

Nenad Medvidović

*Professor and Chair*

Department of Computer Science

Viterbi School of Engineering

941 Bloom Walk University of Southern California  
Los Angeles, CA 90089-0781 U.S.A.

+1-213-740-5579 (phone)

+1-310-702-3309 (cell)

nenom@usc.edu (email)

<http://softarch.usc.edu/~nenom/> (www)

## **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

## 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

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

- *Most cited papers, IEEE Trans. on Software Engr.* 7<sup>th</sup> [J27]  
(academic.microsoft.com)
- *Most cited papers, ACM Trans. on Software Engr. & Methodology* 10<sup>th</sup> [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 Falconry  
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** Chiyong 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, Chiyong Seo, and **Nenad Medvidovic**. Model Interpreter Frameworks: A Foundation for the Analysis of Domain-Specific Software Architectures. *Journal of Universal Computer Science*, special issue on Software Components, Architectures, and Reuse, 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, Suhridd 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, Suhridd 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), Montpellier, 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.
- C44** Joshua Garcia, Ivo Krka, **Nenad Medvidovic**, and Chris Douglas. A Framework for Obtaining the Ground-Truth in Architectural Recovery. In Proceedings of the Joint Working IEEE/IFIP Conference on Software Architecture and European Conference on Software Architecture (WICSA/ECSA 2012), Helsinki, Finland, August 2012.
- C45** George Edwards, Yuriy Brun, and **Nenad Medvidovic**. Automated Analysis and Code Generation for Domain-Specific Models. In Proceedings of the Joint Working IEEE/IFIP Conference on Software Architecture and European Conference on Software Architecture (WICSA/ECSA 2012), Helsinki, Finland, August 2012.
- C46** Daniel Popescu, Joshua Garcia, Kevin Bierhoff, and **Nenad Medvidovic**. Impact Analysis for Distributed Event-Based Systems. In Proceedings of the 6th ACM International Conference on Distributed Event-Based Systems (DEBS 2012), Berlin, Germany, July 2012.
- C47** Ivo Krka and **Nenad Medvidovic**. Revisiting Modal Interface Automata. In Proceedings of the Workshop on Formal Methods in Software Engineering: Rigorous and Agile Approaches (FormSERA), Zurich, Switzerland, June 2012.
- C48** Hossein Tajalli and **Nenad Medvidovic**. A Reference Architecture for Integrated Development and Run-Time Environments. In Proceedings of the 2nd Workshop on Developing Tools as Plug-ins (TOPI), San Francisco, CA, June 2012.
- C49** Yuriy Brun and **Nenad Medvidovic**. Keeping Data Private while Computing in the Cloud. In Proceedings of the 5th International Conference on Cloud Computing (IEEE CLOUD 2012), Honolulu, HI, June 2012.

- C50** Leslie Cheung, Ivo Krka, Leana Golubchik, and **Nenad Medvidovic**. Architecture-Level Reliability Prediction for Concurrent Systems. In Proceedings of the 3rd International Conference on Performance Engineering (ICPE 2012), Boston, MA, April 2012.
- C51** Isela Macia Bertrán, Joshua Garcia, Daniel Popescu, Alessandro Garcia, **Nenad Medvidovic**, and Arndt Von Staa. Are Automatically-Detected Code Anomalies Relevant to Architectural Modularity? An Exploratory Analysis of Evolving Systems. In Proceedings of the 11th International Conference on Aspect-Oriented Software Development, Potsdam, Germany, March 2012.
- C52** Jae young Bang, Daniel Popescu, and **Nenad Medvidovic**. Enabling Workspace Awareness for Collaborative Software Modeling. In Proceedings of the Future of Collaborative Software Development Workshop, Seattle, WA, February 2012.
- C53** George Edwards, Yuriy Brun, and **Nenad Medvidovic**. Isomorphism in Model Tools and Editors. In Proceedings of the 26th IEEE/ACM International Conference on Automated Software Engineering (ASE 2011), Lawrence, KS, November 2011.
- C54** Joshua Garcia, Daniel Popescu, Chris A. Mattmann, **Nenad Medvidovic**, and Yuanfang Cai. Enhancing Architectural Recovery Using Concerns. In Proceedings of the 26th IEEE/ACM International Conference on Automated Software Engineering (ASE 2011), Lawrence, KS, November 2011.
- C55** Isela Macia Bertrán, Alessandro Garcia, Arndt von Staa, Joshua Garcia, and **Nenad Medvidovic**. On the Impact of Aspect-Oriented Code Smells on Architecture Modularity: An Exploratory Study. In Proceedings of the 5th Brazilian Symposium on Software Components, Architectures, and Reuse (SBCARS 2011), Sao Paulo, Brazil, September 2011.
- C56** Yuriy Brun, George Edwards, Jae young Bang, and **Nenad Medvidovic**. Smart Redundancy for Distributed Computation. In Proceedings of the 31st International Conference on Distributed Computing Systems (ICDCS), Minneapolis, MN, June 2011.
- C57** Hossein Tajalli, Joshua Garcia, George Edwards, and **Nenad Medvidovic**. PLASMA: A Plan-based Layered Architecture for Software Model-driven Adaptation. In Proceedings of the 25th IEEE/ACM International Conference on Automated Software Engineering (ASE 2010), Antwerp, Belgium, September 2010.
- C58** David Woollard, Chris A. Mattmann, Daniel Popescu, and **Nenad Medvidovic**. KADRE: Domain-Specific Architectural Recovery for Scientific Software Systems. In Proceedings of the 25th IEEE/ACM International Conference on Automated Software Engineering (ASE 2010), Antwerp, Belgium, September 2010.
- C59** Jae young Bang, Daniel Popescu, George Edwards, **Nenad Medvidovic**, Naveen Kulkarni, Girish M. Rama, and Srinivas Padmanabhuni. CoDesign - A Highly Extensible Collaborative Software Modeling Framework. In Proceedings of the 32nd International Conference on Software Engineering (ICSE 2010), Formal Demonstration Track, Cape Town, South Africa, May 2010.
- C60** Ivo Krka, Yuriy Brun, Daniel Popescu, Joshua Garcia, and **Nenad Medvidovic**. Using Dynamic Execution Traces and Program Invariants to Enhance Behavioral Model Inference. In Proceedings of the 32nd International Conference on Software Engineering (ICSE 2010), New Ideas and Emerging Results, Cape Town, South Africa, May 2010.

