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Table of Contents

Education	2
Employment History	2
Honors, Awards, Fellowships	3
Selected Statistics	3
Graduated Doctoral Students	4
Publications	5
Research Support	30
Patents	38
Teaching	38
Supervised Students	40
Formal Presentations	44
Professional Service	55
University Service	68
Professional Associations	71
Consulting	71

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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
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

Bachelor of Science, *Summa Cum Laude* (8/92, Cumulative GPA: 4.00) Arizona State University — Computer Science and Engineering Department

2 Employment History

2/11 - present	Professor, Computer Science Department University of Southern California, Los Angeles, CA
7/1 - present	Chair, Computer Science Department University of Southern California, Los Angeles
7/21 - 6/22	Vice-Chair for Tenure Affairs, Computer Science Department University of Southern California, Los Angeles
1/18 - present	Editor-in-Chief IEEE Transactions on Software Engineering
7/15 - 6/18	Chair, Special Interest Group on Software Engineering (SIGSOFT) Association for Computing Machinery (ACM)
7/11 - 6/15	Associate Chair for Ph.D. Affairs, Computer Science Department University of Southern California, Los Angeles
1/09 - 1/13	Director, Center for Systems and Software Engineering Viterbi School of Engineering, University of Southern California, Los Angeles
3/05 - 2/11	Associate Professor, Computer Science Department University of Southern California, Los Angeles
1/99 - 3/05	Assistant Professor, Computer Science Department University of Southern California, Los Angeles
9/94 - 12/98	Graduate Student Researcher, Software Architecture Group University of California, Irvine
9/93 - 8/94	Teaching Assistant University of California, Irvine
6/93 - 8/93	Research Assistant / Engineering Intern, Software Engineering Group Arizona State University and Rupp Technology, Phoenix, AZ
8/92 - 8/93	Teaching Assistant Arizona State University, Tempe

3 Honors, Awards, Fellowships

2020	ACM SIGSOFT Distinguished Service Award
2020	Most Influential Paper Award, International Symposium on Software Engineering for Adaptive and Self-Managing Systems
2018	Distinguished Engineering Merit Award, Orange County Engineering Council
2018	Best Paper Award, International Conference on Software Architecture
2017	Best Tool-Paper Award, International Conference on Automated Software Engineering
2017	Best Paper Award, International Conference on Software Architecture
2016	Fellow, IEEE
2015	Distinguished Scientist, ACM
2010	USC Mellon Mentoring Award
2009	Best Poster Award, International Conference on Program Comprehension
2008	Most Influential Paper Award, International Conference on Software Engineering
2005, 2009	Finalist, 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
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, Arizona State University

4 Selected Statistics

• *Total number of citations* (scholar.google.com)	19,870
• *h-index* (scholar.google.com)	63
• *Most Influential Scholars in Software Engineering* (aminer.org)	6th all-time
• *Most cited publication* (scholar.google.com)	3,105 citations [J27]

- *Most cited papers, IEEE Trans. on Software Engr.* 7th [J27] (academic.microsoft.com)
- *Most cited papers, ACM Trans. on Software Engr. & Methodology* 10th [J25] (academic.microsoft.com)

5 Graduated Doctoral Students

PhD1 Marija Mikic, July 2004
currently Senior Engineering Director at Google

PhD2 Nikunj R. Mehta, September 2004 currently a Founder and CEO at Falkonry
formerly Consulting Member of Technical Staff at Oracle

PhD3 Roshanak Roshandel, December 2006
currently Project Manager at Amazon
previously *Associate Professor* and *Department Chair* at Seattle University

PhD4 Sam Malek, May 2007
currently *Professor* at UC Irvine

PhD5 Chris Mattmann, August 2007
currently CTIO at JPL and *Adjunct Associate Professor* at USC

PhD6 Yuriy Brun, March 2008
currently *Professor* at University of Massachusetts
formerly *Computing Innovation (CI) Post-Doctoral Fellow* at U. of Washington

PhD7 Chiyoung Seo, May 2008
currently Senior Engineer at AirBnB formerly a Software Architect at Couchbase

PhD8 George Edwards, July 2010
currently founder of Quandary Peak Research

PhD9 David Woollard, January 2011
currently VP of Engineering at MoveWith

PhD10 Daniel Popescu, November 2011
currently Staff Software Engineer at Google

PhD11 Ivo Krka, January 2014
currently Co-Founder and Chief Software Engineer at Sportening

PhD12 Hossein Tajalli, May 2014
currently Senior Software Architect at NVIDIA

PhD13 Joshua Garcia, May 2014
currently Assistant Professor at UC Irvine

PhD14 Jae young Bang, March 2015
currently Software Litigation Consultant at Quandary Peak Research

PhD15 Gholamreza Safi, July 2016
currently Software Engineer at Cloudera

PhD16 Youn Kyu Lee, October 2017
currently Assistant Professor at Hongik University, Seoul, South Korea

PhD17 Arman Shahbazian, May 2018
currently Software Engineer at Google

PhD18 Duc Minh Le, August 2018
currently Software Engineer at Bloomberg

PhD19 Yixue Zhao, December 2020
currently *CI Post-Doctoral Fellow at U. of Massachusetts*

6 Publications

Authored Books

AB1 Richard N. Taylor, **Nenad Medvidovic**, and Eric M. Dashofy. Software Architecture: Foundations, Theory, and Practice. *John Wiley & Sons*, January 2009, 736 pages. ISBN-10: 0470167742. ISBN-13: 978-0470167748.

Edited Books and Journals

EB2 Hakan Erdogmus, **Nenad Medvidovic**, and Frances Paulisch, eds. IEEE Software – Special Issue on 50 Years of Software Engineering. *IEEE Computer Society*, vol. 35, no. 5, September/October 2018.

Winner of the 2019 APEX Award for Publication Excellence.

EB3 Domenico Bianculli, **Nenad Medvidovic**, and David Rosenblum, eds. 40 Editions of ICSE - The Ruby Anniversary Celebration. International Conference on Software Engineering, May 2018.

EB4 **Nenad Medvidovic** and Santonu Sarkar, eds. Proceedings of the 2017 Innovations in Software Engineering Conference, ACM, February 2017.

EB5 Barbora Buhnova, Jorge Cuellar, Magnus Larsson, Javier López, **Nenad Medvidovic**, Antonio Vallecillo, eds. Special Issue on Component-Based Software Engineering and Software Architecture, *Science of Computer Programming*, September 2014.

EB6 Magnus Larsson and **Nenad Medvidovic**, eds. Proceedings of the The 15th International ACM SIGSOFT Symposium on Component Based Software Engineering (CBSE-2012). ACM, June 2012.

EB7 Harald Gall and **Nenad Medvidovic**, eds. Proceedings of the 33rd International Conference on Software Engineering (ICSE 2011). ACM, May 2011.

EB8 Fabrice Saffre, **Nenad Medvidovic**, and Alberto Montresor, eds. Proceedings of the 3rd International Conference on Self-Adaptive and Self-Organizing Systems. IEEE Computer Society, September 2009.

EB9 **Nenad Medvidovic** and Tetsuo Tamai, eds. Proceedings of the Warm Up Workshop for the 32nd International Conference on Software Engineering. ACM, April 2009.

EB10 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 Jae young Bang, Yuriy Brun, and **Nenad Medvidovic**. Collaborative Design Conflicts: Costs and Solutions. *IEEE Software*, vol. 35, no. 6 (November/December 2018).

J2 Thibaud Lutellier, Devin Chillak, Joshua Garcia, Lin Tan, Derek Rayside, **Nenad Medvidovic**, and Robert Kroeger. Measuring the Impact of Code Dependencies on Software Architecture Recovery Techniques. *IEEE Transactions on Software Engineering*, vol. 44, no. 2 (February 2017).

J3 Pooyan Behnamghader, Duc Minh Le, Joshua Garcia, Daniel Link, Arman Shahbazian, and **Nenad Medvidovic**. A Large-Scale Study of Architectural Evolution in Open-Source Software Systems. *Journal of Empirical Software Engineering*, vol. 22, no. 3 (June 2017).

J4 Hamid Bagheri, Joshua Garcia, Alireza Sadeghi, Sam Malek, and **Nenad Medvidovic**. Software Architectural Principles in Contemporary Mobile Software: from Conception to Practice. *Journal of Systems and Software*, vol. 119 (September 2016).

J5 Yuriy Brun, Jae young Bang, George Edwards, and **Nenad Medvidovic**. Self-Adapting Reliability in Distributed Systems. *IEEE Transactions on Software Engineering*, vol. 41, no. 8 (August 2015).

J6 Chris Mattmann, Joshua Garcia, Ivo Krka, Daniel Popescu, and **Nenad Medvidovic**. Revisiting the Anatomy and Physiology of the Grid. *Journal of Grid Computing*, vol. 13, no. 1 (March 2015).

J7 Yuriy Brun and **Nenad Medvidovic**. Entrusting Private Computation and Data to Untrusted Networks. *IEEE Transactions on Dependable and Secure Computing*, vol. 10, no. 4 (July/ August 2013).

J8 Hossein Tajalli and **Nenad Medvidovic**. iDARE — A Reference Architecture for Integrated Software Environments. *Journal of Software: Practice and Experience*, vol. 44, no. 3 (March 2014).

J9 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*, vol. 55, no. 3 (August 2012).

J10 Sam Malek, **Nenad Medvidovic**, and Marija Mikic-Rakic. An Extensible Framework for Improving a Distributed Software System's Deployment Architecture. *IEEE Transactions on Software Engineering*, vol. 38, no. 1 (January/February 2012).

J11 **Nenad Medvidovic**, Hossein Tajalli, Joshua Garcia, Yuriy Brun, Ivo Krka, and George Edwards. Engineering Heterogeneous Robotics Systems: A Software Architecture-Based Approach. *IEEE Computer*, vol. 44, no. 5 (May 2011).

J12 Sam Malek, George Edwards, Yuriy Brun, Hossein Tajalli, Joshua Garcia, Ivo Krka, **Nenad Medvidovic**, Marija Mikic-Rakic, and Gaurav Sukhatme. An Architecture-Driven Software Mobility Framework. *Journal of Systems and Software*, special issue on Software Architecture and Mobility, vol. 83, no. 6 (June 2010).

J13 **Nenad Medvidovic** and George Edwards. Software Architecture and Mobility: A Roadmap. *Journal of Systems and Software*, special issue on Software Architecture and Mobility, vol. 83, no. 6 (June 2010).

J14 David Woollard, **Nenad Medvidovic**, Yolanda Gil, and Chris A. Mattmann. Scientific Software as Workflows: From Discovery to Distribution. *IEEE Software*, special issue on Developing Scientific Software, vol. 25, no. 4 (July/August, 2008).

J15 George Edwards, Chiyoung 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, volume 14, number 8 (2008).

J16 **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 (January 2007).

J17 **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).

J18 **Nenad Medvidovic** and Vladimir Jakobac. Using Software Evolution to Focus Architectural Recovery. *Journal of Automated Software Engineering*, vol. 13, no. 2 (April 2006).

J19 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 (March 2005).

J20 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 (April 2004).

J21 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).

J22 **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 (December 2003).

J23 **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 (September 2003).

Acceptance rate 5 of 87.

J24 **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 (August 2003).

J25 **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 (January 2002).

J26 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 (December 2000).

J27 **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 (January 2000).

Reprinted in *Rational Developer Network: Seminal Papers on Software Architecture*, Rational Software Corp. (July 2001). Named most widely cited software engineering paper published in 2000 by the *Journal of Information and Software Technology* (January 2007).

J28 Peyman Oreizy, Michael M. Gorlick, Richard N. Taylor, Dennis Heimbigner, Gregory Johnson, **Nenad Medvidovic**, Alex Quilici, David S. Rosenblum, and Alexander L. Wolf. An Architecture-Based Approach to Self-Adaptive Software. *IEEE Intelligent Systems and Their Applications*, vol. 14, no. 3 (May/June 1999).

J29 **Nenad Medvidovic** and Richard N. Taylor. Exploiting Architectural Style to Develop a Family of Applications. *IEE Proceedings - Software Engineering*, vol. 144, no. 5-6 (October-December 1997).

J30 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 (June 1996).

Refereed Book Chapters

B1 **Nenad Medvidovic** and Alessandro Orso. Software Analytics Under the Lamppost (or What Star Trek Teaches Us About the Importance of Asking the Right Questions). In T. Menzies, L. Williams, and T Zimmermann, eds., *Perspectives on Data Science for Software Engineering*, Morgan Kaufmann, July 2016.

B2 Chris A. Mattmann, Daniel J. Crichton, Andrew F. Hart, Cameron Goodale, J. Steven Hughes, Sean Kelly, Luca Cinquini, Thomas H. Painter, Joseph Lazio, Duane Waliser, **Nenad Medvidovic**, Jinwon Kim, and Peter Lean. Architecting Data-Intensive Systems. In B. Furht and A. Escalante, eds., *Handbook of Data Intensive Computing*, Springer Verlag, 2011.

B3 Ivo Krka, George Edwards, Leslie Cheung, Leana Golubchik, and **Nenad Medvidovic**. A Comprehensive Exploration of Challenges in Architecture-Based Reliability Estimation. In R. de Lemos, J.-C. Fabre, C. Gacek, F. Gadducci, and M. ter Beek, eds., *Architecting Dependable Systems VI*, Springer Verlag, December 2009.

B4 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, et al., eds., *Architecting Dependable Systems III*, Springer Verlag, October 2005.

B5 Paris Avgeriou, Nicolas Guelfi, and **Nenad Medvidovic**. Software Architecture Description and UML. In Nuno J. Nunes, Bran Selic, Alberto Rodrigues da Silva, eds., *UML Modeling Languages and Applications*, LNCS 3297, Springer Verlag, February 2005.

B6 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, June 2004.

B7 **Nenad Medvidovic** and Nikunj Mehta. Java Beans and Software Architecture. In Hossein Bidgoli, ed., *The Internet Encyclopedia*, John Wiley & Sons, Inc., vol. 2, December 2003.

B8 **Nenad Medvidovic**, Marija Mikic-Rakic, and Nikunj Mehta. Improving Dependability of Component-Based Systems via Multi-Versioning Connectors. In R. de Lemos, et al., eds., *Architecting Dependable Systems*, Lecture Notes in Computer Science (LNCS 2677), Springer Verlag, August 2003.

Refereed Conference Publications

C1 Saghar Talebipour, Yixue Zhao, Luka Dojcilovic, Chenggang Li, and **Nenad Medvidovic**. UI Test Migration Across Mobile Platforms. In Proceedings of the 36th IEEE/ACM International Conference on Automated Software Engineering (ASE 2021), November 2021.

C2 Adriana Sejfia, Yixue Zhao, and **Nenad Medvidovic**. Identifying Casualty Changes in Software Patches. In Proceedings of the 29th ACM Joint Meeting on European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE 2021), September 2021.

C3 Yixue Zhao, Siwei Yin, Adriana Sejfia, Marcelo Schmitt Laser, Haoyu Wang, and **Nenad Medvidovic**. Assessing the Feasibility of Web-Request Prediction Models on Mobile Platforms. In Proceedings of the 8th International Conference on Mobile Software Engineering and Systems (MobileSoft 2021), May 2021.

