIP/ACM Working Conference on Component Deployment (CD 2002), Berlin, Germany, June 2002.
- P21** *Focus: A Light-Weight, Incremental Approach to Software Architecture Recovery and Evolution*. 2001 Working IEEE/IFIP Conference on Software Architectures (WICSA-2), Amsterdam, the Netherlands, August 2001.
- P22** *Software Model Connectors: Bridging Models across the Software Lifecycle*. 13th International Conference on Software Engineering and Knowledge Engineering (SEKE 2001), Buenos Aires, Argentina, June 2001.
- P23** *What Young Faculty Members Still Want to Know*. ICSE 2001 New Software Engineering Faculty Symposium, Toronto, Canada, May 2001.
- P24** *Exploiting Software Architecture Implementation Infrastructure in Facilitating Component Mobility*. ICSE 2001 Workshop on Software Engineering and Mobility, Toronto, Canada, May 2001.
- P25** *xADL: Enabling Architecture-Centric Tool Integration With XML*. 34th Hawaii International Conference on System Sciences (HICSS-34), Maui, Hawaii, January 2001.
- P26** *Programming in the Small and Many: A Software Engineering Research Agenda for the 21st Century*. 2000 ACM SIGSOFT Symposium on the Foundations of Software Engineering (FSE-8), Wild Ideas and Fun Flames, San Diego, CA, November 2000.
- P27** *Towards Software Multioperability: Bridging Heterogeneous Software Interoperability Platforms*. Fourth International Software Architecture Workshop (ISAW-4), Limerick, Ireland, June 2000.
- P28** *Using Off-the-Shelf Middleware to Implement Connectors in Distributed Software Architectures*. 21st International Conference on Software Engineering (ICSE'99), Los Angeles, CA, May 1999.
- P29** *A Language and Environment for Architecture-Based Software Development and Evolution*. 21st International Conference on Software Engineering (ICSE'99), Los Angeles, CA, May 1999.
- P30** *Modeling Software Architectures in UML*. Workshop on Software Architectures and the Unified Modeling Language, Denver, CO, April 1999.

- P31** *An Approach to Architecture-Based Software Integration.* Ground System Architectures Workshop (GSAW 99), El Segundo, CA, March 1999.
- P32** *Assessing the Suitability of a Standard Design Method for Modeling Software Architectures.* First Working IFIP Conference on Software Architecture, San Antonio, TX, February 1999.
- P33** *A Comparative Analysis of Architecture Description Languages.* USC-CSE Annual Research Review, Los Angeles, CA, February 1999.
- P34** *Assessing UML's Suitability for Modeling Software Architectures.* USC-CSE Annual Research Review, Los Angeles, CA, February 1999.
- P35** *Employing Off-the-Shelf Connector Technologies in C2-Style Architectures.* California Software Symposium (CSS'98), Irvine, CA, October 1998.
- P36** *An Architecture-Based Approach to Software Evolution.* International Workshop on the Principles of Software Evolution, Kyoto, Japan, April 1998.
- P37** *Domains of Concern in Software Architectures and Architecture Description Languages.* USENIX Conference on Domain-Specific Languages, Santa Barbara, CA, October 1997.
- P38** *A Framework for Classifying and Comparing Architecture Description Languages.* Sixth European Software Engineering Conference together with the Fifth ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE'97), Zurich, Switzerland, September 1997.
- P39** *Reuse of Off-the-Shelf Components in C2-Style Architectures.* 1997 Symposium on Software Reusability (SSR'97) and 1997 International Conference on Software Engineering (ICSE'97), joint session on Software Reuse, Boston, MA, May 1997.
- P40** *Reusing Off-the-Shelf Components to Develop a Family of Applications in the C2 Architectural Style.* First International Workshop on Development and Evolution of Software Architectures for Product Families, Las Navas del Marqués, Spain, November 1996.
- P41** *ADLs and Dynamic Architecture Changes.* Second International Software Architecture Workshop (ISAW-2), San Francisco, CA, October 1996.
- P42** *Using Object-Oriented Typing to Support Architectural Design in the C2 Style.* Fourth ACM SIGSOFT Symposium on the Foundations of Software Engineering (FSE4), San Francisco, CA, October 1996.
- P43** *Formal Modeling of Software Architectures at Multiple Levels of Abstraction.* California Software Symposium, Los Angeles, CA, April 1996.
- P44** *A Component- and Message-Based Architectural Style for GUI Software.* Technology Presentation Track, 17th International Conference on Software Engineering (ICSE17), Seattle, WA, April 1995.