- C61** Ivo Krka, Leana Golubchik, and **Nenad Medvidovic**. Probabilistic Automata for Architecture-Based Reliability Assessment. In Proceedings of the Workshop on Quantitative Stochastic Models in the Verification and Design of Software Systems (QUOVADIS), Cape Town, South Africa, May 2010.
- C62** Leslie Cheung, Leana Golubchik, and **Nenad Medvidovic**. SHARP: A Scalable Approach to Architecture-Level Reliability Prediction of Concurrent Systems. In Proceedings of the Workshop on Quantitative Stochastic Models in the Verification and Design of Software Systems (QUOVADIS), Cape Town, South Africa, May 2010.
- C63** T. S. Mohan, **Nenad Medvidovic**, and Chris A. Mattmann. Leveraging Domain-Specific Software Architectures for Classifying Cloud Service Abstractions. In Proceedings of the Cloud Futures 2010 Workshop, Redmond, WA, April 2010.
- C64** Susan Ferreira, Ricardo Valerdi, **Nenad Medvidovic**, John Hess, Indira Deonandan, Tsoline Mikaelian, Tom Tenorio, Filiberto Macias, and Gayle Shull. Unmanned and Autonomous Systems of Systems Test and Evaluation: Challenges and Opportunities. In Proceedings of the 2010 IEEE International Systems Conference (SysCon), San Diego, CA, April 2010.
- C65** Chris Mattmann, Joshua Garcia, Ivo Krka, Daniel Popescu, and **Nenad Medvidovic**. The Anatomy and Physiology of the Grid Revisited. In Proceedings of the Joint 8th Working IEEE/IFIP Conference on Software Architecture (WICSA-8) and the 3rd European Conference on Software Architecture (ECSA-3), Cambridge, UK, September 2009.
- C66** Richard N. Taylor, **Nenad Medvidovic**, and Peyman Oreizy. Architectural Styles for Runtime Software Adaptation In Proceedings of the Joint 8th Working IEEE/IFIP Conference on Software Architecture (WICSA-8) and the 3rd European Conference on Software Architecture (ECSA-3), Cambridge, UK, September 2009.
- C67** Ivo Krka, Yuriy Brun, George Edwards, and **Nenad Medvidovic**. Synthesizing Partial Component-Level Behavior Models from System Specifications. In Proceedings of the 7th Joint Meeting of the European Software Engineering Conference and ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE09), Amsterdam, the Netherlands, August 2009.
- C68** Chiyoung Seo, George Edwards, Daniel Popescu, Sam Malek, and **Nenad Medvidovic**. A Framework for Estimating the Energy Consumption Induced by a Distributed System's Architectural Style. In Proceedings of the 8th Workshop on Specification and Verification of Component-Based Systems (SAVCBS), Amsterdam, the Netherlands, August 2009.
- C69** Joshua Garcia, Daniel Popescu, George Edwards, and **Nenad Medvidovic**. Toward a Catalogue of Architectural Bad Smells. In Proceedings of the 5th International Conference on the Quality of Software Architectures (QoSA), East Stroudsburg, PA, June 2009.
- C70** Donna Spruijt-Metz, Ming Li, Gautam Thatte, Gaurav Sukhatme, Murali Annavaram, Sabyasachi Ghosh, Viktor Rozgic, Urbashi Mitra, **Nenad Medvidovic**, Britni Belcher, and Shrikanth Narayanan. Differentiating Physical Activity Modalities in Youth Using Heartbeat Waveform Shape and Differences between Adjacent Waveforms. In Proceedings of the 7th International Conference on Diet and Activity Methods (ICDAM 7), Washington, DC, June 2009.