C4 Marcelo Schmitt Laser, Duc Minh Le, Joshua Garcia and **Nenad Medvidovic**. Architectural Archipelagos: Technical Debt in Long-Lived Software Research Platforms. In Proceedings of the 4th International Conference on Technical Debt (TechDebt 2021), May 2021.

C5 Joshua Garcia, Mehdi Mirakhorli, Lu Xiao, Yutong Zhao, Ibrahim Mujhid, Khoi Pham, Ahmet Okutan, Sam Malek, Rick Kazman, Yuanfang Cai, and **Nenad Medvidovic**. Constructing a Shared Infrastructure for Software Architecture Analysis and Maintenance. In Proceedings of the IEEE 18th International Conference on Software Architecture (ICSA 2021), March 2021.

C6 Duc Minh Le, Suhrid Karthik, Marcelo Schmitt Laser, and **Nenad Medvidovic**. Architectural Decay as Predictor of Issue-and Change-Proneness. In Proceedings of the IEEE 18th International Conference on Software Architecture (ICSA 2021), March 2021.

C7 Arman Shahbazian, Suhrid Karthik, Yuriy Brun, and **Nenad Medvidovic**. eQual: Informing Early Design Decisions. In Proceedings of the ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE 2020), Sacramento, CA, November 2020.

C8 Yixue Zhao, Justin Chen, Adriana Sejfia, Marcelo Schmitt Laser, Jie Zhang, Federica Sarro, Mark Harman, and **Nenad Medvidovic**. FrUITeR - A Framework for Evaluating UI Test Reuse. In Proceedings of the ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE 2020), Sacramento, CA, November 2020.

C9 Gvozden Marinkovic, Nikola Lukic, and **Nenad Medvidovic**. Online Sports Betting Through the Prism of Software Engineering. In Proceedings of the ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE 2020), Industrial Track, Sacramento, CA, November 2020.

C10 Marcelo Schmitt Laser, Duc Minh Le, Joshua Garcia, and **Nenad Medvidovic**. ARCADE: An Extensible Workbench for Architecture Recovery, Change, and Decay Evaluation. In Proceedings of the ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE 2020), Tool Demonstrations Track, Sacramento, CA, November 2020.

C11 Nikola Lukic, Saghar Talebipour, and **Nenad Medvidovic**. Remote Control of iOS Devices via Accessibility Features. In Proceedings of the Workshop on Forming an Ecosystem Around Software Transformation (FEAST 2020), November 2020.

C12 Nikola Lukic, Saghar Talebipour, and **Nenad Medvidovic**. AirMochi - A Tool for Remotely Controlling iOS Devices. In Proceedings of the 35th International Conference on Automated Software Engineering (ASE 2020), Melbourne, Australia, September 2020.

C13 Adriana Sejfia and **Nenad Medvidovic**. Strategies for Pattern-Based Detection of Architecturally-Relevant Software Vulnerabilities (Don't Try This at Home - It Doesn't Work). In Proceedings of the 4th IEEE International Conference on Software Architecture (ICSA 2020), Salvador, Brazil, March 2020.

C14 Yixue Zhao and **Nenad Medvidovic**. A Microservice Architecture for Online Mobile App Optimization. In Proceedings of the 6th International Conference on Mobile Software Engineering and Systems (MOBILESoft 2019), Montreal, Canada, 2019.

C15 Suhrid Karthik and **Nenad Medvidovic**. Automatic Detection of Latent Component Relationships from Online Q&A Sites. In Proceedings of the 7th International Workshop on Realizing Artificial Intelligence Synergies in Software Engineering (RAISE 2019), Montreal, Canada, May 2019.

C16 Yixue Zhao, Paul Wat, Marcelo Laser, and **Nenad Medvidovic**. Empirically Assessing Opportunities for Prefetching and Caching in Mobile Apps. In Proceedings of the 33rd IEEE/ACM International Conference on Automated Software Engineering (ASE 2018), Montpelier, France, September 2018.

C17 Daye Nam, Youn Kyu Lee, and **Nenad Medvidovic**. EVA: A Tool for Visualizing Software Architectural Evolution. In Proceedings of the 40th International Conference on Software Engineering (ICSE 2018), Gothenburg, Sweden, May 2018.

C18 Yixue Zhao, Marcelo Laser, Yingjun Lyu, and **Nenad Medvidovic**. Leveraging Program Analysis to Reduce User-Perceived Latency in Mobile Applications. In Proceedings of the 40th International Conference on Software Engineering (ICSE 2018), Gothenburg, Sweden, May 2018.

C19 Arman Shahbazian, Daye Nam, and **Nenad Medvidovic**. Toward Predicting Architectural Significance of Implementation Issues. In Proceedings of the 15th IEEE/ACM International Conference on Mining Software Repositories (MSR 2018), Gothenburg, Sweden, May 2018.

C20 Duc Minh Le, Daniel Link, Arman Shahbazian, and **Nenad Medvidovic**. An Empirical Study of Architectural Decay in Open-Source Software. In Proceedings of the 2nd IEEE International Conference on Software Architecture (ICSA 2018), Seattle, WA, April 2018.

Winner of the ICSA 2018 Best Paper Award

C21 Arman Shahbazian, Youn Kyu Lee, and **Nenad Medvidovic**. Recovering Architectural Design Decisions. In Proceedings of the 2nd IEEE International Conference on Software Architecture (ICSA 2018), Seattle, WA, April/May 2018.

C22 Youn Kyu Lee, Peera Yoodee, Arman Shahbazian, Daye Nam, and **Nenad Medvidovic**. SEALANT: A Detection and Visualization Tool for Inter-app Security Vulnerabilities in Android. In Proceedings of the 32nd IEEE/ACM International Conference on Automated Software Engineering (ASE 2017), Urbana-Champaign, USA, November 2017.

Winner of the ASE 2017 Best Tool-Paper Award

C23 Youn Kyu Lee, Jae Young Bang, Gholamreza Safi, Arman Shahbazian, Yixue Zhao, and **Nenad Medvidovic**. A SEALANT for Inter-App Security Holes in Android. In Proceedings of the 39th International Conference on Software Engineering (ICSE 2017), Buenos Aires, Argentina, May 2017.

C24 Jae young Bang, Yuriy Brun, and **Nenad Medvidovic**. Continuous Analysis of Collaborative Design. In Proceedings of the 1st IEEE International Conference on Software Architecture (ICSA 2017), Gothenburg, Sweden, April 2017.

Winner of the ICSA 2017 Best Paper Award

C25 Martin Robillard and **Nenad Medvidovic**. Disseminating Architectural Knowledge on Open-Source Projects. In Proceedings of the 38th International Conference on Software Engineering (ICSE 2016), Austin, TX, May 2016.

C26 Arman Shahbazian, George Edwards, and **Nenad Medvidovic**. An End-to-End Domain-Specific Modeling and Analysis Platform. In Proceedings of the 8th International Workshop on Modeling in Software Engineering (MISE 2016), Austin, TX, May 2016.

C27 Michael Langhammer, Arman Shahbazian, **Nenad Medvidovic**, and Ralf Reussner. Automated Extraction of Rich Software Models from Limited System Information. In Proceedings of the 13th Working IEEE/IFIP Conference on Software Architecture (WICSA 2016), Venice, Italy, April 2016.

C28 Duc Minh Le, Carlos Carrillo, Rafael Capilla, and **Nenad Medvidovic**. Relating Architectural Decay and Sustainability of Software Systems. In Proceedings of the 13th Working IEEE/IFIP Conference on Software Architecture (WICSA 2016), Venice, Italy, April 2016.

C29 Gholamreza Safi, Arman Shahbazian, William G.J. Halfond, and **Nenad Medvidovic**. Detecting Event Anomalies in Event-Based Systems. In Proceedings of the 10th joint meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE 2015), Bergamo, Italy, September 2015.

C30 Duc Minh Le, Pooyan Behnamghader, Joshua Garcia, Daniel Link, Arman Shahbazian, and **Nenad Medvidovic**. An Empirical Study of Architectural Change in Open-Source Software Systems. In Proceedings of the 12th Working Conference on Mining Software Repositories (MSR 2015), Florence, Italy, May 2015.

Fast-tracked for journal publication as one of the best papers of the conference.

C31 Thibaud Lutellier, Devin Chollak, Joshua Garcia, Lin Tan, Derek Rayside, **Nenad Medvidovic**, and Robert Kroeger. Comparing Software Architecture Recovery Techniques Using Accurate Dependencies. In Proceedings of the 37th International Conference on Software Engineering (ICSE 2015), Software Engineering in Practice Track, Florence, Italy, May 2015.

C32 Jae young Bang and **Nenad Medvidovic**. Proactive Detection of Higher-Order Software Design Conflicts. In Proceedings of the 12th Working IEEE/IFIP Conference on Software Architecture (WICSA 2015), Montreal, Canada, May 2015.

C33 Ivo Krka, Yuriy Brun, and **Nenad Medvidovic**. Automatic Mining of Specifications from Invocation Traces and Method Invariants. In Proceedings of the 22nd ACM SIGSOFT Symposium on the Foundations of Software Engineering (FSE 2014), Hong Kong, November 2014.

C34 Youn Kyu Lee, Jae young Bang, Joshua Garcia, and **Nenad Medvidovic**. ViVA: A Visualization and Analysis Tool for Distributed Event-Based Systems. In Proceedings of the 36th International Conference on Software Engineering (ICSE 2014), Formal Demonstration Track, Hyderabad, India, June 2014.

C35 Ivo Krka, Nicolas D'Ippolito, **Nenad Medvidovic**, and Sebastian Uchitel. Revisiting Compatibility of Input-Output Modal Transition Systems. In Proceedings of the 19th International Symposium on Formal Methods (FM 2014), Singapore, May 2014.

C36 Ivo Krka and **Nenad Medvidovic**. Component-Aware Triggered Scenarios. In Proceedings of the 11th Working IEEE/IFIP Conference on Software Architecture (WICSA 2014), Sydney, Australia, April 2014.

C37 Joshua Garcia, Igor Ivkovic, and **Nenad Medvidovic**. A Comparative Analysis of Software Architecture Recovery Techniques. In Proceedings of the 28th IEEE/ACM International Conference on Automated Software Engineering (ASE 2013), Palo Alto, CA, November 2013.

C38 Joshua Garcia, Daniel Popescu, Gholamreza Safi, William G.J. Halfond, and **Nenad Medvidovic**. Identifying Message Flow in Distributed Event-Based Systems. In Proceedings of the 9th joint meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE 2013), St. Petersburg, Russia, August 2013.

C39 Ivo Krka and **Nenad Medvidovic**. Distributing Refinements of a System-Level Partial Behavior Model. In Proceedings of the 21st International Conference on Requirements Engineering, Rio de Janeiro, Brazil, July 2013.

C40 Joshua Garcia, Ivo Krka, Chris Mattmann, and **Nenad Medvidovic**. Obtaining Ground-Truth Software Architectures. In Proceedings of the 35th International Conference on Software Engineering (ICSE 2013), Software Engineering in Practice Track, San Francisco, CA, May 2013.

C41 Jae young Bang, Ivo Krka, **Nenad Medvidovic**, Naveen Kulkarni, and Srinivas Padmanabhuni. How Software Architects Collaborate: Insights from Collaborative Software Design in Practice. In Proceedings of the 6th International Workshop on Cooperative and Human Aspects of Software Engineering (CHASE 2013), San Francisco, CA, May 2013.

C42 Ran Mo, Joshua Garcia, Yuanfang Cai, and **Nenad Medvidovic**. Mapping Architectural Smells into Dependency Models. In Proceedings of the 4th International Workshop on Managing Technical Debt (MTD 2013), San Francisco, CA, May 2013.

C43 Christoph Dorn, George Edwards, and **Nenad Medvidovic**. Analyzing Design Tradeoffs in Large-scale Socio-Technical Systems through Simulation of Dynamic Collaboration Patterns. In Proceedings of the 20th International Conference on Cooperative Information Systems (CoopIS 2012), Rome, Italy, September 2012.

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C159 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 2000.

C160 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), Fort Collins, CO, October 1999.

C161 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), Fort Collins, CO, October 1999.

C162 **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), Toulouse, France, September 1999.

C163 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), Los Angeles, CA, May 1999.

C164 **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), Los Angeles, CA, May 1999.

Finalist for the ICSE'99 Most Influential Paper Award

C165 **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), San Antonio, TX, February 1999.

C166 **Nenad Medvidovic** and Richard N. Taylor. Separating Fact from Fiction in Software Architecture. In Proceedings of the Third International Software Architecture Workshop (ISAW-3), Orlando, FL, November 1998.

C167 **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), Irvine, CA, October 1998.

C168 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), Kyoto, Japan, April 1998.

C169 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), Kyoto, Japan, April 1998.

Winner of the ICSE'98 Most Influential Paper Award, awarded at ICSE 2008

C170 **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), Kyoto, Japan, 1998.

C171 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 1998.

C172 **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), Santa Barbara, CA, October 1997.

C173 **Nenad Medvidovic** and Richard N. Taylor. A Framework for Classifying and Comparing Architecture Description Languages. In Joint proceedings of the Sixth European Software Engineering Conference together and Fifth ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC-FSE'97), Zurich, Switzerland, September 1997.

C174 **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), Boston, MA, May 1997. Also in Proceedings of the 1997 International Conference on Software Engineering (ICSE'97), Boston, MA, May 1997.

C175 **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 1996.

C176 **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),San Francisco, CA, October 1996.

C177 **Nenad Medvidovic**. ADLs and Dynamic Architecture Changes. In Alexander L. Wolf, ed., Proceedings of the Second International Software Architecture Workshop (ISAW-2), San Francisco, CA, October 1996.

C178 **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, Los Angeles, CA, April 1996.

C179 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),Seattle, WA, April 1995.

Fast-tracked journal publication as one of the best papers of the conference Finalist for the ICSE'95 Most Influential Paper Award

C180 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), Seattle, WA, April 1995.

Invited, Weakly Refereed, and Non-Refereed Publications

I1 **Nenad Medvidovic**. Pains and Gains of Peer Reviewing in Software Engineering: A Journal-Centric Perspective. ACM SIGSOFT Software Engineering Notes, vol. 46, no. 3, July 2021.

I2 Yixue Zhao and **Nenad Medvidovic**. Mobile-App Analysis and Instrumentation Techniques Reimagined with DECREE. In *Recognizing and Rewarding Open Science in Software Engineering (ROSE Festival)*, held at ICSE 2019, Montreal, Canada, May 2019.

I3 **Nenad Medvidovic**. Editorial: State of the Journal. *IEEE Transactions on Software Engineering*, vol. 45, no. 1, January 2019.

I4 Hakan Erdogmus, **Nenad Medvidovic**, and Frances Paulisch. 50 Years of Software Engineering. *IEEE Software*, vol. 25, no. 6, November/December 2018.

I5 Arman Shahbazian, Yuriy Brun, and **Nenad Medvidovic**. eQual: Search-Based Software Design Optimization Poster paper. In *Proceedings of the 40th International Conference on Software Engineering (ICSE 2018)*, Gothenburg, Sweden, May 2018.

I6 Barbora Buhnova, Antonio Vallecillo, **Nenad Medvidovic**, Magnus Larsson, Javier López, Jorge Cuellar. Guest editorial to the Special Issue on Component-Based Software Engineering and Software Architecture. *Science of Computer Programming*, vol. 90, part B, September 2014.

