

Curriculum Vitae

(updated as of 4/25/2004)

Nikunj R. Mehta

Research Assistant
Computer Science Department
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1 Education

Doctor of Philosophy (expected 08/2004, Cumulative GPA: 3.95)

University of Southern California
Department of Computer Science
Advisor: Dr. Nenad Medvidovic
Dissertation: *Composing Style-based Software Architectures From Architectural Primitives*

Master of Science (8/1999, Cumulative GPA: 3.96)

University of Southern California
Department of Computer Science
Emphasis: Software Engineering

Bachelor of Engineering, *First Class with Distinction* (6/1997, 75% marks)

University of Mumbai, India
Major: Computer Engineering

2 Honors, Scholarships

2004 USC International Student Academic Achievement Award
1998 Manoobhai Doongursee Scholarship
1998 Sir Ratan Tata Scholarship
1998 Pirojsha Godrej Scholarship
1997 Ranked 3rd in University of Mumbai, among 900 students of Computer Engineering

3 Research Interests

Software engineering
Software architectures
Formal methods and model checking
Software reuse and component-based development
Ubiquitous software engineering
Software development environments
Software development processes

4 Employment History

- 4/03 - present Research Assistant, Computer Science Department
University of Southern California
- 3/01 - 3/03 Senior Architect, Fasturn Inc., Redwood City, CA
- 4/00 - 2/01 Co-founder/Architect, Mediaconnex Communication Inc., Hollywood, CA
- 9/99 - 4/00 Teaching Assistant, Computer Science Department
University of Southern California
- CSCI 577a - Software Engineering
 - CSCI 577b - Software Engineering
- 6/99 - 8/99 Graduate Research Assistant, Technology Transfer Group
CMU Software Engineering Institute, Pittsburgh
- 1/99 - 5/99 Research Assistant, Center for Software Engineering
University of Southern California
- 8/98 - 12/98 Research Assistant, USC Human Brain Project
University of Southern California
- 1/98 - 4/98 Visiting Faculty, Thadomal Shahani Engineering College,
Department of Computer Engineering
University of Mumbai
- Software Engineering
 - Digital Image Processing
- 6/97 - 7/98 Software Engineer, Tata Infotech Ltd., India

5 Patents

- [1] *Drill Down Calendar Display of Active Data Associated With One or More Operational Flows*. Assignee Fasturn Inc., U. S. Patent Application Serial No. 10/653,003, filed August 28, 2003.

6 Publications

Refereed Journal Articles

- [1] Nikunj R. Mehta and Kaustubh S. Mhatre, "Design of Multilayer Perceptron Networks for Pattern Classification." In *Vivek, A Quarterly In Artificial Intelligence*, vol. 9, no. 4, pages 3-16, NCST (October 1996).
- [2] Nenad Medvidovic, Marija Mikic-Rakic, Nikunj R. 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).
This paper was one of five selected from 87 submissions.

Chapters in Books

- [1] Nenad Medvidovic and Nikunj R. Mehta. "JavaBeans and Software Architecture." In *The Internet Encyclopedia*, vol. 2, Hossein Bidgoli (ed.), John Wiley & Sons, December 2003.

- [2] Nenad Medvidovic, Marija Mikic-Rakic, and Nikunj R. Mehta. "Improving Dependability of Computer-Based Systems via Multi-Versioning Connectors." In *Architecting Dependable Systems, Lecture Notes in Computer Science*, vol. 2677, pages 37-60, Rogerio De Lemos and Christina Gacek and Alexander Romanovsky (eds.), Springer-Verlag, Berlin, 2003.

Refereed Conference/Symposia Publications

- [1] Nikunj R. Mehta, Nenad Medvidovic, and Sandeep Phadke. "Rich Software Interconnections." In *Proceedings of the Fourth Ground System Architectures Workshop (GSAW 2000)*, El Segundo, CA, February 23-25, 2000.
- [2] Alexander Egyed, Nikunj R. Mehta, and Nenad Medvidovic. "Software Connectors and Refinement in Family Architectures." In *Proceedings of the Third International Workshop on Development and Evolution of Software Architectures for Product Families (ARES III)*, Lecture Notes in Computer Science, vol. 1951, pages 96-105, Las Palmas de Gran Canaria, Spain, March 15-17, 2000.
- [3] Nikunj R. Mehta. "Software Connectors - A Taxonomy Approach." In *Proceedings of the 1st Workshop on Evaluating Software Architectural Solutions (WESAS 2000)*, Irvine, CA, May, 2000.
- [4] Marija Mikic-Rakic and Nikunj R. Mehta. "Challenges in Implementing Software Architectures." *Proceedings of the 1st Workshop on Evaluating Software Architectural Solutions (WESAS 2000)*, Irvine, CA, May, 2000.
- [5] Nikunj R. Mehta, Nenad Medvidovic, and Sandeep Phadke. "Towards a Taxonomy of Software Connectors." In *Proceedings of the 22nd International Conference on Software Engineering (ICSE 2000)*, pages 178-187, Limerick, Ireland, June 4-11, 2000.
- [6] Cyrus Fakhrazadeh and Nikunj R. Mehta. "Architecture Development Process Dynamics in MBASE." In *Proceedings of the 18th International Conference of The System Dynamics Society (ICSDDS 2000)*, Bergen, Norway, August 6-10, 2000.
- [7] Nenad Medvidovic, Nikunj R. Mehta, and Marija Mikic-Rakic. "A Family of Software Architecture Implementation Frameworks." In *Proceedings of Third IFIP Working International Conference on Software Architectures (WICSA 2002)*, pages 221-235, Montreal, Canada, August 2002.
- [8] Marija Mikic-Rakic, Nikunj R. Mehta, and Nenad Medvidovic. "Architectural Style Requirements for Self-Healing Systems." In *Proceedings of First Workshop on Self-Healing Systems (WoSS 2002)*, pages 49-54, Charleston, SC, November 2002.
- [9] Nikunj R. Mehta and Nenad Medvidovic. "Understanding Software Connector Compatibilites Using A Connector Taxonomy." In *Proceedings of First Workshop on Software Design and Architecture (SoDA '02)*, Bangalore, India, December 22-23, 2002.
- [10] Nikunj R. Mehta and Nenad Medvidovic. "Composing Architectural Styles From Architectural Primitives." In *Proceedings of 9th European Software Engineering Conference together with the 11th ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC-FSE'03)*, pages 347-350, Helsinki, Finland, September 1-5, 2003.