- C71** Yuriy Brun and **Nenad Medvidovic**. Crystal-Growth-Inspired Algorithms for Computational Grids. In Proceedings of the Workshop on Bio-Inspired Algorithms for Distributed Systems (BADSO9), Barcelona, Spain, June 2009.
- C72** Ivo Krka, George Edwards, Yuriy Brun, and **Nenad Medvidovic**. From System Specifications to Component Behavioral Models. In Proceedings of the 31st International Conference on Software Engineering (ICSE 2009), New Ideas and Emerging Results Track, Vancouver, Canada, May 2009.
- C73** Daniel Popescu, Joshua Garcia, and **Nenad Medvidovic**. Enabling More Precise Dependency Analysis in Event-Based Systems. In Proceedings of the 17th International Conference on Program Comprehension (ICPC 2009), Vancouver, Canada, May 2009.  
Winner of the ICPC 2009 Best Poster Award
- C74** George Edwards, Joshua Garcia, Hossein Tajalli, Daniel Popescu, **Nenad Medvidovic**, Gaurav Sukhatme, and Brad Petrus. Architecture-Driven Self-Adaptation and Self-Management in Robotics Systems. In Proceedings of the 2009 ACM/IEEE International Workshop on Software Engineering for Adaptive and Self-Managing Systems (SEAMS), Vancouver, Canada, May 2009.
- C75** David Woollard, Chris Mattmann, and **Nenad Medvidovic**. Injecting Software Architectural Constraints into Legacy Scientific Applications. In Proceedings of the ICSE 2009 Workshop on Software Engineering for Computational Science and Engineering, Vancouver, Canada, May 23, 2009.
- C76** Joshua Garcia, Daniel Popescu, George Edwards and **Nenad Medvidovic**. Identifying Architectural Bad Smells. In Proceedings of the 13th European Conference on Software Maintenance and Reengineering (CSMR 2009), Kaiserslautern, Germany, March 2009.
- C77** Murali Annavaram, **Nenad Medvidovic**, Urbashi Mitra, Shrikanth Narayanan, Donna Spruijt-Metz, Gaurav Sukhatme, Zhaoshi Meng, Shi Qiu, Rohit Kumar, and Gautam Thatte. Multimodal Sensing for Pediatric Obesity Applications. In Proceedings of the International Workshop on Urban, Community, and Social Applications of Networked Sensing Systems (UrbanSense08), Raleigh, NC, November 4, 2008.
- C78** Chiyong Seo, Sam Malek, and **Nenad Medvidovic**. Component-Level Energy Consumption Estimation for Distributed Java-Based Software Systems. In Proceedings of the 11th International Symposium on Component Based Software Engineering (CBSE 2008), Karlsruhe, Germany, October 2008.
- C79** George Edwards and **Nenad Medvidovic**. A Methodology and Framework for Creating Domain-Specific Development Infrastructures. In Proceedings of the 23rd IEEE/ACM International Conference on Automated Software Engineering (ASE 2008), L'Aquila, Italy, September 2008.
- C80** Daniel Popescu and **Nenad Medvidovic**. Ensuring Architectural Conformance in Message- Based Systems. In Proceedings of the DSN 2008 Workshop on Architecting Dependable Systems (WADS 2008), Anchorage, AK, USA, June 2008.