University and Research Institute Presentations

- P45** *Improving a Distributed Software System's Quality of Service via Architecture-Driven Dynamic Redeployment.* Institute for Software Research Forum, University of California, Irvine, June 2007.
- P46** *Dynamic Software Architectures.* Jesper Andersson Dissertation Defense Opponent, Linkoping University, Sweden, April 2007.
- P47** *From Dependable Architectures to Dependable Systems.* USC-CSE Annual Research Review, Los Angeles, CA, February 2007.

- P48** *Moving Architectural Description from Under the Technology Lamppost.* USC Center for Systems and Software Engineering Convocation, October 2006.
- P49** *Endowing Legacy Applications with Software Architectural Capabilities.* University of Southern California – Information Sciences Institute, Marina del Rey, CA, October 2006.
- P50** *The Prism Project: Software Architectural Support for Highly Distributed Environments.* Bosch Research and Technology Center, Palo Alto, CA, January 2006.
- P51** *Coupling Architectural Discovery and Recovery to Stem Architectural Erosion.* USC-CSE Annual Research Review, Los Angeles, CA, March 2003.
- P52** *Exploiting Architectural Style, Connectors, and Types in Large-Scale Software Development and Evolution.* University of Texas, Austin, TX, April 2001.
- P53** *An Architecture-Based Approach to Developing Heterogeneous, Highly Distributed Software Systems.* University of Southern California – Information Sciences Institute, Marina del Rey, CA, February 2001.
- P54** *Programming in the Many: Software Engineering Paradigm for the 21st Century.* USC-CSE Annual Research Review, Los Angeles, CA, February 2001.
- P55** *An Architecture-Based Approach to Developing Heterogeneous, Highly Distributed Software Systems.* University of Washington, Seattle, WA, January 2001.
- P56** *From Programming in the Large to Programming in the Small and Many.* University of California, Santa Cruz, CA, October 2000.
- P57** *Exploiting Architectural Style, Connectors, and Types in Large-Scale Software Development and Evolution.* Rice University, Houston, TX, September 2000.
- P58** *SAAGE — An Environment for Software Architecture, Analysis, Generation, and Evolution.* USC-CSE Annual Research Review, Los Angeles, CA, February 2000.
- P59** *A Style-Based Approach to the Design and Evolution of Adaptable Software.* University of Texas, Austin, TX, November 1997.

Industry and Funding Agency Presentations

- P60** *Overview of Software Architecture Research at USC.* Bosch Research and Technology Center, Palo Alto, CA, January 2007.
- P61** *Identifying and Addressing Uncertainty in Architecture-Level Software Reliability Modeling.* NSF Next Generation Software Program (NSFNGS) Workshop, Long Beach, CA, February 2007.
- P62** *Multi-Framework Programming via Software Architecture and Architectural Middleware.* DARPA Multi-Framework Programming Workshop, Menlo Park, CA, August 2007.
- P63** *Overview of Software Architecture Research at USC.* USC Computer Science Department Industrial Advisory Board Meeting, Los Angeles, CA, April 2006.
- P64** *Overview of Software Architecture Research at USC.* General Electric Site Visit, Los Angeles, CA, February 2006.
- P65** *Software Architecture for DREAM Environments.* Jet Propulsion Laboratory, Pasadena, CA, January 2005.
- P66** *DeSi - An Environment for Modeling, Analyzing, and Simulating Deployment Architectures.* Boeing, Anaheim, November 2004.

