

# Curriculum Vitae

Marija Mikic-Rakic  
+1-323-810-3988 (voice)  
marija@gmail.com (email)  
<http://sunset.usc.edu/~marija/> (WWW)

## 1 Education

**Doctor of Philosophy** (7/2004, Cumulative GPA: 4.00)

University of Southern California  
Computer Science Department  
Advisor: Dr. Nenad Medvidovic  
Dissertation: *Software Architectural Support for Disconnected Operation in Distributed Environments*

**Master of Science** (8/2001, Cumulative GPA: 4.00)

University of Southern California  
Computer Science Department

**Diploma Engineer**, (5/1998, Cumulative GPA: 8.67/10)

University of Belgrade  
Department of Electrical Engineering  
Thesis: *Design and Implementation of an Information System for a Family Therapy Clinic*

## 2 Professional Interests

Software engineering  
Software architectures  
Software deployment  
Middleware  
Distributed systems

## 3 Professional Experience

9/04 - present Software Engineer  
Google, Inc.

8/99 - 8/04 Graduate Student Researcher, Software Architecture Group  
University of Southern California

9/01 - 12/01 Teaching Assistant  
CS 599 – Software Engineering for Embedded Systems (graduate)  
University of Southern California

9/99 - 12/99 Teaching Assistant  
CS 201 – Software Development (undergraduate)  
University of Southern California

9/97 - 8/99 Software Engineer – Vidra Info, Belgrade, Yugoslavia

8/92 – 8/97 Software Developer – International Computers LTD (ICL), Belgrade, Yugoslavia

## 4 Publications

### Refereed Journal Articles

1. Nenad Medvidovic, Marija Mikic-Rakic, Nikunj Mehta, and Sam Malek. Software Architectural Support for Handheld Computing. *IEEE Computer – Special Issue on Handheld Computing*, vol. 36, no. 9, pages 66-73, September 2003. (acceptance rate: 5 of 87)
2. Roshanak Roshandel, Andre van der Hoek, Marija Mikic-Rakic, and Nenad Medvidovic. Mae: A System Model and Environment for Managing Architectural Evolution. *ACM Transactions on Software Engineering and Methodology*, vol. 11, no. 2, pages 240-276, April 2004.

### Currently in Submission

1. Marija Mikic-Rakic and Nenad Medvidovic. Disconnected Operation Techniques: A Survey. Submitted to *ACM Computing Surveys*.
2. Marija Mikic-Rakic, Sam Malek, and Nenad Medvidovic. Prism-MW: A Style-Aware Architectural Middleware for Resource Constrained, Distributed Systems. Submitted to *IEEE Transactions on Software Engineering*.

### Chapters in Books

1. Nenad Medvidovic, Marija Mikic-Rakic, and Nikunj Mehta. Improving Dependability of Component-Based Systems via Multi-Versioning Connectors. In *Architecting Dependable Systems. Lecture Notes in Computer Science (LCNS 2677)*. R. de Lemos, C. Gacek, and A. Romanovsky (Eds.), 2003.

### Refereed Conference Proceedings

1. Marija Rakic and Nikunj R. Mehta. Challenges in Implementing Software Architectures. In *Proceedings of the 1st Workshop on Evaluating Software Architectural Solutions (WESAS)*, Irvine, California, May, 2000.
2. Nenad Medvidovic and Marija Rakic. Exploiting Software Architecture Implementation Infrastructure in Facilitating Component Mobility. In *Proceedings of the Software Engineering and Mobility Workshop*, Toronto, Canada, May 2001.
3. 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.
4. 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.

5. André van der Hoek, Marija 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.
6. Nenad Medvidovic and Marija Mikic-Rakic. Programming-in-the-Many: A Software Engineering Paradigm for the 21st Century. In *Proceedings of the Workshop on New Visions for Software Design and Productivity: Research and Applications*, Nashville, Tennessee, December 2001.
7. Marija Mikic-Rakic and Nenad Medvidovic. Architecture-Level Support for Software Component Deployment in Resource Constrained Environments. In *Proceedings of the First International IFIP/ACM Working Conference on Component Deployment (CD 2002)*, Berlin, Germany, June 2002.
8. Nenad Medvidovic, Nikunj R. Mehta, and Marija Mikic-Rakic. A Family of Software Architecture Implementation Frameworks. In *Proceedings of the 3rd IFIP Working International Conference on Software Architectures*, Montreal, Canada, August 2002.
9. Marija Mikic-Rakic, Nikunj R. Mehta, and Nenad Medvidovic. Architectural Style Requirements for Self-Healing Systems. In *Proceedings of the First Workshop on Self-Healing Systems*, Charleston, South Carolina, November 2002.
10. 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 (WADS'03)*, Portland, Oregon, May 2003.
11. Marija Mikic-Rakic and Nenad Medvidovic. A Connector-Aware Middleware for Distributed Deployment and Mobility. In *Proceedings of the ICDCS Workshop on Mobile Computing Middleware (MCM'03)*. Providence, Rhode Island, May 2003.
12. 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.
13. Nenad Medvidovic, Marija Mikic-Rakic, and Sam Malek. Software Architectures for Embedded Systems. In *Proceedings of the Monterey Workshop Series – Workshop on Software Engineering for Embedded Systems: From Requirements to Implementation*. Chicago, Illinois, September 2003.
14. 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, May 2004.
15. Marija Mikic-Rakic, Sam Malek, Nels Beckman, and Nenad Medvidovic. A Tailorable Environment for Assessing the Quality of Deployment Architectures in Highly Distributed Set-

tings. In *Proceedings of the 2nd International Working Conference on Component Deployment (CD 2004)*, Edinburgh, UK, May 2004.