- C81** Ivo Krka, Leslie Cheung, George Edwards, Leana Golubchik, and **Nenad Medvidovic**. Architecture-Based Software Reliability Estimation: Problem Space, Challenges, and Strategies. In Proceedings of the DSN 2008 Workshop on Architecting Dependable Systems (WADS 2008), Anchorage, AK, USA, June 2008.
- C82** Leslie Cheung, Roshanak Roshandel, **Nenad Medvidovic**, and Leana Golubchik. Early Prediction of Software Component Reliability. In Proceedings of the 30th International Conference on Software Engineering (ICSE 2008), Leipzig, Germany, May 2008.
- C83** Marija Mikic-Rakic, Sam Malek, and **Nenad Medvidovic**. Architecture-Driven Software Mobility in Support of QoS Requirements. In Proceedings of the International Workshop on Software Architectures and Mobility (SAM 2008), Leipzig, Germany, May 2008.
- C84** Chris Mattmann, David Woollard, and **Nenad Medvidovic**. Exploiting Connector Knowledge To Efficiently Disseminate Highly Voluminous Data Sets. In Proceedings of the 3rd Workshop on SHaring and Reusing architectural Knowledge (SHARK 2008), Leipzig, Germany, May 2008.
- C85** Chiyong Seo, Sam Malek, and **Nenad Medvidovic**. Estimating the Energy Consumption in Pervasive Java-Based Systems. In Proceedings of the 6th IEEE International Conference on Pervasive Computing and Communications, Hong Kong, March 2008.
- C86** Chiyong Seo, George Edwards, Sam Malek, and **Nenad Medvidovic**. A Framework for Estimating the Impact of a Distributed Software System's Architectural Style on its Energy Consumption. In Proceedings of the 7th Working IEEE/IFIP Conference on Software Architecture (WICSA 2008), Vancouver, BC, Canada, February 2008.
- C87** George Edwards, Chiyong Seo, Daniel Popescu, Sam Malek, and **Nenad Medvidovic**. Self-\* Software Architectures and Component Middleware in Pervasive Environments. In Proceedings of the 5th International Workshop on Middleware for Pervasive and Ad-Hoc Computing (MPAC 2007), Newport Beach, CA, November 2007.
- C88** Chiyong Seo, Sam Malek, and **Nenad Medvidovic**. An Energy Consumption Framework for Distributed Java-Based Systems. In Proceedings of the 22nd IEEE/ACM International Conference on Automated Software Engineering (ASE 2007), Atlanta, GA, November 2007.
- C89** Daniel Popescu, Spencer Rugaber, **Nenad Medvidovic**, and Daniel M. Berry. Improving the Quality of Requirements Specifications via Automatically Created Object-Oriented Models. In Proceeding of the 14th Monterey Workshop on Requirements Analysis, Monterey, CA, September 2007.
- C90** Yuriy Brun and **Nenad Medvidovic**. Fault and Adversary Tolerance as an Emergent Property of Distributed Systems' Software Architectures. In Proceedings of the 2nd International Workshop on Engineering Fault Tolerant Systems (EFTS 2007), Dubrovnik, Croatia, September 2007.
- C91** **Nenad Medvidovic** and Sam Malek. Software Deployment Architecture and Quality-of-Service in Pervasive Environments. In Proceedings of the International Workshop on the Engineering of Software Services for Pervasive Environments (ESSPE 2007), Dubrovnik, Croatia, September 2007.

- C92** George Edwards, Chiyong Seo, and **Nenad Medvidovic**. Construction of Analytic Frameworks for Component-Based Architectures. In Proceedings of the Brazilian Symposium on Software Components, Architectures, and Reuse (SBCARS 2007), Campinas, Brazil, August 2007.
- C93** Vito Perrone, Chris A. Mattmann, Sean Kelly, Daniel J. Crichton, Anthony Finkelstein, and **Nenad Medvidovic**. A Reference Framework for Requirements and Architecture in Biomedical Grid Systems. In Proceedings of the IEEE International Conference on Information Reuse and Integration (IEEE IRI-2007), Las Vegas, NV, August 2007.
- C94** Roshanak Roshandel, **Nenad Medvidovic**, and Leana Golubchik. A Bayesian Model for Predicting Reliability of Software Systems at the Architectural Level. In Proceedings of the 3rd International Conference on Quality of Software Architectures (QoSA 2007), Boston, MA, July 2007.
- C95** Roshanak Roshandel and **Nenad Medvidovic**. A Classification of Architectural Reliability Models. In Proceedings of the International Workshop on Software Architecture Research and Practice, Silicon Valley, CA, July 2007.
- C96** Yuriy Brun and **Nenad Medvidovic**. An Architectural Style for Solving Computationally Intensive Problems on Large Networks. In Proceedings of the 2nd Workshop on Software Engineering for Adaptive and Self-Managing Systems (SEAMS 2007), Minneapolis, MN, May 2007.
- Winner of the SEAMS 2007 Most Influential Paper Award, awarded at SEAMS 2020
- C97** Sam Malek, Chiyong Seo, Sharmila Ravula, Brad Petrus, and **Nenad Medvidovic**. Reconceptualizing a Family of Heterogeneous Embedded Systems via Explicit Architectural Support. In Proceedings of the 29th International Conference on Software Engineering (ICSE 2007), Minneapolis, MN, May 2007.
- C98** Chiyong Seo, Sam Malek, George Edwards, Daniel Popescu, **Nenad Medvidovic**, Brad Petrus, and Sharmila Ravula. Exploring the Role of Software Architecture in Dynamic and Fault-Tolerant Pervasive Systems. In Proceedings of the Workshop on Software Engineering of Pervasive Computing Applications, Systems, and Environments (SEPCASE 2007), Minneapolis, MN, May 2007.
- C99** Chris A. Mattmann, David Woollard, **Nenad Medvidovic**, and Reza Mahjourian. Software Connector Classification and Selection for Data-intensive Systems. In Proceedings of the 2nd Workshop on Incorporating COTS Software into Software Systems: Tools and Techniques (IWICSS 2007), Minneapolis, MN, May 2007.
- C100** George Edwards, Sam Malek, and **Nenad Medvidovic**. Scenario-Driven Dynamic Analysis of Distributed Architecture. In Proceedings of the 10th International Conference on Fundamental Approaches to Software Engineering (FASE 2007), Braga, Portugal, March- April 2007.
- C101** Chris A. Mattmann and **Nenad Medvidovic**. The GridLite DREAM: Bringing the Grid to Your Pocket. In Proceedings of the 12th Monterey Workshop, LNCS 4322, Springer Verlag, February 2007.