I7 **Nenad Medvidovic** and Chris A. Mattmann. Leveraging Software Architecture to Reconcile the Promise and Reality of Grid Computing. *Infosys Technology Roundtable*, September 2009. http://www.infosys.com/newsletter/technology-roundtable/web.htm

I8 Peyman Oreizy, **Nenad Medvidovic**, and Richard N. Taylor. Runtime Software Adaptation: Framework, Approaches, and Styles. In *Proceedings of the 30th International Conference on Software Engineering (ICSE 2008)*, follow-on to the Most Influential Paper of ICSE 1998, Leipzig, Germany, May 2008.

I0 **Nenad Medvidovic**. Foreword to Rogerio De Lemos, Cristina Gacek, and Alexander Romanovsky, eds., Architecting Dependable Systems, LNCS 4615, Springer Verlag, 2007.

I10 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.

I11 **Nenad Medvidovic**. Moving Architectural Description from Under the Technology Lamppost. In *Proceedings of the 32nd EUROMICRO Conference on Software Engineering and Advanced Applications*, Dubrovnik, Croatia, August 2006.

I12 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.

I13 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.

I14 **Nenad Medvidovic**. Software Architectures and Embedded Systems: A Match Made in Heaven? *IEEE Software*, September-October 2005.

I15 **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 2003.

I16 **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 2003.

I17 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.

I18 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.

I19 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 2000.

I20 **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.

I21 **Nenad Medvidovic**. An Approach to Architecture-Based Software Integration. In *Proceedings of the Ground System Architectures Workshop (GSAW 99)*, El Segundo, CA, March 1999.

I22 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 1998.

I23 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)*, Irvine, CA, March 1995.

Non-Refereed Technical Reports

N1 Youn Kyu Lee, Ruhollah Shemirani, Jae young Bang, Arman Shahbazian, Gholamreza Safi, and **Nenad Medvidovic**. SEALANT: Preventing Inter-Application Attacks in Android. USC Center for Systems and Software Engineering Technical Report, USC-CSSE-2016-601, March 2016.

N2 Duc M. Le, Pooyan Behnamghader, Joshua Garcia, Daniel Link, Arman Shahbazian, and **Nenad Medvidovic**. An Empirical Study of Architectural Change in Open-Source Software Systems. USC Center for Systems and Software Engineering Technical Report, USC-CSSE-2014-509, December 2014.

N3 Ivo Krka, Yuriy Brun, and **Nenad Medvidovic**. Automatically Mining Specifications from Invocation Traces and Method Invariant. USC Center for Systems and Software Engineering Technical Report, USC-CSSE-2013-509, September 2013.

N4 George Edwards and **Nenad Medvidovic**. Model Interpreter Frameworks. USC Center for Systems and Software Engineering Technical Report, USC-CSSE-2009-514, July 2009.

N5 Yuriy Brun, George Edwards, Jae Young Bang, and **Nenad Medvidovic**, Online Reliability Improvement via Smart Redundancy in Systems with Faulty and Untrusted Participants. USC Center for Systems and Software Engineering Technical Report, USC-CSSE-2009- 510, May 2009.

N6 Yuriy Brun and **Nenad Medvidovic**. Preserving Privacy in Distributed Computation via Self-Assembly. USC Center for Systems and Software Engineering Technical Report, USC- CSSE-2008-819, September 2008.

N7 Yuriy Brun and **Nenad Medvidovic**. Discreetly Distributing Computation via Self-Assembly. USC Center for Systems and Software Engineering Technical Report, USC-CSSE-2007-714, April 2007.

N8 David Woollard, Chris A. Mattmann, and **Nenad Medvidovic**. Injecting Software Architectural Constraints into Legacy Scientific Applications. USC Center for Software Engineering Technical Report, USC-CSE-2007-701, January 2007.

N9 Chiyoung 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.

N10 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, USC Center for Software Engineering, March 2004.

N11 Nikunj Mehta and **Nenad Medvidovic**. Checking Style Conformance of Software Architectural Compositions. Technical Report USC-CSE-2004-504, USC Center for Software Engineering, February 2004.

N12 Nikunj Mehta and **Nenad Medvidovic**. Composition of Style-Based Software Architectures from Architectural Primitives. Technical Report USC-CSE-2004-503, USC Center for Software Engineering, February 2004.

N13 Nikunj Mehta and **Nenad Medvidovic**. Toward Composition Of Style-Conformant Software Architectures. Technical Report USC-CSE-2004-500, USC Center for Software Engineering, January 2004.

N14 Marija Mikic-Rakic, Sam Malek, and **Nenad Medvidovic**. Improving Availability in Large, Distributed, Component-Based Systems via Redeployment. Technical Report USC-CSE- 2003-515, USC Center for Software Engineering, December 2003.

N15 Nikunj Mehta and **Nenad Medvidovic**. Concise Composition of Architectural Styles from Architectural Primitives. Technical Report USC-CSE-2003-510, USC Center for Software Engineering, October 2003

N16 Roshanak Roshandel and **Nenad Medvidovic**. Relating Software Component Models. Technical Report USC-CSE-2003-504, USC Center for Software Engineering, March 2003.

N17 Nikunj R. Mehta and **Nenad Medvidovic**. Distilling Software Architecture Primitives from Architectural Styles. Technical Report USC-CSE-2002-509, USC Center for Software Engineering, September 2002.

N18 Marija Mikic-Rakic and **Nenad Medvidovic**. Software Architecture-Based Development Support for Ubiquitous Systems. Technical Report USC-CSE-2002-508, USC Center for Software Engineering, September 2002.

N19 Ebru Dincel, **Nenad Medvidovic**, and Andre van der Hoek. An Example Product Line Architecture: The Library System. Technical Report USC-CSE-2002-507, USC Center for Software Engineering, September 2002.

N20 Ebru Dincel, **Nenad Medvidovic**, and Andre van der Hoek. An Example Product Line Architecture: Troops Deployment System. Technical Report USC-CSE-2002-506, USC Center for Software Engineering, September 2002.

N21 Ebru Dincel, **Nenad Medvidovic**, and Andre van der Hoek. An Example Product Line Architecture: Digital Library Projects. Technical Report USC-CSE-2002-505, USC Center for Software Engineering, September 2002.

N22 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, USC Center for Software Engineering, February 2002.

N23 **Nenad Medvidovic** and Marija Mikic-Rakic. Architectural Support for Programming-in-the-Many. Technical Report USC-CSE-2001-506, USC Center for Software Engineering, September 2001.

N24 Ebru Dincel, Roshanak Roshandel, and **Nenad Medvidovic**. ADL-Independent Architectural Representation in XML. Technical Report USC-CSE-00-519, USC Center for Software Engineering, May 2000.

N25 **Nenad Medvidovic**. On the Role of Middleware in Architecture-Based Software Development. Available as Technical Report USC-CSE-00-517, USC Center for Software Engineering, April 2000.

N26 **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, USC Center for Software Engineering, March 2000.

N27 Nikunj R. Mehta, **Nenad Medvidovic**, and Marija Rakic. Why Consider Implementation-Level Decisions in Software Architectures? Technical Report USC-CSE-00-514, USC Center for Software Engineering, February 2000.

N28 Alexander Egyed, Paul Gruenbacher, and **Nenad Medvidovic**. Refinement and Evolution Issues between Requirements and Product Line Architectures. Technical Report USC-CSE- 00-515, USC Center for Software Engineering, February 2000.

N29 **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.

N30 **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.

N31 **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.

N32 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.

7 Research Support

Current Support

G1 Google Research
Sole PI
Automatic Program Patching and Synthesis
Duration: 5/1/22 - 4/30/23
Award Amount: *$50,000*

G2 National Science Foundation — Software and Hardware Foundations
Sole PI at USC; collaborative proposal with Georgia Institute of Technology and UC Irvine
A General Framework for Automated Test Transfer
Duration: 10/1/21 - 9/30/25
Grant Number: 2105871
Award Amount to USC: *$400,000*

G3 National Science Foundation — Community Infrastructure Planning
Sole PI at USC; lead institution on collaborative proposal with UC Irvine, Rochester Institute of Technology, University of Hawaii,
Drexel University, and Stevens Institute of Technology
Constructing a Community-Wide Software Architecture Infrastructure
Duration: 9/1/18 - 8/31/22
Grant Number: 1823354
Award Amount to USC: *$684,000*

G4 National Science Foundation — Software and Hardware Foundations
Sole PI
Rooting Out Data- and Control-Flow Anomalies in Event-Based Systems Duration: 8/15/17 - 7/31/22
Grant Number: 1717963
Award Amount: *$500,000*

Past Support

G5 Office of Naval Research
Co-PI
Ensuring Security of Android Software via Tailorable Multi-Layer Customization
Co-PIs: Chao Wang, USC (lead PI)
William GJ Halfond, USC
Duration: 9/1/17 - 8/31/21
Grant Number: N00014-17-1-2896
Award Amount: *$1,082,320*

G6 Google
Sole PI
Mining Architectural Information to Stem Technical Debt
Duration: 10/1/19 - 4/30/21
Award Amount: *$42,500*

G7 National Science Foundation — Community Infrastructure Planning
Sole PI
Planning and Prototyping a Community-Wide Software Architecture Instrument
Duration: 8/1/16 - 7/31/19
Grant Number: 1629977
Award Amount: *$70,000*

G8 Huawei Technologies
Sole PI
Advanced Support for Software Architecture Recovery and Maintenance
Duration: 2/15/18 - 2/14/19
Award Amount: *$200,000*

G9 National Science Foundation — Software and Hardware Foundations
Sole PI
Techniques for Pruning Problem and Solution Spaces to Enable Methodical Exploration of Software Development Alternatives
Duration: 6/1/16 - 5/31/19
Grant Number: 1618231
Award Amount: *$500,000*

G10 Huawei Technologies
Sole PI
Automated, Intelligent Support for Architecture-Based Forward- and Reverse-Engineering
Duration: 12/1/16 - 11/30/17
Award Amount: *$145,000*

G11 Northrop Grumman
Sole PI
Parametric and Simulation Models Research and Calibration
Duration: 8/16/2014 - 5/15/2017
Award Amount: *$30,000*

G12 National Science Foundation — Software and Hardware Foundations
Co-PI
Helping Developers Improve the Energy Consumption of Smartphone Applications
Co-PIs: William GJ Halfornd, USC (lead PI)
Ramesh Govindan, USC
Duration: 7/1/13 - 6/30/17
Grant Number: 1321141
Award Amount: *$500,000*

G13 National Science Foundation — Software and Hardware Foundations
Sole PI
From Scenario-Based Software Requirements to Component-Level Behavior
Duration: 9/01/12 - 8/31/16
Grant Number: 1218115
Award Amount: *$500,000*

G14 National Science Foundation — Software and Hardware Foundations
Sole PI
Automating the Detection of Architectural Degradation in Software Systems
Duration: 8/01/11 - 7/31/15
Grant Number: 1117593
Award Amount: *$300,000*

G15 Defense Advanced Research Projects Agency (DARPA)
Lead PI
Testing Privacy-Preserving Distributed Systems on SAFERlab
Co-PIs: Yuriy Brun, University of Massachusetts
Sam Malek, George Mason University
Contract Number: N66001-11-C-4021
Duration: 11/1/13 - 2/28/15
Award Amount: *$300,000*

G16 Intelligence Advanced Research Projects Activity (IARPA)
Lead PI
OpTile: Private Computing in the Open
Co-PIs: Yuriy Brun, University of Massachusetts
Sam Malek, George Mason University
Contract Number: N66001-13-1-2006
Duration: 9/27/13 - 9/26/14
Award Amount: *$300,000*

G17 Northrop Grumman
Sole PI
Architectural Transformation of Legacy Systems to Future Systems
Duration: 1/1/14 - 5/15/14
Award Amount: *$30,000*

G18 Northrop Grumman
Sole PI
Domain-Specific Modeling and Simulation in Collaborative Software Development Projects
Duration: 8/16/13 - 5/15/14
Award Amount: *$10,000*

G19 Infosys Technologies Ltd.
Sole PI
CoDesign - A Collaborative Software Design Environment
Duration: 10/1/11 - 8/31/14
Award Amount: *$200,000*

G20 Northrop Grumman
Sole PI
Domain-Specific Modeling and Simulation
Duration: 8/16/12 - 5/15/13
Award Amount: *$10,000*

G21 Northrop Grumman
Sole PI
Exploring Design Alternatives in Software-Intensive Projects
Duration: 8/16/11 - 5/15/12
Award Amount: *$10,000*

G22 National Science Foundation — Software and Hardware Foundations
Lead PI
Early Reliability Modeling and Prediction of Embedded Software Systems
Duration: 3/01/10 - 8/31/12
Co-PIs: Leana Golubchik, USC
Gaurav Sukhatme, USC
Grant Number: 0905665
Award Amount: *$210,000*

G23 Stevens Institute of Technology — Systems Engineering Research Center
Sole PI
Requirements for Net-Centric Enterprises (RT-25)
Duration: 10/1/10 - 12/31/11
Award Amount: *$270,298*

G24 National Science Foundation — Software for Real-World Systems
Sole PI at USC; collaborative proposal with UC Irvine
Recombinant Services - Recasting the Web for Continuously Evolving Systems
Duration: 9/15/08 - 8/31/11
Grant Number: 0820170
Award Amount to USC: *$193,670*

G25 Office of Secretary of Defense — UAST
Sole PI; subcontract to MIT
A Prescriptive and Adaptive Testing Framework (PATFrame) for Unmanned and Autonomous Systems of Systems
Duration: 10/1/09 - 9/30/10
Subcontract Amount: *$128,649*

G26 Infosys Technologies Ltd.
Sole PI
An Extensible Infrastructure for Collaborative Architecture-Based Development of Distributed Software-Intensive Systems
Duration: 9/1/08 - 12/31/10
Grant Number: 0208
Award Amount: *$200,000*

G27 Jet Propulsion Laboratory — SURP
Co-PI
Reconfigurable Software for Recovering from Component Failures in Long Duration Missions
Co-PIs: Gaurav Sukhatme, USC (co-PI)
Duration: 9/1/09 - 5/31/10
Award Amount: *$75,000*

G28 National Institutes of Health Co-PI
Mobile Device Biomonitoring to Prevent and Treat Obesity in Underserved Minority Youth
Duration: 8/1/08 - 7/31/10
Co-PIs: Donna Spruijt-Metz, USC (lead PI)
Murali Annavaram, USC
Urbashi Mitra, USC
Shrikanth Narayanan, USC
Gaurav Sukhatme, USC
Award Amount: *$948,348*

G29 Robert Bosch Research and Technology Centers
Sole PI
Software Architectural Support for Embedded Systems
Duration: 3/1/06 - 5/31/09
Award Amount: *$470,000*

G30 National Science Foundation — Information Technology Research
Sole PI
Software Architectural Support for Programming-in-the-Small-and-Many
Duration: 9/1/03 - 8/31/09
Grant Number: 0312780
Award Amount: *$448,000*

G31 National Science Foundation — Computer Systems Research
Lead PI
Engineering Reliability into Hybrid Systems: A Compositional and Hierarchical Approach
Duration: 8/01/07 - 7/31/09
Co-PIs: Leana Golubchik, USC
Grant Number: 0720612
Award Amount: *$40,000*