- P67** *Overview of Software Architecture Research at USC.* Northrop Grumman Site Visit, Los Angeles, CA, April 2004.
- P68** *Overview of Software Architecture Research at USC.* Microsoft Site Visit, Los Angeles, CA, March 2004.
- P69** *Overview of Software Architecture Research at USC.* Airbus Site Visit, Los Angeles, CA, February 2004.
- P70** *DeSi - A Tailorable Environment for Assessing the Quality of Distributed Software Architectures.* Jet Propulsion Laboratory, Pasadena, CA, January 2004.
- P71** *Overview of Software Engineering Research at USC.* Boeing Site Visit, Los Angeles, CA, November 2003.
- P72** *Software Architecture Research at USC-CSE: An Overview.* Jet Propulsion Laboratory Site Visit, Los Angeles, CA, September 2003.
- P73** *Software Architectures and Self-Healing Systems.* Boeing, Anaheim, CA, May 2003.
- P74** *Software Architectures and Self-Healing Systems.* Boeing-DARPA Future Combat Systems Meeting, Boeing, Anaheim, CA, September 2002.
- P75** *Software Connectors for Programming-in-the-Many.* Boeing, Seattle, WA, November 2001.
- P76** *Software Architecture Collaboration between JPL and USC.* Jet Propulsion Laboratory, Pasadena, CA, September 2001.
- P77** *Relating State-Based and Component/Connector-Based Architectural Styles: Technical Project Review.* Jet Propulsion Laboratory, Pasadena, CA, August 2001.
- P78** *Architectural Support for Programming-in-the-Many.* U.S. Army Tank-Automotive and Armaments Command (TACOM), Detroit, MI, July 2001.
- P79** *Software Architecture Research at USC: Programming in the Large and Many.* Xerox Corporation, El Segundo, CA, January 2001.
- P80** *From Programming in the Large to Programming in the Small and Many.* Microsoft USC Site Visit, Los Angeles, December 2000.
- P81** *Software Architecture at USC and JPL.* Jet Propulsion Laboratory, Pasadena, CA, October 2000.
- P82** *Programming in the Small, Large, and Many.* Xerox Corporation, El Segundo, CA, October 2000.
- P83** *Programming in the Small, Large, and Many.* Schlumberger Corporation, Houston, TX, September 2000.
- P84** *Dynamic Assembly, Assessment, Assurance, and Adaptation via Heterogeneous Software Connectors.* DARPA/ISO DASADA Project Kick-off Meeting, Santa Fe, NM, September 2000.
- P85** *UML and Software Architectures.* DARPA/ISO DASADA Project Kick-off Meeting, Santa Fe, NM, September 2000.
- P86** *An Approach to Architecture-Based Software Development and Evolution.* Jet Propulsion Laboratory, Pasadena, CA, May 2000.
- P87** *SAAGE — An Environment for Software Architecture, Analysis, Generation, and Evolution.* Lockheed Martin USC Site Visit, Los Angeles, CA, May 2000.

- P88** *On the Role of UML in Modeling Software Architectures*. Southern California Software Process Improvement Network, Long Beach, CA, April 2000.
- P89** *Software Architecture Research and Practice*. Jet Propulsion Laboratory, Pasadena, CA, April 2000.
- P90** *Architecture-Centric Dynamic Adaptation of Deeply Networked Embedded Systems*. DARPA/ITO RENES Project Kick-off Meeting, Arlington, VA, November 1999.
- P91** *Software Architecture Research and Practice*. NSF Software Engineering Strategies Workshop Briefing, National Science Foundation, Arlington, VA, September 1999.
- P92** *Assessing the Suitability of UML for Modeling Software Architectures*. Bay Area Round Table (BART), Palo Alto, CA, July 1999.
- P93** *A Classification and Comparison Framework for Software Architecture Description Languages*. Second DARPA EDCS Architecture/Generation Workshop, Santa Fe, NM, April 1997.
- P94** *Component-Based GUI Architecture*. Hughes Aircraft Corp., El Segundo, CA, January 1997.
- P95** *What's New with C2?* Arcadia Research Meeting, Portland, OR, August 1996.
- P96** *Chiron-2: A Component- and Message-Based Architectural Style for GUI Software*. Sun Microsystems Laboratories, Palo Alto, CA, June 1995.
- P97** *Chiron-2: A Component- and Message-Based Architectural Style for GUI Software*. Bay Area Round Table (BART), Palo Alto, CA, June 1995.