- C102** Jesal Bhuta, Chris A. Mattmann, **Nenad Medvidovic**, and Barry Boehm. A Framework for the Assessment and Selection of Software Components and Connectors in COTS-based Architectures. In Proceedings of the 2007 IEEE/IFIP Working Conference on Software Architecture (WICSA-6), Mumbai, India, January 2007.
- C103** Sam Malek, Chiyong Seo, Sharmila Ravula, Brad Petrus, and **Nenad Medvidovic**. Providing Middleware-Level Facilities to Support Architecture-Based Development of Software Systems in Pervasive Environments. In Proceedings of the 4th International Workshop on Middleware for Pervasive and Ad-Hoc Computing (MPAC 2006), Melbourne, Australia, November 27 - December 2006.
- C104** Sam Malek, Chiyong Seo, and **Nenad Medvidovic**. Tailoring an Architectural Middleware Platform to a Heterogeneous Embedded Environment. In Proceedings of the 6th International Workshop on Software Engineering and Middleware (SEM 2006), Portland, Oregon, November 2006.
- C105** Marija Mikic-Rakic and **Nenad Medvidovic**. A Classification of Disconnected Operation Techniques. In Proceedings of the 32nd EUROMICRO Conference on Software Engineering and Advanced Applications (EUROMICRO'06), Dubrovnik, Croatia, August 29 - September 2006.
- C106** Chris A. Mattmann, Daniel J. Crichton, **Nenad Medvidovic**, and Steven Hughes. A Software Architecture-Based Framework for Highly Distributed and Data Intensive Scientific Applications. In Proceedings of the 28th International Conference on Software Engineering (ICSE 2006), Shanghai, China, May 2006.
- C107** Roshanak Roshandel, Somo Banerjee, Leslie Cheung, **Nenad Medvidovic**, and Leana Golubchik. Estimating Software Component Reliability by Leveraging Architectural Models. In Proceedings of the 28th International Conference on Software Engineering (ICSE 2006), Shanghai, China, May 2006.
- C108** David Woollard and **Nenad Medvidovic**. An Architectural Style for High-Performance Asymmetrical Parallel Computations. In Proceedings of the 28th International Conference on Software Engineering (ICSE 2006), Shanghai, China, May 2006.
- C109** Sam Malek, Marija Mikic-Rakic, and **Nenad Medvidovic**. A Decentralized Redeployment Algorithm for Improving the Availability of Distributed Systems. In Proceedings of the 3rd International Working Conference on Component Deployment (CD 2005), Grenoble, France, November 2005.
- C110** Marija Mikic-Rakic, Sam Malek, and **Nenad Medvidovic**. Improving Availability in Large, Distributed Component-Based Systems via Redeployment. In Proceedings of the 3rd International Working Conference on Component Deployment (CD 2005), Grenoble, France, November 2005.
- C111** Somo Banerjee, Chris A. Mattmann, **Nenad Medvidovic**, and Leana Golubchik. Leveraging Architectural Models to Inject Trust into Software Systems. In Proceedings of the ICSE 2005 Workshop on Software Engineering for Secure Systems - Building Trustworthy Applications (SESS'05), St. Louis, MO, May 2005.