G32 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*

G33 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*

G34 National Science Foundation — Science of Design
Co-PI
Value-Based Science of Design
Duration: 12/15/04 - 11/30/08
Co-PIs: Barry W. Boehm, USC (lead PI)
Grant Number: 0438931
Award Amount: *$400,000*

G35 National Science Foundation — Computer Systems Research
Lead PI
Engineering Reliability Into Hybrid Systems via Rich Design Models
Duration: 7/1/05 - 6/30/07
Co-PIs: Leana Golubchik, USC
Grant Number: 0509539
Award Amount: *$100,000*

G36 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
Co-PIs: Leana Golubchik, USC (lead PI)
B. Clifford Neuman, USC
Gerard Medioni, USC
Grant Number: 0417274
Award Amount: *$300,000*

G37 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*

G38 Boeing
Sole PI
C4ISR SADD Development Assistance (FCS)
Duration: 10/1/05 - 3/31/06
Award Amount: *$100,000*

G39 Jet Propulsion Laboratory Sole PI
Software Connectors for Data Distribution
Duration: 7/1/05 - 8/31/05
Award Amount: *$18,144*

G40 NASA High-Dependability Computing Consortium
Co-PI
Empirical Research on High Dependability Computing
Duration: 4/1/01 - 3/31/06
Co-PIs: Barry W. Boehm, USC (lead PI)
Award Amount: *$2,500,000*

G41 National Science Foundation — CAREER
Sole PI
Architecture-Based Support for Software Application Families
Duration: 7/1/00 - 6/30/05
Grant Number: 9985441
Award Amount: *$241,000*

G42 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*

G43 Jet Propulsion Laboratory
Sole PI
Extensible Architectural Technology for Managing Complex Space Data Systems
Duration: 11/1/03 - 8/31/04
Contract Number: 579951
Award Amount: *$50,000*

G44 Defense Advanced Research Projects Agency (DARPA)
Lead PI
Dynamic Assembly, Assessment, Assurance, and Adaptation via Heterogeneous Software Connectors
Duration: 7/1/00 - 10/31/03
Co-PIs: Barry W. Boehm, USC
Contract Number: F30602-00-2-0615
Award Amount: *$460,000*

G45 Jet Propulsion Laboratory
Sole PI
Relating State-Based and Component/Connector-Based Architectural Styles
Duration: 8/1/00 - 8/31/03
Contract Number: 1219801
Award Amount: *$95,672*

G46 U.S. Army Tank-Automotive and Armaments Command
Sole PI
COTS Components and Connectors
Duration: 9/1/01 - 3/31/03
Contract Number: 1400508
Award Amount: *$68,350*

G47 Xerox Corporation
Sole PI
Architecting Application Families
Duration: 9/1/00 - 8/31/02
Award Amount: *$60,000*
Intel Corporation

Lead PI
Embedded Systems Lab: A Teaching and Research Facility
Award Date: July 2001, July 2002
Co-PIs: Gaurav Sukhatme, USC
Award Amount: *$95,000* (in equipment and cash)

G48 Defense Advanced Research Projects Agency (DARPA)
Sole PI; subcontract to UC Irvine
Architecture-Centric Dynamic Adaptation of Deeply Networked Embedded Systems
Duration: 9/23/99 - 1/22/01
Contract Number: F30602-99-C-0174
Subcontract Amount: *$92,500*

8 Patents

11/2020 SEALANT: Security for End-users of Android via Light-weight ANalysis Techniques
U.S. Patent 10,827,349

12/2012 Tile Architectural Style for Privacy-Preserved Distributed Computing
U.S. Patent 8,332,457

9 Teaching

University of Southern California

Courses Developed and Taught

T1 CSCI 699 — Software Forensics
Ph.D.-level seminar
Spring 2020

T2 CSCI 578 — Software Architectures
Graduate-level course, a core course for the M.S. specialization in Software Engineering
Spring 1999, 2000, 2001, 2002, 2004, 2005, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2015, 2016, 2017, 2018
Fall 2008, 2009, 2010, 2011, 2012, 2014; 2019, 2020

T3 CSCI 310 — Software Engineering
Upper-division undergraduate course Spring 2021
Fall 2016, 2017

T4 CSCI 589 — Software Engineering for Embedded Systems
Graduate-level course
Fall 2001, 2002, 2003, 2004, 2006, 2007, 2015

T5 CSCI 499 — Modeling Software-Intensive Systems
Upper-division undergraduate / lower-division graduate seminar
Spring 2011

T6 CSCI 377 — Introduction to Software Engineering
Upper-division undergraduate course
Fall 2004, 2006, 2007, 2008, 2009

T7 CSCI 599 — Formal Methods in Software Architectures
Graduate seminar
Fall 2000

T8 CSCI 599 — Current Issues in Software Architectures
Graduate seminar
Fall 1999

Courses Developed

T9 CSCI 568 — Requirements Engineering
Graduate-level course, a core course for the Certificate in Software Architecture

Courses Taught

T10 CSCI 477 — Design and Construction of Large Software Systems
Upper division undergraduate / lower-division graduate course
Spring 2003

Other Universities

T11 Mining Software Repositories for Architectural Knowledge
International Summer School on Software Engineering, Salerno, Italy
Graduate course
July 2017
Half-day course

T12 Software Architecture and Robotics
LASER Summer School
Advanced Graduate Course
September 2017
One-week course

T13 Software Architectures
Universidad Politécnica de Madrid, Spain
Graduate course
March 2011
One-week course, part of the European Master of Software Engineering program

T14 Advanced Software Architectures
Politecnico di Milano, Italy
Graduate course
July 2010
Two-week course, part of PoliMi's Ph.D. program

T15 Software Architecture
University of Buenos Aires, Argentina
Graduate course
August 2009
One-week course, part of UBA's Winter School

T16 NSEN 6111 — Software Architectures
Walden University, USA
Graduate online course
Spring 2008
Co-taught with Richard N. Taylor and Eric Dashofy

Industry

T17 Advanced Topics in Software Architecture
Samsung Electronics Co. Ltd., Suwon, South Korea
2-day professional development course
June 2013

T18 Software Architecture
Samsung Electronics Co. Ltd., Suwon, South Korea
3-day professional development course
June 2013

T19 Software Architecture
Infosys Technologies Ltd., Mysore, India
3-week professional development course
December 2009

T20 Software Architectures
Jet Propulsion Laboratory, Pasadena, CA
10-week professional development course
Spring 2001, 2002; Summer 2001, 2002

Teaching Assistantships

T21 ICS 121 — Introduction to Software Engineering
Junior/senior-level undergraduate course (Summer 1994)
University of California, Irvine

T22 ICS 141 — Programming Languages
Junior/senior-level undergraduate course (Spring 1994)
University of California, Irvine

T23 ICS 52 — Systematic Software Construction
Sophomore-level undergraduate course (Fall 1993, Winter 1994)
University of California, Irvine

T24 CSE 460/598 — Software Project Management and Development I
Senior-level undergraduate course (Fall 1992, Spring 1993, Summer 1993)
Arizona State University

10 Supervised Students

Doctoral Students - Advisor

- Satyaki Das
  Start date: August 2021
- Luka Dojcilovic
  Start date: January 2021
- Tooraj Helmi
  Start date: August 2020
- Marcelo Laser
  Start date: August 2018
- Adriana Sejfia
  Start date: August 2018
- Saghar Talebipour
  Start date: August 2019

Doctoral Students - Dissertation Committee Member

Current

- Negarsadat Abolhassani
- Yazeed Alabdulkarim
- Reem Alfayez
- Celia Chen
- Paul Chiou
- Greg Harris
- Anandi Hira
- Yannan Li
- Sara Mohammadinejad
- Brandon Paulsen
- Khiem Ngo
- Kan Qi
- Selva Samuel, Carnegie Mellon University
- Hao Shi
- Jingbo Wang
- Di Wu

Graduated

- Marwan Abi-Antoun, CMU
- Mohammad-Mirza Aghatabar
- Abdulmajeed Alameer
- Mohamed Al Said
- Muhammad Ali Amer
- Jesper Andersson, Linkoping University, Sweden
- Pongtip Aroonvatanaporn
- Adi Azar
- Jongmoon Baik
- Sumita Barahmand
- Pooyan Behnamghader
- Jesal Bhuta
- Yue Chen
- Zhihao Chen
- Hugo Cheung
- Leslie Cheung
- Kun Young Chung
- Jürgen Cito, University of Zurich
- Eric Dashofy, UC Irvine
- Shirin Ebrahimi-Taghizadeh

- Alexander Egyed
- Ragy Eleish
- Alessio Gambi, University of Lugano, Switzerland
- Jiaping Gui
- Shuai Hao
- I-De Huang
- LiGuo Huang
- Shahdad Irajpour
- Jinwoo Kim
- Hasan Kitapci
- Yoon-Ju Lee
- Ding Li
- In-Young Ko
- Supannika Koolmanojwong
- Alexander Lam
- DeWitt Lattimer
- Joo H. Lee
- Keun Lee
- Qi Li
- Sonal Mahajan
- Ali Malik
- Muhammad Murtaza
- David Naffin
- Vu Nguyen
- Luis Pedrosa
- Gustavo Perez
- Monvorath Phongpaibul
- Hitesh Sajnani, UC Irvine
- Aaron Schram, University of Colorado, Boulder
- Shideh Shahidi
- Doochul Shin
- Chungha Sung
- Giordano Tamburrelli, Politecnico di Milano, Italy
- Thomas Tan
- Shahzad Tiwana
- Marcos Vieira
- Mian Wan
- Dan Wu
- Ye Yang
- Jason Yap

Masters Students

Graduated

- Ian Elston
- John Morse
- Marwan Abi-Antoun
- Raghbir Banwait
- Miheer Bhachech
- Ebru Dincel
- Lei Ding
- Brian D'Souza
- Eder Figueroa
- Prakash Gupta
- Sheryl John
- Himanshu Joshi
- Suhrid Karthik
- Armagan Kilic
- Vishal Kudchadkar
- Mehrdad Mahdavi
- Sean McCleese
- Suhas Mehta
- Daye Nam
- Mahindra Pai
- Sandeep Phadke
- Aliasgar Rampurwala
- Tatsuhiko Tomita
- Vinaynathan Viswanathan
- Michael Wakerly
- Dongwoo Won
- David Woollard

Undergraduate Students

Current

- Justin Chen (Columbia University)
- Markus Snelder

Graduated

- Nels Beckman
- Morgan Brown
- Vanessa Carson
- Charles DeBergh

- Kelly Dickson
- Eric Dong
- Joshua Garcia
- Kevin Jing
- Trevor Johns
- Yi (Nick) Kuang
- Jerry Lin
- Jacob Schaider
- Anita Singh
- Paul Wat
- Yifeng Yu

11 Formal Presentations

Keynote Presentations

P1 *Mining Architectural Information to Stem Technical Debt*. International Workshop on Mining Software Repositories for Software Architecture (MSR4SA), held with the European Conference on Software Architecture, online, September 2021.

P2 *Human Archipelagos Have Been Induced by COVID but Architectural Archipelagos Are All Our Own Doing.* IEEE 18th International Conference on Software Architecture (ICSA 2021), online, March 2021.

P3 *Stemming Architectural Decay in Software Systems*. Fourth International conference on Tools and Methods of Program Analysis (TMPA-2017), Moscow, Russia, March 2017.

P4 *Software Decay as a Big-Data Problem Viewed Through the Architectural Lens.* 2016 International Simulation Multi-Conference (AsiaSim / SCS AutumnSim 2016), Beijing, China, October 2016.

P5 *Viewing Software Decay Through the Architectural Lens*. International Symposium on Software Engineering and Applications (SEA 2015), Marina del Rey, CA, October 2015.

P6 *What Architecture Can Teach Us About When, Where, and Why Software Systems Decay*. 9th European Conference on Software Architecture (ECSA 2015), Dubrovnik/Cavtat, Croatia, September 2015.

P7 *Adapting Our View of Software Adaptation: An Architectural Perspective.* 9th International Symposium on Software Engineering for Adaptive and Self-Managing Systems (SEAMS 2014), Hyderabad, India, June 2014.

P8 *PhD Research: What, Where, Why, When, How*. INCOSE/CSER Systems Engineering and Architecting Doctoral Student Network (SEANET), University of Southern California, Los Angeles, CA, March 2014.

P9 *When, Where, and Why Software Systems Decay and What We Can Do about It*. University of California Irvine (UCI) Institute for Software Research Forum, Irvine, CA, May 2013.

P10 *Software Architecture Challenges & Opportunities for the 21st Century: Dynamism, Mobility, Autonomy, Services, Grids & Clouds*. 11th Brazilian Symposium on Software Quality, Fortaleza, Brazil, June 2012.

P11 *Software Architecture Challenges & Opportunities for the 21st Century: Dynamism, Mobility, Autonomy, Services, Grids & Clouds*. 5th India Software Engineering Conference (ISEC 2012), Kanpur, India, February 2012.

P12 *Software Architecture and Mobility: A Perfect Marriage or an Uneasy Alliance*. International Workshop on Software Architectures and Mobility (SAM 2008), Leipzig, Germany, May 2008.

P13 *Moving Architectural Description from Under the Technology Lamppost*. Brazilian Symposium on Software Components, Architectures, and Reuse (SBCARS 2007), Campinas, Brazil, August 2007.

P14 *Moving Architectural Description from Under the Technology Lamppost*. 32nd EUROMICRO Conference on Software Engineering and Advanced Applications (EUROMICRO'06), Dubrovnik, Croatia, August, 2006.

P15 *From Dependable Architectures to Dependable Systems*. 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.

Academic Conference Presentations

P16 *Software Architecture and COVID: A Marriage of (In)Confenience*. New and Emerging Ideas Panel: Software Architecture in the COVID-19 Reality. IEEE 18th International Conference on Software Architecture (ICSA 2021), online, March 2021.

P17 *Online Sports Betting Through the Prism of Software Engineering*. Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE 2020), November 2020.

P18 *An Architectural Style for Solving Computationally Intensive Problems on Large Networks*. (with Yuriy Brun) 15th International Symposium on Software Engineering for Adaptive and Self-Managing Systems (SEAMS 2020), Seoul, South Korea, May 2020.

P19 *ARCADE: A Workbench for Mining Architectural Information and Identifying Technical Debt*. Workshop on the National Java Repository Project, San Diego, CA, November 2019

P20 *Mining Architectural Information to Stem Technical Debt*. Southern California Software Engineering Symposium, Irvine, CA, June 2016.

P21 *Viewing Software Decay Through the Architectural Lens*. 2nd Latin American School on Software Engineering, Porto Alegre, Brazil, July 2016.

P22 *An End-to-End Domain-Specific Modeling and Analysis Platform*. 8th International Workshop on Modeling in Software Engineering (MISE 2016), Austin, TX, May 2016.

P23 *Extracting the Essence of Software Systems' Architectures Through Unstructured-Data Mining*. Mining and Modeling Unstructured Data in Software - Challenges for the Future, Shonan Village, Japan, March 2016.

P24 *An Empirical Study of Architectural Decay in Software Systems.* 39th International Conference on Software Engineering (ICSE 2017) Warm-up Workshop, Maceio, Brazil, October 2014.