10 Professional Service

Editorial Boards and Steering Committees

- S1** Editorial Board Member, Elsevier Information and Software Technology Journal (1/08 - present)
- S2** Steering Committee Member, Working IEEE/IFIP Conference on Software Architecture (1/05 - 2/08)

Conference/Workshop Organization

- S3** Program Chair, Doctoral Symposium, 16th ACM SIGSOFT International Symposium on the Foundations of Software Engineering (FSE 16), Atlanta, GA, November 2008
- S4** Program Chair, Special Session on Software Architecture for Pervasive Systems (SAPS), 34th Euromicro Conference in Parma, Italy, September 3-5, 2008
- S5** Student Volunteer Coordinator, 30th International Conference on Software Engineering (ICSE 2008), Leipzig, Germany, May 2008
- S6** Technical Paper Session Chair, Working IEEE/IFIP Conference on Software Architecture (WICSA 2008), Vancouver, Canada, February 2008
- S7** E-Publicity Chair, 29th International Conference on Software Engineering (ICSE 2007), Minneapolis, MN, May 2007
- S8** Session Chair, USC Center for Systems and Software Engineering Convocation, Los Angeles, CA, October 2006
- S9** Program Co-Chair, 2005 Working IEEE/IFIP Conference on Software Architecture (WICSA 2005), Pittsburgh, PA, November 2005

- S10** Panelist, New Software Engineering Faculty Symposium (NSEFS 05), 27th International Conference on Software Engineering (ICSE 2005), St. Louis, MO, May 2005
- S11** Chair, Executive Workshop on Model-Driven Architecture, Annual Research Review, Center for Software Engineering, University of Southern California, Los Angeles, CA, March 2005
- S12** Technical Paper Session Chair, 19th IEEE International Conference on Automated Software Engineering (ASE 2004), Linz, Austria, September 2004
- S13** Chair, Workshops, 26th International Conference on Software Engineering (ICSE 2004), Edinburgh, UK, May 2004
- S14** Session Organizer and Chair, Annual Research Review, Center for Software Engineering, University of Southern California, Los Angeles, CA, March 2004
- S15** Co-Chair, Tutorials, 9th European Software Engineering Conference and 11th ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE 2003), Helsinki, Finland, September 2003
- S16** Session Organizer and Chair, Annual Research Review, Center for Software Engineering, University of Southern California, Los Angeles, CA, March 2003
- S17** Session Chair, Dagstuhl Workshop on Software Architecture Recovery and Modeling (SWARM), Dagstuhl, Germany, February 2003
- S18** Chair, Tutorials, The Third Working IEEE/IFIP Conference on Software Architecture (WICSA-3), Montreal, Canada, August 2002
- S19** Technical Paper Session Chair, The Working IEEE/IFIP Conference on Software Architecture (WICSA-3), Montreal, Canada, August 2002
- S20** Chair, State-of-the-Art Track, 24th International Conference on Software Engineering (ICSE 2002), Orlando, FL, May 2002
- S21** Technical Paper Session Chair, 24th International Conference on Software Engineering (ICSE 2002), Orlando, FL, May 2002
- S22** Session Organizer and Chair, Annual Research Review, Center for Software Engineering, University of Southern California, Los Angeles, CA, March 2002
- S23** Technical Paper Session Chair, Eighth European Software Engineering Conference and Ninth ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE 2001), Vienna, Austria, September 2001
- S24** Technical Paper Session Chair, 23rd International Conference on Software Engineering (ICSE 2001), Toronto, Canada, May 2001
- S25** Session Organizer and Chair, Annual Research Review, Center for Software Engineering, University of Southern California, Los Angeles, CA, March 2001
- S26** Technical Paper Session Chair, Eighth ACM SIGSOFT Symposium on the Foundations of Software Engineering (FSE8), San Diego, CA, November 2000
- S27** Co-Chair, First International Workshop on Evaluating Software Architecture Solutions (WESAS), Irvine, CA, May 2000
- S28** Session Organizer and Chair, Annual Research Review, Center for Software Engineering, University of Southern California, Los Angeles, CA, March 2000

- S29** Organizing Committee Member, NSF Workshop on Software Engineering Research Strategies, Los Angeles, CA, August 1999
- S30** Student Volunteer Coordinator, 21st International Conference on Software Engineering (ICSE'99), Los Angeles, CA, May 1999
- S31** Co-Chair, DARPA/ITO EDCS Workshop on Architecture Description Language Toolkits, San Diego, CA, October 1998
- S32** Chair, DARPA/ITO EDCS Workshop on the UML, Austin, TX, November 1997
- S33** Webmaster, 1997 International Conference on Software Engineering (ICSE'97), Boston, MA, May 1997