- C112** Omer Erdem Demir, Prem Devanbu, **Nenad Medvidovic**, and Eric Wohlstadter. DISCOA: Architectural Adaptations for Security and QoS. In Proceedings of the ICSE 2005 Workshop on Software Engineering for Secure Systems - Building Trustworthy Applications (SESS'05), St. Louis, MO, May 2005.
- C113** Vladimir Jakobac, **Nenad Medvidovic**, and Alexander Egyed. Separating Architectural Concerns to Ease Program Understanding. In Proceedings of the ICSE 2005 Workshop on the Modeling and Analysis of Concerns in Software (MACS), St. Louis, MO, May 2005.
- C114** Chris A. Mattmann, **Nenad Medvidovic**, Paul M. Ramirez, and Vladimir Jakobac. Unlocking the Grid. In Proceedings of the 8th International Symposium on Component Based Software Engineering (CBSE-8), St. Louis, MO, May 2005.
- C115** David Woollard, **Nenad Medvidovic**, Walter Yamada, and Theodore Berger. ADaPT: An Event-Passing Protocol for Reducing Delivery Costs in Scatter-Gather Parallel Processes. In Proceedings of the Workshop for Patterns in High Performance Computing, Urbana, IL, May 2005.
- C116** Vladimir Jakobac, Alexander Egyed, and **Nenad Medvidovic**. Improving System Understanding via Interactive, Tailorable, Source Code Analysis. In Proceedings of the 2005 Conference on Fundamental Approaches to Software Engineering (FASE 2005), Edinburgh, UK, April 2005.
- C117** Chris A. Mattmann, Sam Malek, Nels Beckman, Marija Mikic-Rakic, **Nenad Medvidovic**, and Daniel J. Crichton. GLIDE: A Grid-based Light-weight Infrastructure for Data-intensive Environments. In Proceedings of the 2005 European Grid Conference (EGC 2005), Amsterdam, the Netherlands, February 2005.
- C118** Sam Malek, Marija Mikic-Rakic, **Nenad Medvidovic**. An Extensible Framework for Autonomic Analysis and Improvement of Distributed Deployment Architectures. In Proceedings of the ACM SIGSOFT Workshop on Self-Managed Systems (WOSS 2004), Newport Beach, CA, October 31 - November 2004.
- C119** Nikunj Mehta, **Nenad Medvidovic**, Marjan Sirjani, and Farhad Arbab. Modeling Behavior in Compositions of Software Architectural Primitives. In Proceedings of the 19th IEEE International Conference on Automated Software Engineering (ASE 2004), Linz, Austria, September 2004.
- C120** Barry Boehm, Jesal Bhuta, David Garlan, Eric Gradman, LiGuo Huang, Alexander Lam, Ray Madachy, **Nenad Medvidovic**, Kenneth Meyer, Steven Meyers, Gustavo Perez, Kirk Reinholtz, Roshanak Roshandel, and Nicolas Rouquette. Using Testbeds to Accelerate Technology Maturity and Transition: The SCROver Experience. In Proceedings of the ACM-IEEE 2004 International Symposium on Empirical Software Engineering (ISESE 2004), Redondo Beach, CA, August 2004.
- C121** Roshanak Roshandel, Bradley Schmerl, **Nenad Medvidovic**, David Garlan, and Dehua Zhang. Understanding Tradeoffs among Different Architectural Modeling Approaches. In Proceedings of the 4th Working IEEE/IFIP Conference on Software Architecture (WICSA-4), Oslo, Norway, June 2004.
- C122** Roshanak Roshandel and **Nenad Medvidovic**. Toward Architecture-Based Reliability Estimation. In Proceedings of Twin Workshops on Architecting Dependable Systems (WADS 2004), Edinburgh, UK, May 25, 2004 and Florence, Italy, June 2004.