P25 *An ARCADE for Architecture Analytics.* Dagstuhl Seminar on Software Development Analytics, Dagstuhl, Germany, June 2014.

P26 *Component-Aware Triggered Scenarios.* Working IEEE/IFIP Conference on Software Architecture (WICSA 2014), Sydney, Australia, April 2014.

P27 *When, Where, and Why Software Systems Decay and What We Can Do about It.* International Symposium to Commemorate the 45th Anniversary of the First Software Engineering Conference (SE@45), University of Southern California, Los Angeles, CA, October 2013.

P28 *Platform Architectures.* Dagstuhl Seminar on Customizing Service Platforms, Dagstuhl, Germany, April 2013.

P29 When, Where, and Why Do Software Systems' Architectures Decay? Workshop on Modularity and Software Architecture, Rio de Janeiro, Brazil, March 2013.

P30 *Impact Analysis for Distributed Event-Based Systems.* 6th ACM International Conference on Distributed Event-Based Systems (DEBS 2012), Berlin, Germany, July 2012.

P31 *The Impact of Architectural Design Decisions on Non-Functional Properties of Software Systems*. OOP 2010 - Software Engineering and Management Conference, Munich, Germany, January 2010.

P32 *A Framework for Modeling Software Product Lines*. OOP 2010 - Software Engineering and Management Conference, Munich, Germany, January 2010.

P33 *LVC Software Architecture Support for PATFrame*. International Test and Evaluation Association (ITEA) Live Virtual Constructive Conference, El Paso, TX, January 2010.

P34 *The Anatomy and Physiology of the Grid Revisited*. IEEE/CSSE/ISR Workshop on Software Architecture Challenges for the 21st Century, Los Angeles, CA, June 2009.

P35 *Center for Systems and Software Engineering Overview*. IEEE/CSSE/ISR Workshop on Software Architecture Challenges for the 21st Century, Los Angeles, CA, June 2009.

P36 *Architecture-Based Software Development of Mobile and Embedded Systems*. 2nd International ICSE Warm-up Workshop (WUP 2009), Cape Town, South Africa, April 2009.

P37 *Service-Oriented Architectures*. 13th Ground System Architectures Workshop (GSAW 2009), Torrance, CA, March 2009.

P38 *Architecture and Mobile/Embedded Systems - An Uneasy Alliance or a Marriage Made in Heaven*. USC-CSSE Annual Research Review Executive Workshop, Los Angeles CA, March 2009.

P39 *Software Architecture Modeling with Uncertainty*. AADL Workshop, Los Angeles, CA, February 2009.

P40 *Architecture and Hardware/Software/System Engineering Integration*. USC-CSSE COCOMO Workshop, Los Angeles, CA, October 2008.

P41 *Runtime Software Adaptation: Framework, Approaches, and Styles*. (with Peyman Oreizy and Richard N. Taylor) 30th International Conference on Software Engineering (ICSE 2008), Leipzig, Germany, May 2008.

P42 *Estimating the Energy Consumption in Pervasive Java-Based Systems.* 6th IEEE International Conference on Pervasive Computing and Communications (PerCom 2008), Hong Kong, March 2008.

P43 *An Introduction to Architecture-Level Reliability Analysis*. Tutorial, with Roshanak Roshandel, Working IEEE/IFIP Conference on Software Architecture (WICSA), Vancouver, Canada, February 2008.

P44 *Software Architectures and Embedded Systems*. Korean Computer Scientists and Engineers Association in America, University of Southern California, Los Angeles, CA, December 2007.

P45 *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.

P46 *Construction of Analytic Frameworks for Component-Based Architectures.* Brazilian Symposium on Software Components, Architectures, and Reuse (SBCARS 2007), Campinas, Brazil, August 2007.

P47 *From Dependable Architectures to Dependable Systems*. USC-CSSE Annual Research Review, Los Angeles, CA, February 2007.

P48 *A Classification of Disconnected Operation Techniques*. 32nd EUROMICRO Conference on Software Engineering and Advanced Applications (EUROMICRO'06), Dubrovnik, Croatia, August, 2006.

P49 *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.

P50 *The GridLite DREAM: Bringing the Grid to Your Pocket*. Monterey Workshop, Laguna Beach, CA, September 22-23, 2005.

P51 *A View from the Trenches*. ICSE 2005 New Software Engineering Faculty Symposium, St. Louis, MO, May 2005.

P52 *Modeling Behavior in Compositions of Software Architectural Primitives*. 19th IEEE International Conference on Automated Software Engineering (ASE 2004), Linz, Austria, September 2004.

P53 *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.

P54 *Style-Based Software Architectural Compositions as Domain-Specific Models*. Workshop on Directions in Software Engineering Environments (WoDiSEE 2004), Edinburgh, UK, May 2004.

P55 *Software Architectures and Embedded Systems*. Monterey Workshop on Software Engineering for Embedded Systems: From Requirements to Implementation, Chicago, IL, September 2003.

P56 *Coupling Architectural Discovery and Recovery to Stem Architectural Erosion*. Dagstuhl Workshop on Software Architecture Recovery and Modeling (SWARM), Dagstuhl, Germany, February 2003.

P57 *A Family of Software Architecture Implementation Frameworks*. 2002 Working IEEE/IFIP Conference on Software Architectures (WICSA-3), Montreal, Canada, August 2002.

P58 *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.

P59 *Architecture-Level Support for Software Component Deployment in Resource Constrained Environments*. IFIP/ACM Working Conference on Component Deployment (CD 2002), Berlin, Germany, June 2002.

P60 *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.

P61 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.

P62 *What Young Faculty Members Still Want to Know.* ICSE 2001 New Software Engineering Faculty Symposium, Toronto, Canada, May 2001.

P63 *Exploiting Software Architecture Implementation Infrastructure in Facilitating Component Mobility*. ICSE 2001 Workshop on Software Engineering and Mobility, Toronto, Canada, May 2001.

P64 *xADL: Enabling Architecture-Centric Tool Integration With XML.* 34th Hawaii International Conference on System Sciences (HICSS-34), Maui, Hawaii, January 2001.

P65 *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.

P66 *Towards Software Multioperability: Bridging Heterogeneous Software Interoperability Platforms.* Fourth International Software Architecture Workshop (ISAW-4), Limerick, Ireland, June 2000.

P67 *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.

P68 A Language and Environment for Architecture-Based Software Development and Evolution. 21st International Conference on Software Engineering (ICSE'99), Los Angeles, CA, May 1999.

P69 *Modeling Software Architectures in UML*. Workshop on Software Architectures and the Unified Modeling Language, Denver, CO, April 1999.

P70 *An Approach to Architecture-Based Software Integration*. Ground System Architectures Workshop (GSAW 99), El Segundo, CA, March 1999.

P71 *Assessing the Suitability of a Standard Design Method for Modeling Software Architectures*. First Working IFIP Conference on Software Architecture, San Antonio, TX, February 1999.

P72 *A Comparative Analysis of Architecture Description Languages*. USC-CSE Annual Research Review, Los Angeles, CA, February 1999.

P73 *Assessing UML's Suitability for Modeling Software Architectures*. USC-CSE Annual Research Review, Los Angeles, CA, February 1999.

P74 *Employing Off-the-Shelf Connector Technologies in C2-Style Architectures*. California Software Symposium (CSS'98), Irvine, CA, October 1998.

P75 *An Architecture-Based Approach to Software Evolution*. International Workshop on the Principles of Software Evolution, Kyoto, Japan, April 1998.

P76 *Domains of Concern in Software Architectures and Architecture Description Languages.* USENIX Conference on Domain-Specific Languages, Santa Barbara, CA, October 1997.

P77 *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.

P78 *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.

P79 *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.

P80 *ADLs and Dynamic Architecture Changes.* Second International Software Architecture Workshop (ISAW-2), San Francisco, CA, October 1996.

P81 *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.

P82 *Formal Modeling of Software Architectures at Multiple Levels of Abstraction.* California Software Symposium, Los Angeles, CA, April 1996.

P83 *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

P84 *Mining Architectural Information to Stem Technical Debt*. Georgia Institute of Technology, Atlanta, GA, November 2019

P85 *Mining Architectural Information to Stem Technical Debt*. University College London, UK, July 2019

P86 *Loose Coupling in Mobile Systems: Challenges and Opportunities*. Harbin Institute of Technology, Harbin, China, April 2019.

P87 *Mining Architectural Information to Stem Technical Debt*. Harbin Institute of Technology, Harbin, China, April 2019.

P88 *Teaching CS and SE at USC*. Harbin Institute of Technology, Harbin, China, April 2019.

P89 *Publishing Strategies for Top SE Venues*. Harbin Institute of Technology, Harbin, China, April 2019.

P90 *Ph.D. Research: What, Where, Why, When, How*. Harbin Institute of Technology, Harbin, China, April 2019.

P91 *Introduction to Software Architecture*. Faculty of Organizational Sciences, University of Belgrade, Serbia, March 2017.

P92 *Architectural Decay in Software Systems: Symptoms, Causes, and Remedies.* University of Massachusetts, Amherst, MA, November 2013.

P93 *Architectural Decay in Software Systems: Symptoms, Causes, and Remedies.* McGill University, Montreal, Canada, October 2013.

P94 *When, Where, and Why Do Software Systems' Architectures Decay?* University of Lugano, Lugano, Switzerland, October 2012.

P95 *When, Where, and Why Do Software Systems' Architectures Decay?* University of Arizona, Tucson, AZ, October 2012.

P96 *Architectural Degradation - The Plague of Maturing Software Systems*. University of California Irvine Institute for Software Research Annual Research Review, Irvine, CA, May 2012.

P97 *Overview of Software Engineering Research at USC*. Computer Science Department Annual Research Review, Los Angeles, CA, March 2012.

P98 *A Framework for Maintaining a Distributed Software System's QoS*. Computer Science Department Annual Research Review, USC, Los Angeles, March 2010.

P99 *Academic Career Work-Life Balance - A View from the Trenches*. University of Southern California, April 2011.

P100 *Overview of Software Engineering Research at USC*. University of Southern California, Computer Science Research Day, March 2011.

P101 *A Framework for Early Estimation of Software System Reliability*. University of California, San Diego, February 2011.

P102 *Software Architecture and Mobility: A Perfect Marriage or an Uneasy Alliance?* University College, London, UK, October 2010.

P103 A Framework for Early Estimation of Software System Reliability. University of Zurich, Switzerland, September 2010.

P104 *The Future of Software Architecture: Challenges and Opportunities*. Federal University of Bahia, Salvador, Brazil, August 2010.

P105 *Software Architecture and Mobility: A Perfect Marriage or an Uneasy Alliance?* Federal University of Rio de Janeiro, Brazil, August 2010.

P106 Software Architecture and Mobility: A Perfect Marriage or an Uneasy Alliance? Pontifícia Universidade Católica do Rio de Janeiro, August 2010.

P107 *A Framework for Early Estimation of Software System Reliability*. Georgia Institute of Technology, Atlanta, GA, April 2010.

P108 *Software Architecture and Mobility: A Perfect Marriage or an Uneasy Alliance*. Institute for Software Research, Distinguished Speaker Series, University of California, Irvine, February 2010.

P109 *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.

P110 *Dynamic Software Architectures*. Jesper Andersson Dissertation Defense Opponent, Linkoping University, Sweden, April 2007.

P111 *From Dependable Architectures to Dependable Systems*. USC-CSE Annual Research Review, Los Angeles, CA, February 2007.

P112 *Moving Architectural Description from Under the Technology Lamppost*. USC Center for Systems and Software Engineering Convocation, October 2006.

P113 *Endowing Legacy Applications with Software Architectural Capabilities*. University of Southern California - Information Sciences Institute, Marina del Rey, CA, October 2006.

P114 *The Prism Project: Software Architectural Support for Highly Distributed Environments*. Bosch Research and Technology Center, Palo Alto, CA, January 2006.

P115 *Coupling Architectural Discovery and Recovery to Stem Architectural Erosion*. USC-CSE Annual Research Review, Los Angeles, CA, March 2003.

P116 *Exploiting Architectural Style, Connectors, and Types in Large-Scale Software Development and Evolution.* University of Texas, Austin, TX, April 2001.

P117 *An Architecture-Based Approach to Developing Heterogeneous, Highly Distributed Software Systems.* University of Southern California - Information Sciences Institute, Marina del Rey, CA, February 2001.

P118 *Programming in the Many: Software Engineering Paradigm for the 21st Century.* USC-CSE Annual Research Review, Los Angeles, CA, February 2001.

P119 *An Architecture-Based Approach to Developing Heterogeneous, Highly Distributed Software Systems.* University of Washington, Seattle, WA, January 2001.

P120 *From Programming in the Large to Programming in the Small and Many.* University of California, Santa Cruz, CA, October 2000.

P121 *Exploiting Architectural Style, Connectors, and Types in Large-Scale Software Development and Evolution.* Rice University, Houston, TX, September 2000.

P122 *SAAGE — An Environment for Software Architecture, Analysis, Generation, and Evolution*. USC-CSE Annual Research Review, Los Angeles, CA, February 2000.

P123 *A Style-Based Approach to the Design and Evolution of Adaptable Software.* University of Texas, Austin, TX, November 1997.

Professional Organization, Industry, and Funding Agency Presentations

P124 *Classifying and Identifying Noise in Software Patches*. 64th Meeting of IFIP Working Group 2.4, online, May 2021.

P125 *Events in Mobile Systems: A Blessing and a Curse*. 62nd Meeting of IFIP Working Group 2.4, Port Elizabeth, South Africa, January 2020.

P126 *Architectural Decay in Open-Source Software*, Google, Irvine, CA, October 2019.

P127 E*nsuring Security of Android Software via Tailorable Multi-Layer Customization*. Office of Naval Research (ONR) Total Platform Cyber Protection (TPCP) Program Annual Review, Boston, MA, June 2019.

P128 *Mining Architectural Information to Stem Technical Debt*. Google, Los Angeles, CA, June 2019.

P129 *Architectural Decay in Large Software Systems*. Google, Los Angeles, CA, November 2017.

P130 *Correlating Implementation Issues with Architectural Decay in Large Software Systems*. Huawei Vision Forum, Santa Clara, CA, October 2017.

P131 *Using Architecture Recovery to Stem Software System Decay*. Huawei Vision Forum, Santa Clara, CA, October 2016.

P132 *Software Architecture Recovery, Event-Based App Analysis, and Mobile Security*. Huawei Technologies Site Visit, University of Southern California, Los Angeles, CA, June 2016.

P133 *Correctness, Security, and Adaptation in Distributed Event-Based Systems*. Army Research Laboratories Site Visit, University of Southern California, Los Angeles, CA, April 2016.

P134 *The Flame Project*. Infosys Site Visit, University of Southern California, Los Angeles, CA, February 2016.

P135 *Architectural Decay in Software Systems: Symptoms, Causes, and Remedies.* United Technologies Research Center, Hartford, CT, October 2013.

P136 *sTile: Securing the Insecure Cloud*. DARPA Site Visit, Information Sciences Institute, Marina del Rey, CA, May 2012.

P137 *CoDesign - A Collaborative Software Design Environment*. Infosys Site Visit, Los Angeles, CA, May 2012.