Program Committee Membership

- S34** Program Committee Member, 4th International Conference on the Quality of Software Architectures (QoSA 2008), Karlsruhe, Germany, October 2008
- S35** Program Committee Member, 11th International Symposium on Component-Based Software Engineering (CBSE 2008), Karlsruhe, Germany, October 2008
- S36** Program Committee Member, 23rd IEEE/ACM International Conference on Automated Software Engineering (ASE 2008), L'Aquila, Italy, September 2008
- S37** Program Committee Member, 7th International Workshop on the Foundations of Coordination Languages and Software Architectures, Reykjavik, Iceland, July 2008
- S38** Program Committee Member, DSN 2008 Workshop on Architecting Dependable Systems (WADS 2007), Anchorage, AK, June 2008
- S39** Program Committee Member, 30th International Conference on Software Engineering, Leipzig, Germany, May 2008
- S40** Symposium Committee Member, Doctoral Symposium, 30th International Conference on Software Engineering, Leipzig, Germany, May 2008
- S41** Program Committee Member, 3rd International Workshop on Software Engineering for Adaptive and Self-Managing Systems (SEAMS 2008), Leipzig, Germany, May 2008
- S42** Program Committee Member, International Workshop on Software Architectures and Mobility, Leipzig, Germany, May 2008
- S43** Program Committee Member, 22nd IEEE/ACM International Conference on Automated Software Engineering, Atlanta, GA, November 2007
- S44** Program Committee Member, International Workshop on the Engineering of Software Services for Pervasive Environments (ESSPE), Dubrovnik, Croatia, September 2007
- S45** Program Committee Member, 10th International Symposium on Component-Based Software Engineering (CBSE 2007), Boston, MA, July 2007
- S46** Program Committee Member, 3rd International Conference on the Quality of Software Architectures (QoSA 2007), Boston, MA, July 2007
- S47** Program Committee Member, First IEEE International Conference on Self-Adaptive and Self-Organizing Systems (SASO 2007), Boston, MA, July 2007
- S48** Program Committee Member, DSN 2007 Workshop on Architecting Dependable Systems (WADS 2007), Edinburgh, UK, June 2007
- S49** Program Committee Member, 2nd International Workshop on Software Engineering for Adaptive and Self-Managing Systems (SEAMS 2007), Minneapolis, MN, May 2007

- S50** Program Committee Member, 2nd Workshop on Sharing and Reusing Architectural Knowledge – Architecture Rationale and Design Intent (SHARK/ADI), Minneapolis, MN, May 2007
- S51** Tutorials Committee Member, 29th International Conference on Software Engineering (ICSE 2007), Minneapolis, MN, May 2007
- S52** Program Committee Member, Workshop on Tools, Operating Systems and Programming Models for Developing Reliable Systems (TOPMoDeLS'2007), Long Beach, CA, March 2007
- S53** Program Committee Member, 6th International Workshop on Software and Performance (WOSP 2007), Buenos Aires, Argentina, February 2007
- S54** Program Committee Member, 6th Working IEEE/IFIP Conference on Software Architecture, Mumbai, India, January 2007
- S55** Program Committee Member, 14th ACM SIGSOFT Symposium on the Foundations of Software Engineering (FSE 14), Portland, OR, November 2006
- S56** Symposium Committee Member, Doctoral Symposium, 14th ACM SIGSOFT Symposium on the Foundations of Software Engineering (FSE 14), Portland, OR, November 2006
- S57** Expert Reviewer Panel Member, 21st IEEE/ACM International Conference on Automated Software Engineering (ASE 2006), Tokyo, Japan, September 2006
- S58** Symposium Committee Member, Doctoral Symposium, 21st IEEE/ACM International Conference on Automated Software Engineering (ASE 2006), Tokyo, Japan, September 2006
- S59** Program Committee Member, 9th International Symposium on Component-Based Software Engineering (CBSE 2006), Mälardalen University, Västerås near Stockholm, Sweden, June/July 2006
- S60** Program Committee Member, ICSE 2006 Workshop on Software Engineering for Adaptive and Self-Managing Systems (SEAMS), Shanghai, China, May 2006
- S61** Tutorials Committee Member, 28th International Conference on Software Engineering (ICSE 2006), Shanghai, China, May 2006
- S62** Program Committee Member, 20th IEEE International Conference on Automated Software Engineering (ASE 2005), Long Beach, CA, November 2005
- S63** Program Committee Member, 10th European Software Engineering Conference and 13th ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE 2005), Lisbon, Portugal, September 2005
- S64** Program Committee Member, 9th International Software Product Line Conference (SPLC-EUROPE 2005), Rennes, France, September 2005
- S65** Program Committee Member, 5th International Workshop on Software Engineering and Middleware (SEM 2005), Lisbon, Portugal, 5-6 September 2005
- S66** Program Committee Member, Workshop on Architecture-Centric Evolution (ACE 2005), Glasgow, UK, July 2005
- S67** Program Committee Member, 4th International Workshop on Architecting Dependable Systems (WADS 2004), St. Louis, MO, May 2005
- S68** Program Committee Member, 8th International Symposium on Component-Based Software Engineering (CBSE8), St. Louis, MO, May 2005