- C123** Marija Mikic-Rakic, Sam Malek, Nels Beckman, and **Nenad Medvidovic**. Improving Availability of Distributed Event-Based Systems via Run-Time Monitoring and Analysis. In Proceedings of Twin Workshops on Architecting Dependable Systems (WADS 2004), Edinburgh, UK, May 25, 2004 and Florence, Italy, June 2004.
- C124** Nikunj Mehta, Ramakrishna Soma, and **Nenad Medvidovic**. Style-Based Software Architectural Compositions as Domain-Specific Models. In Proceedings of the Workshop on Directions in Software Engineering Environments (WoDiSEE 2004), Edinburgh, UK, May 2004.
- C125** Marija Mikic-Rakic, Sam Malek, Nels Beckman, and **Nenad Medvidovic**. A Tailorable Environment for Assessing the Quality of Deployment Architectures in Highly Distributed Settings. In Proceedings of the 2nd International Working Conference on Component Deployment (CD 2004), Edinburgh, UK, May 2004.
- C126** Marija Mikic-Rakic and **Nenad Medvidovic**. Software Architectural Support for Disconnected Operation in Highly Distributed Environments. In Proceedings of the 7th International Symposium on Component Based Software Engineering (CBSE-7), Edinburgh, UK, May 2004.
- C127** Marija Mikic-Rakic and **Nenad Medvidovic**. Support for Disconnected Operation via Architectural Self-Reconfiguration. In Proceedings of the First International Conference on Autonomic Computing (ICAC-04), New York, NY, May 2004.
- C128** **Nenad Medvidovic**, Sam Malek, and Marija Mikic-Rakic. Software Architectures and Embedded Systems. In Proceedings of the Monterey Workshop on Software Engineering for Embedded Systems (SEES 2003), Chicago, IL, September 2003.
- C129** Andre van der Hoek, Ebru Dincel, and **Nenad Medvidovic**. Using Service Utilization Metrics to Assess the Structure of Product Line Architectures. In Proceedings of the 9th International Software Metrics Symposium, Sydney, Australia, September 2003.
- C130** Nikunj R. Mehta and **Nenad Medvidovic**. Composing Architectural Styles from Architectural Primitives. In Proceedings of the Joint 9th European Software Engineering Conference and 11th ACM Symposium on the Foundations of Software Engineering (ESEC/ FSE 2003), Helsinki, Finland, September 2003.
- C131** Roshanak Roshandel and **Nenad Medvidovic**. Modeling Multiple Aspects of Software Components. In Proceedings of the Workshop on Specification and Verification of Component-Based Systems, Helsinki, Finland, September 2003.
- C132** Marija Mikic-Rakic and **Nenad Medvidovic**. Adaptable Architectural Middleware for Programming-in-the-Small-and-Many. In Proceedings of the ACM/IFIP/USENIX International Middleware Conference (Middleware 2003), Rio de Janeiro, Brazil, June 2003.
- C133** Marija Mikic-Rakic and **Nenad Medvidovic**. A Connector-Aware Middleware for Distributed Deployment and Mobility. In Proceedings of the First International Workshop on Mobile Computing Middleware, Providence, RI, May 2003.
- C134** **Nenad Medvidovic**, Alexander Egyed, and Paul Gruenbacher. Stemming Architectural Erosion by Coupling Architectural Discovery and Recovery. In Proceedings of the Second International Software Requirements to Architectures Workshop, Portland, OR, May 2003.

- C135** Marija Mikic-Rakic and **Nenad Medvidovic**. Toward a Framework for Classifying Disconnected Operation Techniques. In Proceedings of the Second International Workshop on Software Architectures for Dependable Systems, Portland, OR, May 2003.
- C136** Nikunj Mehta and **Nenad Medvidovic**. Understanding Software Connector Compatibilities Using A Connector Taxonomy. In Proceedings of the First Workshop on Software Design and Architecture (SoDA'02), Bangalore, India, December 2002.
- C137** Marija Mikic-Rakic, Nikunj Mehta, and **Nenad Medvidovic**. Architectural Style Requirements for Self-Healing Systems. In Proceedings of the First International Workshop on Self-Healing Systems (WOSS'02), Charleston, SC, November 2002.
- C138** **Nenad Medvidovic**, Nikunj Mehta, and Marija Mikic-Rakic. A Family of Software Architecture Implementation Frameworks. In Proceedings of the 2002 Working IEEE/IFIP Conference on Software Architectures (WICSA-3), Montreal, Canada, August 2002.
- C139** **Nenad Medvidovic**. On the Role of Middleware in Architecture-Based Software Development. In Proceedings of the 14th International Conference on Software Engineering and Knowledge Engineering (SEKE), Ischia, Italy, July 2002.  
Fast-tracked for journal publication as one of the best papers of the conference.
- C140** Marija Mikic-Rakic and **Nenad Medvidovic**. Architecture-Level Support for Software Component Deployment in Resource Constrained Environments. In Proceedings of the IFIP/ACM Working Conference on Component Deployment, Berlin, Germany, June 2002.
- C141** **Nenad Medvidovic** and Marija Mikic-Rakic. Programming-in-the-Many: A Software Engineering Paradigm for the 21st Century. In Proceedings of the Workshop on New Visions for Software Design and Productivity. Nashville, TN, December 2001.
- C142** Roshanak Roshandel and **Nenad Medvidovic**. Coupling Static and Dynamic Semantics in an Architecture Description Language. In Proceedings of the Working Conference on Complex and Dynamic Systems Architecture (CDSA), Brisbane, Australia, December 2001.
- C143** Ebru Dincel, **Nenad Medvidovic**, and Andre van der Hoek. Measuring Product Line Architectures. In Proceedings of the 4th International Workshop on Product Family Engineering (PFE-4), pages 346-352, Bilbao, Spain, October 2001.
- C144** Andre van der Hoek, Marija Mikic-Rakic, Roshanak Roshandel, and **Nenad Medvidovic**. Taming Architectural Evolution. In Proceedings on the Joint 8th European Software Engineering Conference and 9th ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE 2001), Vienna, Austria, September 2001.  
Fast-tracked for journal publication as one of the best papers of the conference.
- C145** Paul Gruenbacher, Alexander Egyed, and **Nenad Medvidovic**. Reconciling Software Requirements and Architectures: The CBSP Approach. In Proceedings of the 5th IEEE International Symposium on Requirements Engineering (RE'01), Toronto, Canada, August 2001.
- C146** Lei Ding and **Nenad Medvidovic**. Focus: A Light-Weight, Incremental Approach to Software Architecture Recovery and Evolution. In Proceedings of the 2001 Working IEEE/IFIP Conference on Software Architectures (WICSA-2), Amsterdam, the Netherlands, August 2001.