P138 *Software Architecture Challenges & Opportunities for the 21st Century: Dynamism, Mobility, Autonomy, Services, Grids & Clouds*. Infosys, Mysore, India, March 2012.

P139 *The Anatomy and Physiology of the Grid Revisited*. Infosys, Bangalore, India, March 2012.

P140 P136 *Software Architecture Challenges & Opportunities for the 21st Century: Dynamism, Mobility, Autonomy, Services, Grids & Clouds*. IBM Research, Delhi, India, February 2012.

P141 *sTile: Securing the Insecure Cloud*. CIA, Washington, DC, November 2011.

P142 *sTile: Securing the Insecure Cloud*. DARPA, Arlington, VA, June 2011.

P143 *Desiderata and Challenges in Globally-Distributed Software Development*. Infosys Aurora, Las Vegas, NV, August 2011.

P144 *Modern Software Architectural Challenges: Dynamism, Mobility, Services, Grids, and Clouds*. Aerospace Corporation, El Segundo, CA, November 2010.

P145 *Software Architecture and Mobility: A Perfect Marriage or an Uneasy Alliance?* Northrop Grumman, Los Angeles, CA, September 2010.

P146 *Software Architecture and Mobility: A Perfect Marriage or an Uneasy Alliance*? Infosys, Bangalore, India, December 2009.

P147 *Software Architecture Support for PATFrame*. PATFrame project kick-off meeting, Ft. Hood, TX, August 2009.

P148 *An Extensible Infrastructure for Collaborative Architecture-Based Development of Distributed Software-Intensive Systems*. Infosys site visit, April 2009.

P149 *Architecture and Hardware/Software/System Engineering Integration*. Lockheed Martin Site Visit, Los Angeles, CA, December 2008.

P150 *An Extensible Infrastructure for Collaborative Architecture-Based Development of Distributed Software-Intensive Systems*. Infosys project progress meeting, August 2008.

P151 *An Extensible Infrastructure for Collaborative Architecture-Based Development of Distributed Software-Intensive Systems*. Infosys project kick-off meeting, August 2008.

P152 *Architecture-Based Modeling and Simulation*. Boeing Professor Day, Seal Beach, CA, February 2008.

P153 *Overview of Software Architecture Research at USC*. Bosch Research and Technology Center, Palo Alto, CA, January 2007.

P154 *Identifying and Addressing Uncertainty in Architecture-Level Software Reliability Modeling*. NSF Next Generation Software Program (NSFNGS) Workshop, Long Beach, CA, February 2007.

P155 *Multi-Framework Programming via Software Architecture and Architectural Middleware*. DARPA Multi-Framework Programming Workshop, Menlo Park, CA, August 2007.

P156 *Overview of Software Architecture Research at USC*. USC Computer Science Department Industrial Advisory Board Meeting, Los Angeles, CA, April 2006.

P157 *Overview of Software Architecture Research at USC.* General Electric Site Visit, Los Angeles, CA, February 2006.

P158 *Software Architecture for DREAM Environments*. Jet Propulsion Laboratory, Pasadena, CA, January 2005.

P159 *DeSi - An Environment for Modeling, Analyzing, and Simulating Deployment Architectures*. Boeing, Anaheim, November 2004.

P160 *Overview of Software Architecture Research at USC.* Northrop Grumman Site Visit, Los Angeles, CA, April 2004.

P161 *Overview of Software Architecture Research at USC.* Microsoft Site Visit, Los Angeles, CA, March 2004.

P162 *Overview of Software Architecture Research at USC.* Airbus Site Visit, Los Angeles, CA, February 2004.

P163 *DeSi - A Tailorable Environment for Assessing the Quality of Distributed Software Architectures*. Jet Propulsion Laboratory, Pasadena, CA, January 2004.

P164 *Overview of Software Engineering Research at USC.* Boeing Site Visit, Los Angeles, CA, November 2003.

P165 *Software Architecture Research at USC-CSE: An Overview.* Jet Propulsion Laboratory Site Visit, Los Angeles, CA, September 2003.

P166 *Software Architectures and Self-Healing Systems*. Boeing, Anaheim, CA, May 2003.

P167 *Software Architectures and Self-Healing Systems*. Boeing-DARPA Future Combat Systems Meeting, Boeing, Anaheim, CA, September 2002.

P168 *Software Connectors for Programming-in-the-Many.* Boeing, Seattle, WA, November 2001.

P169 Software Architecture Collaboration between JPL and USC. Jet Propulsion Laboratory, Pasadena, CA, September 2001.

P170 *Relating State-Based and Component/Connector-Based Architectural Styles: Technical Project Review*. Jet Propulsion Laboratory, Pasadena, CA, August 2001.

P171 *Architectural Support for Programming-in-the-Many.* U.S. Army Tank-Automotive and Armaments Command (TACOM), Detroit, MI, July 2001.

P172 *Software Architecture Research at USC: Programming in the Large and Many.* Xerox Corporation, El Segundo, CA, January 2001.

P173 *From Programming in the Large to Programming in the Small and Many.* Microsoft USC Site Visit, Los Angeles, December 2000.

P174 *Software Architecture at USC and JPL.* Jet Propulsion Laboratory, Pasadena, CA, October 2000.

P175 *Programming in the Small, Large, and Many.* Xerox Corporation, El Segundo, CA, October 2000.

P176 *Programming in the Small, Large, and Many.* Schlumberger Corporation, Houston, TX, September 2000.

P177 *Dynamic Assembly, Assessment, Assurance, and Adaptation via Heterogeneous Software Connectors.* DARPA/ISO DASADA Project Kick-off Meeting, Santa Fe, NM, September 2000.

P178 *UML and Software Architectures.* DARPA/ISO DASADA Project Kick-off Meeting, Santa Fe, NM, September 2000.

P179 *An Approach to Architecture-Based Software Development and Evolution.* Jet Propulsion Laboratory, Pasadena, CA, May 2000.

P180 *SAAGE — An Environment for Software Architecture, Analysis, Generation, and Evolution*. Lockheed Martin USC Site Visit, Los Angeles, CA, May 2000.

P181 *On the Role of UML in Modeling Software Architectures.* Southern California Software Process Improvement Network, Long Beach, CA, April 2000.

P182 *Software Architecture Research and Practice.* Jet Propulsion Laboratory, Pasadena, CA, April 2000.

P183 *Architecture-Centric Dynamic Adaptation of Deeply Networked Embedded Systems.* DARPA/ITO RENES Project Kick-off Meeting, Arlington, VA, November 1999.

P184 *Software Architecture Research and Practice.* NSF Software Engineering Strategies Workshop Briefing, National Science Foundation, Arlington, VA, September 1999.

P185 *Assessing the Suitability of UML for Modeling Software Architectures.* Bay Area Round Table (BART), Palo Alto, CA, July 1999.

P186 *A Classification and Comparison Framework for Software Architecture Description Languages.* Second DARPA EDCS Architecture/Generation Workshop, Santa Fe, NM, April 1997.

P187 *Component-Based GUI Architecture.* Hughes Aircraft Corp., El Segundo, CA, January 1997.

P188 *What's New with C2?* Arcadia Research Meeting, Portland, OR, August 1996.

P189 *Chiron-2: A Component- and Message-Based Architectural Style for GUI Software.* Sun Microsystems Laboratories, Palo Alto, CA, June 1995.

P190 *Chiron-2: A Component- and Message-Based Architectural Style for GUI Software.* Bay Area Round Table (BART), Palo Alto, CA, June 1995.

12 Professional Service

Professional Organization and Journal Leadership

S1 Editor-in-Chief, IEEE Transactions on Software Engineering (1/18 - present)

S2 Chair, ACM Software System Award Committee (7/21 - present)

S3 Deputy Chair, ACM Software Systems Award Committee (7/20 – 6/21)

S4 Chair, Editor-in-Chief Search Committee, ACM Transactions on Autonomous and Adaptive Systems (6/20 - 9/20)

S5 Chair, ACM Publications Board Task Force on Improving Peer-Review Incentives (1/19 - 7/20)

S6 Chair, ACM SIGSOFT (7/15 - 6/18)

S7 Chair, Committee on Capture/Streaming at ACM Conferences, ACM SIG Governing Board (10/16 - 6/18)

S8 Chair, Steering Committee, ACM SIGSOFT Symposium on the Foundations of Software Engineering (7/15 - 9/17)

S9 Chair, Steering Committee, International Conference on Software Engineering (11/13 - 10/15)

Editorial Boards and Steering Committee Membership

S10 Member, Joint ICSE/FSE/ASE Conference Consolidation Committee (7/20 - present)

S11 Member, Executive Committee, ACM Special Interest Group on Software Engineering (SIGSOFT) (7/18 - present)

S12 Member, ACM SIG Governing Board (7/15 - 6/20)

S13 Member, ACM Publications Board (7/18 - 6/20)

S14 Member, Steering Committee, International Conference on Software Engineering (5/08 - present)

S15 Member, Steering Committee, ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE) (5/17 - present)

S16 Member, ICSE Journal-First Task Force (5/16 - present)

S17 Guest Editor, IEEE Software, 50th Anniversary of Software Engineering (6/17 - 10/18)

S18 Associate Editor, ACM Transactions on Software Engineering and Methodology (3/14 - 12/17)

S19 Associate Editor, Journal of Software Engineering for Robotics (12/08 - 12/17)

S20 Editorial Board Member, Journal of Software Engineering Research and Development (4/12 - 12/17)

S21 Editorial Board Member, Springer Computing Journal (2/11 - present)

S22 Editorial Board Member, Elsevier Journal of Systems and Software (1/11 - 12/17)

S23 Editorial Board Member, Elsevier Information and Software Technology Journal (1/08 - 12/17)

S24 Associate Editor, IEEE Transactions on Software Engineering (1/10 - 12/13)

S25 Guest Editor, Elsevier Journal of Systems and Software, The Future of Software Engineering FOR/IN the Cloud (7/11 - 7/13)

S26 Guest Editor, The Science of Computer Programming Journal Best Papers of the CompArch 2012 Conference (7/12 - 9/14)

S27 Member, Steering Committee, Working IEEE/IFIP Conference on Software Architecture (1/05 - 2/08)

Advisory Boards and Award Committees

S28 Co-Chair, ICSE 2011 Most Influential Paper Award (3/19 - 5/21)

S29 Member, ACM Software Systems Award Committee (9/18 - 7/20)

S30 Member, Selection Committee, 2016 ACM SIGSOFT Impact Paper Award (12/16 - 5/17)

S31 Member, Selection Committee, 2015 ACM SIGSOFT Impact Paper Award (12/15 - 5/16)

S32 Member, Selection Committee, 2014 ACM SIGSOFT Outstanding Research Award (8/13 - 5/14)

S33 Member, International Selection Committee, Bower Award for Achievement in Science (8/13 - 11/13)

S34 Member, President's Advisory Board, Carnegie Mellon University - Silicon Valley (1/13 - 4/13)

Conference/Workshop Chairmanship

S35 Co-Chair, Doctoral Symposium, 44th International Conference on Software Engineering (ICSE 2022), Pittsburgh, PA, May 2022

S36 Co-Chair, 2nd International Workshop on Establishing the Community-Wide Infrastructure for Architecture-Based Software Engineering (ECASE 2019), Montreal, Canada, May 2019

S37 Co-Chair, 50 Years of Software Engineering Track, 40th International Conference on Software Engineering (ICSE 2018), Gothenburg, Sweden, May 2018

S38 Co-Chair, 2nd International Workshop on Infrastructures and Instruments For Software Architecture (REINFORCE), Urbana-Champaign, IL, November 2017

S39 Co-Chair, 1st International Workshop on Establishing the Community-Wide Infrastructure for Architecture-Based Software Engineering (ECASE 2017), Buenos Aires, Argentina, May 2017

S40 Program Co-Chair, Innovations in Software Engineering Conference (ISEC 2017), Jaipur, India, February 2017

S41 Co-Chair, 1st Workshop on Infrastructures and Instruments For Software Architecture (REINFORCE), Los Angeles, CA, January 2017

S42 Co-Chair, Workshops, 36th International Conference on Software Engineering (ICSE 2014), Hyderabad, India, June 2014

S43 Chair, International Symposium to Commemorate the 45th Anniversary of the First Software Engineering Conference (SE@45), University of Southern California, Los Angeles, CA, October 2013

S44 Program Co-Chair, 15th International ACM SIGSOFT Symposium on Component Based Software Engineering (CBSE-2012), Bertinoro, Italy, June 2012

S45 Program Co-Chair, 33rd International Conference on Software Engineering (ICSE 2011), Honolulu, HI, May 2011

S46 Program Co-Chair, Workshop on Software Engineering for Cloud Computing (SECLOUD 2011), Honolulu, HI, May 2011

S47 Program Co-Chair, 3rd IEEE International Conference on Self-Adaptive and Self-Organizing Systems (SASO 2009), San Francisco, CA, September 14-18, 2009

S48 Workshop Co-Chair, IEEE/CSSE/ISE Workshop on Software Architecture Challenges for the 21st Century, Los Angeles, CA, June 2009

S49 Program Co-Chair, 2nd International ICSE Warm-up Workshop (WUP 2009), Cape Town, South Africa, April 2009

S50 Workshop Chair, USC-CSSE Annual Research Review and Executive Workshop, Los Angeles, CA, March 2009

S51 Program Chair, Doctoral Symposium, 16th ACM SIGSOFT International Symposium on the Foundations of Software Engineering (FSE 16), Atlanta, GA, November 2008

S52 Program Chair, Special Session on Software Architecture for Pervasive Systems (SAPS), 34th Euromicro Conference in Parma, Italy, September 3-5, 2008

S53 Program Co-Chair, 2005 Working IEEE/IFIP Conference on Software Architecture (WICSA 2005), Pittsburgh, PA, November 2005

S54 Chair, Executive Workshop on Model-Driven Architecture, Annual Research Review, Center for Software Engineering, University of Southern California, Los Angeles, CA, March 2005

S55 Chair, Workshops, 26th International Conference on Software Engineering (ICSE 2004), Edinburgh, UK, May 2004

S56 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

S57 Chair, State-of-the-Art Track, 24th International Conference on Software Engineering (ICSE 2002), Orlando, FL, May 2002

S58 Co-Chair, First International Workshop on Evaluating Software Architecture Solutions (WESAS), Irvine, CA, May 2000

Conference/Workshop Organization

S59 Organizing Committee Member, First International Workshop on Bringing Architecture Design Thinking into Developers' Daily Activities (Bridge 2016), Austin, TX, May 2016

S60 Organizing Committee Member, 39th International Conference on Software Engineering (ICSE 2017) Warm-up Workshop, Maceio, Brazil, October 2014

S61 Technical Paper Session Chair, 22nd ACM SIGSOFT Symposium on the Foundations of Software Engineering (FSE 2014), Hong Kong, November 2014

S62 Workshops Selection Committee Member, 8th Joint meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE 2011), Szeged, Hungary, September 2011

S63 Technical Paper Session Chair, 12th European Software Engineering Conference and 17th ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE 2009), Amsterdam, the Netherlands, August 2009

S64 Student Volunteer Coordinator, 30th International Conference on Software Engineering (ICSE 2008), Leipzig, Germany, May 2008

S65 Technical Paper Session Chair, Working IEEE/IFIP Conference on Software Architecture (WICSA 2008), Vancouver, Canada, February 2008