- S69** Program Committee Member, Workshop on Software Composition (SC 2005), April 2005, Edinburgh, UK
- S70** Program Committee Member, Hawaii International Conference on System Sciences, Mini-Track on Strategic Software Engineering, Hawaii, January 2005
- S71** Program Committee Member, 2004 Workshop on Self-Managed Systems, Newport Beach, CA, November 2004
- S72** Program Co-Chair, Workshop on Software Architecture Description & UML, Lisbon, Portugal, October 2004
- S73** Program Committee Member, 19th IEEE International Conference on Automated Software Engineering (ASE 2004), Linz, Austria, September 2004
- S74** Program Committee Member, 4th IEEE/IFIP Working Conference on Software Architecture (WICSA-4), Oslo, Norway, June 2004
- S75** Program Committee Member, Workshop on Capturing Experience in Software Architecture Best Practices, Oslo, Norway, June 2004
- S76** Program Committee Member, Twin Workshops on Architecting Dependable Systems (WADS 2004), Edinburgh, UK, May 2004 and Florence, Italy, June 2004
- S77** Program Committee Member, 2nd International Working Conference on Component Deployment (CD 2004), Edinburgh, UK, May 2004
- S78** Program Committee Member, 7th International Symposium on Component-Based Software Engineering (CBSE7), Edinburgh, UK, May 2004
- S79** Program Committee Member, International Workshop on Incorporating COTS into Software Systems: Tools and Techniques (IWICSS), Redondo Beach, CA, February 2004
- S80** Program Committee Member, 10th Working Conference on Reverse Engineering (WCRE 2003), Victoria, BC, Canada, November 2003
- S81** Program Committee Member, 5th International Workshop on Product Family Engineering (PFE-5), Siena, Italy, November 2003
- S82** Program Committee Member, 2nd International Workshop on Architecting Dependable Systems (WADS 2003), Portland, OR, May 2003
- S83** Program Committee Member, Conference on Generative and Component-Based Software Engineering (GCSE), Pittsburgh, PA, October 2002
- S84** Program Committee Member, The Working IEEE/IFIP Conference on Software Architecture (WICSA-3), Montreal, Canada, August 2002
- S85** Program Committee Member, 2nd Software Product Line Conference (SPLC-2), San Diego, CA, August 2002
- S86** Program Committee Member, Int'l Workshop on Mobile Teamwork, Vienna, Austria, July 2002
- S87** Program Committee Member, ECOOP 2002 Workshop on Concrete Communication Abstractions Of The Next 701 Distributed Object Systems, Malaga, Spain, June 2002
- S88** Program Committee Member, 24th International Conference on Software Engineering (ICSE 2002), Orlando, FL, May 2002
- S89** Symposium Committee Member, Doctoral Symposium, 24th International Conference on Software Engineering (ICSE 2002), Orlando, FL, May 2002

- S90** Program Committee Member, 1st International Workshop on Architecting Dependable Systems (WADS 2002), Orlando, FL, May 2002
- S91** Program Committee Member, 4th International Workshop on Product Family Engineering (PFE-4), Bilbao, Spain, October 2001
- S92** Program Committee Member, 8th European Software Engineering Conference and 9th ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE 2001), Vienna, Austria, September 2001
- S93** Program Committee Member, The Second Working IEEE/IFIP Conference on Software Architecture (WICSA-2), Amsterdam, The Netherlands, August 2001
- S94** Program Committee Member, 23rd International Conference on Software Engineering (ICSE 2001), Toronto, Canada, May 2001
- S95** Program Committee Member, Second International Workshop on Engineering Distributed Objects (EDO 2000), Davis, CA, November 2000
- S96** Program Committee Member, Eighth ACM SIGSOFT Symposium on the Foundations of Software Engineering (FSE8), San Diego, CA, November 2000
- S97** Program Committee Member, Fourth International Software Architecture Workshop (ISAW-4), Limerick, Ireland, June 2000
- S98** Program Committee Member, Third International Workshop on Software Architectures for Product Families (IW-SAPF-3), Las Palmas de Gran Canaria, Spain, March 2000