- C147 Nenad Medvidovic**, Paul Gruenbacher, Alexander Egyed, and Barry W. Boehm. Software Model Connectors: Bridging Models across the Software Lifecycle. In Proceedings of the 13th International Conference on Software Engineering and Knowledge Engineering (SEKE 2001), Buenos Aires, Argentina, June 2001.
- Fast-tracked for journal publication as one of the best papers of the conference.
- C148 Marija Rakic and Nenad Medvidovic**. Increasing the Confidence in Off-the-Shelf Components: A Software Connector-Based Approach. In Proceedings of the 2001 Symposium on Software Reusability (SSR 2001), Toronto, Canada, May 2001.
- C149 Alexander Egyed and Nenad Medvidovic**. Consistent Architectural Refinement and Evolution Using the Unified Modeling Language. In Proceedings of the Workshop on Describing Software Architecture with UML, Toronto, Canada, May 2001.
- C150 Alexander Egyed, Paul Gruenbacher, and Nenad Medvidovic**. Refinement and Evolution Issues in Bridging Requirements and Architecture - The CBSP Approach. In Proceedings of the First International Software Requirements to Architectures Workshop (STRAW 2001), Toronto, Canada, May 2001.
- C151 Marija Rakic and Nenad Medvidovic**. Runtime Support for Architecture-Level Configuration Management. In Proceedings of the Tenth International Workshop on Software Configuration Management (SCM-10), Toronto, Canada, May 2001.
- C152 Nenad Medvidovic and Marija Rakic**. Exploiting Software Architecture Implementation Infrastructure in Facilitating Component Mobility. In Proceedings of the Workshop on Software Engineering and Mobility, Toronto, Canada, May 2001.
- C153 Nicolas Rouquette, Nenad Medvidovic, and David Garlan**. Dependable Autonomous Systems = knowing well what to do + knowing how to do it well. In Proceedings of the NASA High Dependability Computing Consortium Workshop, NASA AMES, Moffet Field, CA, January 2001.
- C154 Rohit Khare, Michael Guntersdorfer, Peyman Oreizy, Nenad Medvidovic, Richard N. Taylor**. xADL: Enabling Architecture-Centric Tool Integration With XML. In Proceedings of the 34th Hawaii International Conference on System Sciences (HICSS-34), Maui, Hawaii, January 2001.
- C155 Nikunj R. Mehta, Nenad Medvidovic, and Sandeep Phadke**. Towards a Taxonomy of Software Connectors. In Proceedings of the 22nd International Conference on Software Engineering (ICSE 2000), Limerick, Ireland, June 2000.
- C156 Paul Gruenbacher, Alexander Egyed, and Nenad Medvidovic**. Dimensions of Concerns in Requirements Negotiation and Architecture Modeling. In Proceedings of the Workshop on Multi-Dimensional Separation of Concerns in Software Engineering, Limerick, Ireland, June 2000.
- C157 Nenad Medvidovic, Rose F. Gamble, and David S. Rosenblum**. Towards Software Multioperability: Bridging Heterogeneous Software Interoperability Platforms. In Proceedings of the Fourth International Software Architecture Workshop (ISAW-4), Limerick, Ireland, June 2000.

- C158** Alexander Egyed and **Nenad Medvidovic**. A Formal Approach to Heterogeneous Software Modeling. In Proceedings of the 2000 Conference on the Fundamental Approaches to Software Engineering (FASE 2000), Berlin, Germany, March-April 2000.
- 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** Chiyong Seo, Sam Malek, and **Nenad Medvidovic**. An Energy Consumption Framework for Distributed Java-Based Software Systems. Technical Report USC-CSE-2006-604, Center for Software Engineering, University of Southern California, December 2006.
- 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 Halford, 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)Convenience.* 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?* Pontificia 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** *Ensuring 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 (SE-CLOUD 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), Montpellier, 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, Greece, 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