S66 E-Publicity Chair, 29th International Conference on Software Engineering (ICSE 2007), Minneapolis, MN, May 2007

S67 Session Chair, USC Center for Systems and Software Engineering Convocation, Los Angeles, CA, October 2006

S68 Panelist, New Software Engineering Faculty Symposium (NSEFS 05), 27th International Conference on Software Engineering (ICSE 2005), St. Louis, MO, May 2005

S69 Technical Paper Session Chair, 19th IEEE International Conference on Automated Software Engineering (ASE 2004), Linz, Austria, September 2004

S70 Session Organizer and Chair, Annual Research Review, Center for Software Engineering, University of Southern California, Los Angeles, CA, March 2004

S71 Session Organizer and Chair, Annual Research Review, Center for Software Engineering, University of Southern California, Los Angeles, CA, March 2003

S72 Session Chair, Dagstuhl Workshop on Software Architecture Recovery and Modeling (SWARM), Dagstuhl, Germany, February 2003

S73 Chair, Tutorials, The Third Working IEEE/IFIP Conference on Software Architecture (WICSA-3), Montreal, Canada, August 2002

S74 Technical Paper Session Chair, The Working IEEE/IFIP Conference on Software Architecture (WICSA-3), Montreal, Canada, August 2002

S75 Technical Paper Session Chair, 24th International Conference on Software Engineering (ICSE 2002), Orlando, FL, May 2002

S76 Session Organizer and Chair, Annual Research Review, Center for Software Engineering, University of Southern California, Los Angeles, CA, March 2002

S77 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

S78 Technical Paper Session Chair, 23rd International Conference on Software Engineering (ICSE 2001), Toronto, Canada, May 2001

S79 Session Organizer and Chair, Annual Research Review, Center for Software Engineering, University of Southern California, Los Angeles, CA, March 2001

S80 Technical Paper Session Chair, Eighth ACM SIGSOFT Symposium on the Foundations of Software Engineering (FSE8), San Diego, CA, November 2000

S81 Session Organizer and Chair, Annual Research Review, Center for Software Engineering, University of Southern California, Los Angeles, CA, March 2000

S82 Organizing Committee Member, NSF Workshop on Software Engineering Research Strategies, Los Angeles, CA, August 1999

S83 Student Volunteer Coordinator, 21st International Conference on Software Engineering (ICSE'99), Los Angeles, CA, May 1999

S84 Co-Chair, DARPA/ITO EDCS Workshop on Architecture Description Language Toolkits, San Diego, CA, October 1998

S85 Chair, DARPA/ITO EDCS Workshop on the UML, Austin, TX, November 1997

S86 Webmaster, 1997 International Conference on Software Engineering (ICSE'97), Boston, MA, May 1997

Program Committee Membership

S87 Program Committee Member, 45th International Conference on Software Engineering (ICSE 2023), Melbourne, Australia, May 2023

S88 Program Committee Member, 44th International Conference on Software Engineering (ICSE 2022), Pittsburgh, PA, May 2022

S89 Program Committee Member, 5th IEEE International Conference on Software Architecture (ICSA 2021), Stuttgart, Germany, March 2021

S90 Program Committee Member, Journal-First Track, International Conference on Software Engineering (ICSE 2020), Seoul, South Korea, May 2020

S91 Program Committee Member, 4th IEEE International Conference on Software Architecture (ICSA 2020), Salvador, Brazil, March 2020

S92 Program Committee Member, ACM SIGSOFT Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE 2019), Tallinn, Estonia, August 2019

S93 Program Committee Member, Journal-First Track, International Conference on Software Engineering (ICSE 2019), Montreal, Canada, May 2019

S94 Program Committee Member, ACM SIGSOFT Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE 2018), Lake Buena Vista, FL, November 2018

S95 Program Committee Member, 40th International Conference on Software Engineering (ICSE 2018), Gothenburg, Sweden, May 2018

S96 Program Committee Member, International Workshop on Software Fairness (FairWare 2018), Gothenburg, Sweden, May 2018

S97 Program Committee Member, 2nd IEEE International Conference on Software Architecture (ICSA 2018), Seattle, WA, April 2018

S98 Program Committee Member, Innovations in Software Engineering Conference (ISEC 2018), Hyderabad, India, February 2018

S99 Symposium Committee Member, Doctoral Symposium, 11th joint meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE 2017), Paderborn, Germany, September 2017

S100 Symposium Committee Member, Doctoral Symposium, 39th International Conference on Software Engineering (ICSE 2017), Buenos Aires, Argentina, May 2017

S101 Program Board Member, 39th International Conference on Software Engineering (ICSE 2017), Buenos Aires, Argentina, May 2017

S102 Symposium Committee Member, Doctoral Symposium, 39th International Conference on Software Engineering (ICSE 2017), Buenos Aires, Argentina, May 2017

S103 Program Committee Member, 1st IEEE International Conference on Software Architecture (ICSA 2017), Gothenburg, Sweden, April 2017

S104 Mentoring Committee Member, 24th ACM SIGSOFT Symposium on the Foundations of Software Engineering (FSE 2016), Seattle, WA, November 2016

S105 Program Committee Member, 11th International Symposium on Software Engineering for Adaptive and Self-Managing Systems (SEAMS 2016), Austin, TX, May 2016

S106 Program Committee Member, Joint 13th Working IEEE/IFIP Conference on Software Architecture (WICSA), 19th International ACM SIGSOFT Symposium on Component-Based Software Engineering (CBSE), and 12th International ACM SIGSOFT Conference on the Quality of Software Architectures (QoSA), Venice, Italy, April 2016

S107 Program Committee Member, 9th Annual India Software Engineering Conference (ISEC 2016), Goa, India, February 2016

S108 Program Board Member, 38th International Conference on Software Engineering (ICSE 2016), Austin, TX, May 2016

S109 Program Committee Member, 5th International Workshop on the Twin Peaks of Requirements and Architecture, Florence, Italy, May 2015

S110 Symposium Committee Member, Doctoral Symposium, 37th International Conference on Software Engineering (ICSE 2015), Florence, Italy, May 2015

S111 Program Committee Member, Technical Briefings, 37th International Conference on Software Engineering (ICSE 2015), Florence, Italy, May 2015

S112 Program Committee Member, 22nd ACM SIGSOFT Symposium on the Foundations of Software Engineering (FSE 2014), Hong Kong, November 2014

S113 Program Committee Member, 8th European Conference on Software Architecture (ECSA 2014), Vienna, Austria, August 2014

S114 Expert Reviewer Panel Member, 28th IEEE/ACM International Conference on Automated Software Engineering (ASE 2013), Palo Alto, CA, November 2013

S115 Program Committee Member, 9th joint meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE 2013), Saint Petersburg, Russia, August 2013

S116 Symposium Committee Member, Doctoral Symposium, 9th joint meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE 2013), Saint Petersburg, Russia, August 2013

S117 Program Committee Member, 7th European Conference on Software Architecture (ECSA 2013), Montpelier, France, July 2013

S118 Program Committee Member, 7th ACM International Conference on Distributed Event-Based Systems (DEBS 2013), Arlington, TX, June-July 2013

S119 Program Committee Member, 16th International ACM SIGSOFT Symposium on Component-Based Software Engineering, Vancouver, Canada, June 2013

S120 Program Committee Member, 4th International ACM SIGSOFT Symposium on Architecting Critical Systems (ISARCS), Vancouver, Canada, June 2013

S121 Program Committee Member, 33rd International Conference on Software Engineering - New Ideas and Emerging Results Track, San Francisco, CA, May 2013

S122 Program Committee Member, 2nd International Workshop on the Twin Peaks of Requirements and Architecture, San Francisco, CA, May 2013

S123 Program Committee Member, 1st International Workshop on the Twin Peaks of Requirements and Architecture, Chicago, IL, September 2012

S124 Program Committee Member, 6th ACM International Conference on Distributed Event-Based Systems, Berlin, Germany, July 2012

S125 Program Committee Member, 7th International Symposium on Software Engineering for Adaptive and Self-Managing Systems (SEAMS 2012), Zurich, Switzerland, June 2012

S126 Program Committee Member, 3rd International Workshop on Software Engineering for Sensor Network Applications, Zurich, Switzerland, June 2012

S127 Mentoring Committee Member, 34th International Conference on Software Engineering (ICSE 2012), Zurich, Switzerland, June 2012

S128 Program Committee Member, 22nd IEEE International Symposium on Software Reliability Engineering, Hiroshima, Japan, November-December 2011

S129 Program Committee Member, 9th IEEE International Conference on Software Engineering and Formal Methods, Montevideo, Uruguay, November 2011

S130 Expert Reviewer Panel Member, 26th IEEE/ACM International Conference on Automated Software Engineering (ASE 2011), Lawrence, KS, November 2011

S131 Workshops Committee Member, The joint meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE 2011), Szeged, Hungary, September 2011

S132 Program Committee Member, 5th Brazilian Symposium on Software Components, Architectures, and Reuse (SBCARS), Sao Paulo, Brazil, September 2011

S133 Program Committee Member, 9th IEEE/IFIP Working Conference on Software Architecture (WICSA), Boulder, CO, June 2011

S134 Program Committee Member, 6th International Symposium on Software Engineering for Adaptive and Self-Managing Systems (SEAMS), Honolulu, HI, May 2011

S135 Program Committee Member, IEEE Globecom 2010 Workshop on Pervasive Group Communications (PerGroup), Miami, FL, December 2010

S136 Program Committee Member, 18th ACM SIGSOFT Symposium on the Foundations of Software Engineering (FSE 2010), Santa Fe, NM, November 2010

S137 Program Committee Member, International Symposium on Architecting Critical Systems (ISARCS 2010), Prague, Czech Republic, June 2010

S138 Program Committee Member, 32nd International Conference on Software Engineering, Cape Town, South Africa, May 2010

S139 Program Committee Member, 5th International Workshop on Software Engineering for Adaptive and Self-Managing Systems (SEAMS), Cape Town, South Africa, May 2010

S140 Program Committee Member, Workshop on Flexible Modeling Tools (FlexiTools), Cape Town, South Africa, May 2010

S141 Program Committee Member, Workshop on Quantitative Stochastic Models in the Verification and Design of Software Systems (QUOVADIS), Cape Town, South Africa, May 2010

S142 Expert Panel Member, 24th IEEE/ACM International Conference on Automated Software Engineering (ASE 2008), Auckland, New Zealand, November 2009

S143 Program Committee Member, 8th Working IEEE/IFIP Conference on Software Architecture (WICSA) and 3rd European Conference on Software Architecture (ECSA), Cambridge, UK, September 2009

S144 Program Committee Member, 12th European Software Engineering Conference and 17th ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE 2009), Amsterdam, the Netherlands, August 2009

S145 Program Committee Member, 8th International Workshop on the Foundations of Coordination Languages and Software Architectures (FOCLASA'09), Rhodes, Grece, July 2009

S146 Program Committee Member, DSN 2009 Workshop on Architecting Dependable Systems (WADS 2007), Lisbon, Portugal, June 2009

S147 Program Committee Member, 5th International Conference on the Quality of Software Architecture (QoSA 2009), East Stroudsburg, PA, June 2009

S148 Program Committee Member, 6th International Conference on Autonomic Computing (ICAC), Barcelona, Spain, June 2009

S149 Program Committee Member, 4th International Workshop on UML and AADL, Potsdam, Germany, June 2009

S150 Program Committee Member, 31st International Conference on Software Engineering, Vancouver, Canada, May 2009

S151 Program Committee Member, 4th International Conference on the Quality of Software Architectures (QoSA 2008), Karlsruhe, Germany, October 2008

S152 Program Committee Member, 11th International Symposium on Component-Based Software Engineering (CBSE 2008), Karlsruhe, Germany, October 2008

S153 Program Committee Member, 23rd IEEE/ACM International Conference on Automated Software Engineering (ASE 2008), L'Aquila, Italy, September 2008

S154 Program Committee Member, 2nd Brazilian Symposium on Software Components, Architectures, and Reuse (SBCARS 2008), Porto Alegre, Brazil, August 2008

S155 Program Committee Member, 7th International Workshop on the Foundations of Coordination Languages and Software Architectures (FOCLASA'08), Reykjavik, Iceland, July 2008

S156 Program Committee Member, DSN 2008 Workshop on Architecting Dependable Systems (WADS 2007), Anchorage, AK, June 2008

S157 Program Committee Member, 30th International Conference on Software Engineering, Leipzig, Germany, May 2008

S158 Symposium Committee Member, Doctoral Symposium, 30th International Conference on Software Engineering, Leipzig, Germany, May 2008

S159 Program Committee Member, 3rd International Workshop on Software Engineering for Adaptive and Self-Managing Systems (SEAMS 2008), Leipzig, Germany, May 2008

S160 Program Committee Member, International Workshop on Software Architectures and Mobility (SAM 2008), Leipzig, Germany, May 2008

S161 Program Committee Member, 22nd IEEE/ACM International Conference on Automated Software Engineering, Atlanta, GA, November 2007

S162 Program Committee Member, International Workshop on the Engineering of Software Services for Pervasive Environments (ESSPE), Dubrovnik, Croatia, September 2007

S163 Program Committee Member, 10th International Symposium on Component-Based Software Engineering (CBSE 2007), Boston, MA, July 2007

S164 Program Committee Member, 3rd International Conference on the Quality of Software Architectures (QoSA 2007), Boston, MA, July 2007

S165 Program Committee Member, First IEEE International Conference on Self-Adaptive and Self-Organizing Systems (SASO 2007), Boston, MA, July 2007

S166 Program Committee Member, DSN 2007 Workshop on Architecting Dependable Systems (WADS 2007), Edinburgh, UK, June 2007

S167 Program Committee Member, 2nd International Workshop on Software Engineering for Adaptive and Self-Managing Systems (SEAMS 2007), Minneapolis, MN, May 2007

S168 Program Committee Member, 2nd Workshop on Sharing and Reusing Architectural Knowledge - Architecture Rationale and Design Intent (SHARK/ADI), Minneapolis, MN, May 2007

S169 Tutorials Committee Member, 29th International Conference on Software Engineering (ICSE 2007), Minneapolis, MN, May 2007

S170 Program Committee Member, Workshop on Tools, Operating Systems and Programming Models for Developing Reliable Systems (TOPMoDelS), Long Beach, CA, March 2007

S171 Program Committee Member, 6th International Workshop on Software and Performance (WOSP 2007), Buenos Aires, Argentina, February 2007

S172 Program Committee Member, 6th Working IEEE/IFIP Conference on Software Architecture, Mumbai, India, January 2007

S173 Program Committee Member, 14th ACM SIGSOFT Symposium on the Foundations of Software Engineering (FSE 14), Portland, OR, November 2006

S174 Symposium Committee Member, Doctoral Symposium, 14th ACM SIGSOFT Symposium on the Foundations of Software Engineering (FSE 14), Portland, OR, November 2006

S175 Expert Reviewer Panel Member, 21st IEEE/ACM International Conference on Automated Software Engineering (ASE 2006), Tokyo, Japan, September 2006

S176 Doctoral Symposium Committee Member, 21st IEEE/ACM International Conference on Automated Software Engineering (ASE 2006), Tokyo, Japan, September 2006

S177 Program Committee Member, 9th International Symposium on Component-Based Software Engineering (CBSE 2006), Västerås, Sweden, June/July 2006