Referee and Reviewer Service

- S99** ACM Transactions on Software Engineering and Methodology
1998, 1999, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008
- S100** IEEE Transactions on Software Engineering
1997, 1998, 1999, 2000, 2001, 2003, 2004, 2005, 2006, 2007
- S101** Elsevier Information and Software Technology Journal
2007, 2008
- S102** Journal of Systems and Software
2005, 2006, 2007, 2008
- S103** University of Wisconsin-Milwaukee, Research Growth Initiative
2006
- S104** Journal of Automated Software Engineering
1999, 2000, 2005
- S105** 28th International Conference on Software Engineering, Outside Reviewer
2005
- S106** Architecting Dependable Systems III, LNCS, Springer Verlag
2005
- S107** Architecting Dependable Systems II, LNCS, Springer Verlag
2004
- S108** IEEE Transactions on Parallel and Distributed Systems
2003, 2004

- S109** National Science Foundation, Review Panel
1/2000, 10/2003
- S110** IEEE Computer, Special Issue on Handheld Computing
2003
- S111** Architecting Dependable Systems, LNCS, Springer Verlag
2003
- S112** International Journal on Software Maintenance and Evolution
2002
- S113** Science Foundation Ireland
2002
- S114** IEE Proceedings – Software Engineering
1998
- S115** Conference on User Interface Software and Technology, Outside Reviewer
1996
- S116** 19th International Conference on Software Engineering, Outside Reviewer
1997

Other

- S117** Participant, IFIP Working Group 2.10 – Software Architecture
2002-present

11 University Service

- S118** Department Chair’s Advisory Committee, USC
8/07 - present
- S119** Provost/Academic Senate Committee on Information Services, USC
8/06 - present
- S120** Ph.D. Admissions Committee, Computer Science Department, USC
9/04 - 5/05, 9/07 - present
- S121** Ph.D. Fellowships Committee, Computer Science Department, USC
9/07 - present
- S122** Dean/EFC Standing Committee on Best Practices, USC
1/08 - present
- S123** Dean/EFC Standing Committee on Faculty Recruitment and Retention, USC
9/07 - present
- S124** EFC Research Committee
1/07 - 8/07
- S125** Chair, Interaction Group, Computer Science Department, USC
8/06 - 8/07
- S126** Engineering Faculty Council (EFC), Viterbi School of Engineering, USC
1/02 - 5/05, 9/06 - present
- S127** Chair, EFC Merit Review Committee, USC
8/06 - present

- S128** USC Provost-Senate Committee on Information Services
8/06 - present
- S129** Computer Science Department, Qualifying Exam Timeline Committee, USC
4/06 - present
- S130** Computer Science Department, M.S. Program Review Committee, USC
12/03 - present
- S131** Research Faculty Hiring Committee, Computer Science Department, USC
2002, 2003, 2006, 2007, 2008
- S132** Dean's Evaluation Committee, School of Engineering, USC
11/04 - 1/05
- S133** School of Engineering, M.S. Program Review Committee, USC
9/03 - 12/03
- S134** Faculty Hiring Committee, Computer Science Department, USC
2001, 2004
- S135** Merit Review Committee, Computer Science Department, USC
2000, 2004
- S136** Interview Panel, Trustee Scholarship, School of Engineering, USC
3/02, 3/04
- S137** EFC Committee on Research Faculty Rights and Responsibilities, USC
11/02 - 5/03
- S138** Chair, Computer Systems Group, Computer Science Department, USC
12/99 - 5/02
- S139** USC College of Engineering Commencement Marshal
2000, 2002
- S140** Industrial Liaison Committee, Computer Science Department, USC
2000

12 Professional Associations

- Association for Computing Machinery (ACM)
- ACM Special Interest Group on Software Engineering (SIGSOFT)
- IEEE Computer Society
- World-Wide Institute of Software Architects (WWISA)

13 Consulting

6/00 - 6/03 Jet Propulsion Laboratory (JPL), Pasadena, CA