16. Marija Mikic-Rakic and Nenad Medvidovic. Software Architectural Support for Disconnected Operation in Highly Distributed Environments. In *Proceedings of the International Symposium on Component-Based Software Engineering (CBSE7)*, Edinburgh, UK, May 2004.
17. 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 the ICSE/DSN 2004 Twin Workshop on Architecting Dependable Systems (WADS 2004)*, Edinburgh, UK, May 2004, and Florence, Italy, June 2004.
18. Sam Malek, Marija Mikic-Rakic, and 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'04)*. Newport Beach, November 2004.
19. Christian Mattmann, Sam Malek, Nels Beckman, Marija Mikic-Rakic, Nenad Medvidovic, and Daniel Crichton. GLIDE: A Grid-based Lightweight Infrastructure for Data-intensive Environments. In *Proceedings of the 2005 European Grid Conference (EGC 2005)*, Amsterdam, The Netherlands, February 2005.

### **Non-Refereed Publications**

1. Marija Mikic-Rakic and Nenad Medvidovic. Software Architectural Support for Disconnected Operation in Highly Distributed Environments. Technical Report USC-CSE-2003-506, Center for Software Engineering, University of Southern California, 2003.
2. Marija Mikic-Rakic, Sam Malek, and Nenad Medvidovic. Improving Availability in Large, Distributed, Component-Based Systems via Redeployment. Technical Report USC-CSE-2003-515, Center for Software Engineering, University of Southern California, 2003.
3. Nenad Medvidovic and Marija Mikic-Rakic. Middleware for Software Architecture-Based Development in Distributed, Mobile, and Resource-Constrained Environments. Technical Report USC-CSE-2002-501, Center for Software Engineering, University of Southern California, 2002.
4. Nenad Medvidovic and Marija Mikic-Rakic. Software Architecture-Based Development Support for Ubiquitous Systems. Technical Report USC-CSE-2002-508, Center for Software Engineering, University of Southern California, 2002.
5. Nenad Medvidovic and Marija Mikic-Rakic. Architectural Support for programming in the Many. Technical Report USC-CSE-2001-506, Center for Software Engineering, University of Southern California, 2001.

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

## 5 Formal Presentations

1. Challenges in Implementing Software Architectures. *1st Workshop on Evaluating Software Architectural Solutions*, Irvine, CA, May 2000.
2. Software Architecture Research at USC: A Foray into Programming in the Small and Many. *USC Research Activities Presentation (RAP 2000)*, August 2000.
3. Increasing the Confidence of Engineers during Component Upgrades. *USC Center for Software Engineering Annual Research Review*, Los Angeles, CA, February 2001.
4. PRISM – Programming in the Small and Many. *USC Center for Software Engineering Annual Research Review*, Los Angeles, CA, March 2002.
5. Increasing the Confidence in Off-the-Shelf Components: A Software Connector-Based Approach. *2001 Symposium on Software Reusability (SSR 2001)*, Toronto, Canada, May 2001.
6. Prism-MW - Adaptable Architectural Middleware for Mobile and Resource Constrained Environments. *USC Center for Software Engineering Annual Research Review*, Los Angeles, CA, March 2003.
7. Toward a Framework for Classifying Disconnected Operation Techniques. *Second International Workshop on Software Architectures for Dependable Systems (WADS'03)*, Portland, OR, May 2003.
8. A Connector-Aware Middleware for Distributed Deployment and Mobility. *ICDCS Workshop on Mobile Computing Middleware (MCM'03)*, Providence, RI, May 2003.
9. Adaptable Architectural Middleware for Programming-in-the-Small-and-Many. In *ACM/IFIP/USENIX International Middleware Conference (Middleware 2003)*, Rio De Janeiro, Brazil, June 2003.
10. Support for Disconnected Operation via Architectural Self-Reconfiguration. *International Conference on Autonomic Computing (ICAC'04)*, New York, May 2004.
11. Software Architectural Support for Disconnected Operation in Highly Distributed Environments. *International Symposium on Component-Based Software Engineering (CBSE7)*, Edinburgh, UK, May 2004.

## 6 Professional Activities

### Program Committee Membership

- Program Committee Member for the *5th Working IEEE/IFIP Conference on Software Architectures*. Pittsburgh, PA, November 2005.

### Conference/Workshop Organization

- Session Chair, *ICDCS Workshop on Mobile Computing Middleware (MCM03)*. Providence, Rhode Island, May 2003.

### Referee and Reviewer Service

- External Reviewer for *Second International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2003)*, Melbourne, Australia, July 2003.
- External Reviewer for *19th ACM Symposium on Operating Systems Principles (SOSP)*, New York, October 2003.
- External Reviewer for *International Symposium on Component-Based Software Engineering (CBSE7)*, Edinburgh, UK, May 2004.
- External Reviewer for *ICSE/DSN 2004 Twin Workshops on Architecting Dependable Systems (WADS 2004)*, Edinburgh, UK, May 2004, and Florence, Italy, June 2004.
- External Reviewer for *4th IEEE/IFIP Working Conference on Software Architecture (WICSA-4)*, Oslo, Norway, June 2004.
- Reviewer for *Architecting Dependable Systems. Lecture Notes in Computer Science*. R. de Lemos, C. Gacek, and A. Romanovsky (Eds.), 2005.

## 7 Professional Associations

- Association for Computing Machinery (ACM)
- ACM Special Interest Group on Software Engineering (SIGSOFT)