S178 Program Committee Member, ICSE 2006 Workshop on Software Engineering for Adaptive and Self-Managing Systems (SEAMS), Shanghai, China, May 2006

S179 Tutorials Committee Member, 28th International Conference on Software Engineering (ICSE 2006), Shanghai, China, May 2006

S180 Program Committee Member, 20th IEEE International Conference on Automated Software Engineering (ASE 2005), Long Beach, CA, November 2005

S181 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

S182 Program Committee Member, 9th International Software Product Line Conference (SPLC- EUROPE 2005), Rennes, France, September 2005

S183 Program Committee Member, 5th International Workshop on Software Engineering and Middleware (SEM 2005), Lisbon, Portugal, 5-6 September 2005

S184 Program Committee Member, Workshop on Architecture-Centric Evolution (ACE 2005), Glasgow, UK, July 2005

S185 Program Committee Member, 4th International Workshop on Architecting Dependable Systems (WADS 2004), St. Louis, MO, May 2005

S186 Program Committee Member, 8th International Symposium on Component-Based Software Engineering (CBSE8), St. Louis, MO, May 2005

S187 Program Committee Member, Workshop on Software Composition (SC 2005), Edinburgh, UK, April 2005

S188 Program Committee Member, Hawaii International Conference on System Sciences, Mini- Track on Strategic Software Engineering, Hawaii, January 2005

S189 Program Committee Member, 2004 Workshop on Self-Managed Systems, Newport Beach, CA, November 2004

S190 Program Co-Chair, Workshop on Software Architecture Description & UML, Lisbon, Portugal, October 2004

S191 Program Committee Member, 19th IEEE International Conference on Automated Software Engineering (ASE 2004), Linz, Austria, September 2004

S192 Program Committee Member, 4th IEEE/IFIP Working Conference on Software Architecture (WICSA-4), Oslo, Norway, June 2004

S193 Program Committee Member, Workshop on Capturing Experience in Software Architecture Best Practices, Oslo, Norway, June 2004

S194 Program Committee Member, Twin Workshops on Architecting Dependable Systems (WADS 2004), Edinburgh, UK, May 2004 and Florence, Italy, June 2004

S195 Program Committee Member, 2nd International Working Conference on Component Deployment (CD 2004), Edinburgh, UK, May 2004

S196 Program Committee Member, 7th International Symposium on Component-Based Software Engineering (CBSE7), Edinburgh, UK, May 2004

S197 Program Committee Member, International Workshop on Incorporating COTS into Software Systems: Tools and Techniques (IWICSS), Redondo Beach, CA, February 2004

S198 Program Committee Member, 10th Working Conference on Reverse Engineering (WCRE 2003), Victoria, BC, Canada, November 2003

S199 Program Committee Member, 5th International Workshop on Product Family Engineering (PFE-5), Siena, Italy, November 2003

S200 Program Committee Member, 2nd International Workshop on Architecting Dependable Systems (WADS 2003), Portland, OR, May 2003

S201 Program Committee Member, Conference on Generative and Component-Based Software Engineering (GCSE), Pittsburgh, PA, October 2002

S202 Program Committee Member, The Working IEEE/IFIP Conference on Software Architecture (WICSA-3), Montreal, Canada, August 2002

S203 Program Committee Member, 2nd Software Product Line Conference (SPLC-2), San Diego, CA, August 2002

S204 Program Committee Member, International Workshop on Mobile Teamwork, Vienna, Austria, July 2002

S205 Program Committee Member, ECOOP 2002 Workshop on Concrete Communication Abstractions Of The Next 701 Distributed Object Systems, Malaga, Spain, June 2002

S206 Program Committee Member, 24th International Conference on Software Engineering (ICSE 2002), Orlando, FL, May 2002

S207 Symposium Committee Member, Doctoral Symposium, 24th International Conference on Software Engineering (ICSE 2002), Orlando, FL, May 2002

S208 Program Committee Member, 1st International Workshop on Architecting Dependable Systems (WADS 2002), Orlando, FL, May 2002

S209 Program Committee Member, 4th International Workshop on Product Family Engineering (PFE-4), Bilbao, Spain, October 2001

S210 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

S211 Program Committee Member, The Second Working IEEE/IFIP Conference on Software Architecture (WICSA-2), Amsterdam, The Netherlands, August 2001

S212 Program Committee Member, 23rd International Conference on Software Engineering (ICSE 2001), Toronto, Canada, May 2001

S213 Program Committee Member, Second International Workshop on Engineering Distributed Objects (EDO 2000), Davis, CA, November 2000

S214 Program Committee Member, Eighth ACM SIGSOFT Symposium on the Foundations of Software Engineering (FSE8), San Diego, CA, November 2000

S215 Program Committee Member, Fourth International Software Architecture Workshop (ISAW-4), Limerick, Ireland, June 2000

S216 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

S214 Journal of Empirical Software Engineering 2017

S217 National Science Foundation, Review Panel 1/2000, 10/2003, 11/2013, 1/2016, 3/2018, 10/2021

S218 ACM Transactions on Autonomous and Adaptive Systems 2015

S219 ACM Transactions on Software Engineering and Methodology

S220 1998, 1999, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013

S221 IEEE Transactions on Software Engineering 1997, 1998, 1999, 2000, 2001, 2003, 2004, 2005, 2006, 2007, 2008, 2009

S222 Elsevier Information and Software Technology Journal 2007, 2008, 2011, 2014, 2015, 2016

S223 Journal of Software Engineering for Robotics 2009

S224 Architecting Dependable Systems VI, LNCS, Springer Verlag 2009

S225 IEEE Software 2008

S226 IEEE Transactions on Industrial Informatics 2008

S227 Journal of Systems and Software 2005, 2006, 2007, 2008, 2011, 2015

S228 University of Wisconsin-Milwaukee, Research Growth Initiative 2006

S229 Journal of Automated Software Engineering 1999, 2000, 2005

S230 28th International Conference on Software Engineering, Outside Reviewer 2005

S231 Architecting Dependable Systems III, LNCS, Springer Verlag 2005

S232 Architecting Dependable Systems II, LNCS, Springer Verlag 2004

S233 IEEE Transactions on Parallel and Distributed Systems 2003, 2004

S234 National Science Foundation, Proposal Reviewer (PASI) 2/2011

S235 IEEE Computer, Special Issue on Handheld Computing 2003

S236 Architecting Dependable Systems, LNCS, Springer Verlag 2003

S237 International Journal on Software Maintenance and Evolution 2002

S238 Science Foundation Ireland 2002

S239 IEE Proceedings - Software Engineering 1998

S240 Conference on User Interface Software and Technology, Outside Reviewer 1996

S241 19th International Conference on Software Engineering, Outside Reviewer 1997

Other

S242 Observer, IFIP Working Group 2.4 - Software Implementation Technologies (2020 - present)

S243 Participant, IFIP Working Group 2.10 - Software Architecture (2002 - 2007)

13 University Service

S244 Chair, Computer Science Department, USC, 7/22 -present

S245 Vice-Chair for Tenure Affairs, Computer Science Department, USC, 7/21 – 6/22

S246 Chair, Diversity, Equity, and Inclusion Committee, Computer Science Department, USC (2/21 – present)

S247 Chair, Hiring Committee, Computer Science Department, USC (10/21 - present)

S248 Chair, Hiring Committee, Computer Science Department, USC (10/20 - 5/21)

S249 Member, Ad-Hoc Promotion and Tenure Committee, Computer Science Department, USC (1/20 - 3/21)

S250 Appointments, Promotions, and Tenure (APT) Committee, Viterbi School of Engineering, USC (8/20 - 7/21)

S251 APT Executive Committee, Viterbi School of Engineering, USC (8/20 - 7/21)

S252 Area Lead, Computer Systems Area, Computer Science Department, USC (8/19 - 8/20)

S253 Member, Faculty Hiring Committee - Software Engineering, Computer Science Department, USC (12/19 - 5/20)

S254 Member, Faculty Hiring Committee - Programming Languages, Computer Science Department, USC (12/19 - 5/20)

S255 Chair, Ad-Hoc Promotion and Tenure Committee, Computer Science Department, USC (12/19 - 3/20)

S256 Member, Research Ethics Committee, University of Southern California (2/19 - 5/20)

S257 Committee on Academic Policies and Procedures, University of Southern California (8/17 - 8/21)

S258 Chair, Ad-Hoc Promotion and Tenure Committee, Computer Science Department, USC (8/19 - 1/20)

S259 Member, Hiring Committee, Computer Science Department, USC (10/18 - 5/19)

S260 Member, Ad-Hoc Promotion and Tenure Committee, Computer Science Department, USC (12/18 - 5/19)

S261 Chair, Teaching Faculty Merit Review Committee, Computer Science Department, USC (1/18 - 5/18)

S262 Chair, Ad-Hoc Promotion and Tenure Committee, Computer Science Department, USC (8/17 - 12/17)

S263 Member, Joint-Appointment Review Committee, Computer Science Department, USC (9/17 - 11/17)

S264 Member, Ad-Hoc Promotion and Tenure Committee, Computer Science Department, USC (3/17 - 5/17)

S265 Chair, Faculty Hiring Committee - Programming Languages, Computer Science Department, USC (12/16 - 5/17)

S266 Member, Merit Review Committee, Computer Science Department, USC (2/17 - 3/17)

S267 Chair, Merit Review Process Committee, Computer Science Department, USC (8/16 - 2/17)

S268 Chair, Merit Review Committee, Computer Science Department, USC (2/16 - 3/16)

S269 Chair, Research Faculty Promotion Committee Computer Science Department, USC (1/16 – present)

S270 Chair, Research Faculty Promotion Committee, Computer Science Department, USC (11/15 - 11/16)

S271 Chair, Faculty Hiring Committee - Software Engineering, Computer Science Department, USC (12/15 - 5/16)

S272 Chair, Faculty Hiring Committee - Programming Languages, Computer Science Department, USC (12/15 - 5/16)

S273 Chair, Ad-Hoc Promotion and Tenure Committee, Computer Science Department USC (3/15 - 5/16)

S274 Ad-Hoc Promotion Committee, Computer Science Department, USC (5/15 - 5/16)

S275 Associate Chair for Ph.D. Affairs, Computer Science Department, USC (7/11 - 6/15)

S276 Chair, PhD Program Reboot Committee, Computer Science Department, USC (8/13 - 6/15)

S277 Chair, Ph.D. Admissions Committee, Computer Science Department, USC (7/11 - 6/15)

S278 Ph.D. Council, Viterbi School of Engineering, USC (1/12 - 6/15)

S279 Research Committee, Viterbi School of Engineering, USC (7/12 - 8/13)

S280 Transformative Faculty Hiring Committee, Computer Science Department, USC (6/12 - 5/13)

S281 Director, Center for Systems & Software Engineering, Viterbi School of Engineering USC (1/09 - 2/13)

S282 Joint Faculty Appointment Committee, Computer Science Department, USC (11/12 - 12/12)

S283 Department Chair Search Committee, Computer Science Department, USC (9/11 - 5/12)

S284 Chair Performance Evaluation Committee, Computer Science Department, USC (3/12 - 5/12)

S285 Department Ranking Committee, Computer Science Department (2/12 - 5/12)

S286 Engineering Faculty Council (EFC), Viterbi School of Engineering, USC (1/02 - 5/05, 8/06 - 5/10)

S287 New Building Faculty Advisory Committee, Viterbi School of Engineering, USC (1/10 - 3/14)

S288 EFC Academic Senate Alternate, USC (8/08 - 8/09)

S289 Appointments, Promotions, and Tenure (APT) Committee, Viterbi School of Engineering, USC (8/08 - 5/10)

S290 Ph.D. Admissions Committee, Computer Science Department, USC (8/04 - 5/05, 8/07 - 8/15)

S291 Ph.D. Fellowships Committee, Computer Science Department, USC (8/07 - 8/15)

S292 Group Leader, Software Systems and Engineering, Computer Science Department, USC (8/08 - 8/10)

S293 Chair, Faculty Hiring Committee, Computer Science Department, USC (8/08 - 5/09)

S294 Department Chair's Advisory Committee, Computer Science Department, USC (8/07 - 7/08)

S295 Merit Review Committee, Computer Science Department, USC (2000, 2004, 2008, 2010)

S296 Provost/Academic Senate Committee on Information Services, USC (8/06 - 5/08)

S297 Dean/EFC Standing Committee on Best Practices, USC (1/08 - 8/08)

S298 Dean/EFC Standing Committee on Faculty Recruitment and Retention, Viterbi School of Engineering, USC (8/07 - 8/08)

S299 EFC Research Committee, Viterbi School of Engineering, USC (1/07 - 8/07, 1/10 - 5/10)

S300 Chair, Interaction Group, Computer Science Department, USC (8/06 - 8/07)

S301 Chair, EFC Merit Review Committee, Viterbi School of Engineering, USC (8/06 - 8/08)

S302 Qualifying Exam Timeline Committee, Computer Science Department, USC (4/06 - 5/07)

S303 M.S. Program Review Committee, Computer Science Department, USC (12/03 - 5/05)

S304 Research Faculty Hiring Committee, Computer Science Department, USC (2002, 2003, 2006, 2007, 2008)

S305 Dean's Evaluation Committee, School of Engineering, USC (11/04 - 1/05)

S306 M.S. Program Review Committee, School of Engineering, USC (9/03 - 12/03)

S307 Faculty Hiring Committee, Computer Science Department, USC (2001, 2004)

S308 Interview Panel, Trustee Scholarship, School of Engineering, USC (3/02, 3/04)

S309 EFC Committee on Research Faculty Rights and Responsibilities, School of Engineering, USC (11/02 - 5/03)

S310 Chair, Computer Systems Group, Computer Science Department, USC (12/99 - 5/02)

S311 College of Engineering Commencement Marshal, USC (2000, 2002)

S312 Industrial Liaison Committee, Computer Science Department, USC (2000)

14 Professional Associations

- Association for Computing Machinery (ACM)
- ACM Special Interest Group on Software Engineering (SIGSOFT)
- Institute of Electrical and Electronics Engineers (IEEE)
- IEEE Computer Society (CS)

15 Consulting

- 2/11 - present Aerospace Corporation, El Segundo, CA
- 12/19 - 10/21 Skiermont Derby LLP
- 4/20 – 5/21 Fish & Richardson P.C.
- 6/20 - 10/20 King & Spalding LLP
- 8/19 - 2/20 Stepp & Sullivan, PC
- 11/14 - 9/19 Haynes & Boone, LLP
- 11/14 - 3/18 Covington & Burling LLP
- 3/17 - 6/17 Latham & Watkins LLP
- 10/13 - 7/16 Shore Chan DePumpo LLP
- 12/13 - 9/15 Kirkland & Ellis LLP
- 10/13 - 6/15 Dechert LLP
- 11/13 - 2/14 Desmarais LLP
- 10/12 - 3/13 Goodwin Procter LLP
- 10/10 - 1/13 Hughes Hubbard & Reed LLP
- 10/12 - 12/12 Perkins Coie LLP
- 4/11 - 10/12 King & Spalding LLP
- 6/09 - 4/10 Gordon & Rees LLP
- 6/00 - 6/03 Jet Propulsion Laboratory (JPL), Pasadena, CA