- [11] Nikunj R. Mehta, Ramakrishna Soma, and Nenad Medvidovic. "Style-Based Software Architectural Compositions as Domain-Specific Models." To appear in *Proceedings of Workshop on Directions in Software Engineering Environments (WoDiSEE '04)*, Edinburgh, Ireland, May 2004.
- [12] Nikunj R. Mehta, Nenad Medvidovic, Marjan Sirjani, and Farhad Arbab. "Modeling Behavior in Compositions of Software Architectural Primitives." In submission.

7 Formal Presentations

- [1] Wireless Communication. *WATTS '96 Technical Symposium*, Mumbai, India, 1996.
- [2] Design of Multi-layer Perceptron Networks. *Perspective '97*, IEEE-TSEC Student Branch, Mumbai, India, 1997.
- [3] Software Connectors. *USC Center for Software Engineering Annual Research Review*, Los Angeles, CA, February, 2000.
- [4] Rich Software Interconnections. *Fourth Ground System Architectures Workshop (GSAW 2000)*, El Segundo, CA, February, 2000.
- [5] C3 framework for architecture-based software development. *SensOS Research Project*, Irvine, CA, April, 2000.
- [6] Towards a Taxonomy of Software Connectors. *22nd International Conference on Software Engineering*, Limerick, Ireland, May, 2000.
- [7] Software Connectors - A Taxonomy Approach. *1st Workshop on Evaluating Software Architectural Solutions*, Irvine, CA, May, 2000.
- [8] EasyWinWin - The Mediaconnex Experience. *EasyWinWin Webinar*, June 2000.
- [9] The Entrenched Engineer. *USC Software Engineering Internship Workshop*, Los Angeles, CA, August, 2000.
- [10] Software Architecture Frameworks: A Family of Implementations. *USC Center for Software Engineering Annual Research Review*, Los Angeles, CA, February, 2001.
- [11] De-mystifying Architectural Styles. *USC Center for Software Engineering Annual Research Review*, Los Angeles, CA, March, 2002.
- [12] Understanding Software Connector Compatibilites Using A Connector Taxonomy. *First Workshop on Software Design and Architecture (SoDA '02)*, Bangalore, India, December, 2002.
- [13] Towards an Assembly Language for Software Architectural Styles. Poster at *UCI Institute of Software Research Forum*, Irvine, CA, June, 2003.
- [14] Composing Network-Based Architectural Styles From Architectural Primitives. *ESEC/FSE '03 Doctoral Symposium*, Helsinki, Finland, September 2003.
- [15] Composing Architectural Styles From Architectural Primitives. Poster Track of *9th European Software Engineering Conference together with the 11th ACM SIGSOFT*

Symposium on the Foundations of Software Engineering (ESEC-FSE'03), Helsinki, Finland, September, 2003.

- [16] Alfa: Composing Architectural Styles From Software Architectural Primitives. *Amsterdam Coordination Group*, CWI, Amsterdam, The Netherlands, September, 2003.
- [17] Composing Style-Based Software Architectures from Architectural Primitives. Department of Software Engineering, Rochester Institute of Technology, Rochester, NY, USA, February 2004.
- [18] Composing Style-Based Software Architectures from Architectural Primitives. ABLE Research Group, Carnegie Mellon University, Pittsburgh, PA, USA, March 2004.

8 Professional Activities

Conference/Workshop Organization

- Publicity Chair, 12th ACM SIGSOFT Symposium on the Foundations of Software Engineering (FSE-12), Newport Beach, CA, November 2004.
- Co-reviewer, ICSE/DSN 2004 Twin Workshops on Architecting Dependable Systems (WADS 2004), Edinburgh, Scotland, May 2004 and Pisa, Italy, June 2004.
- Co-reviewer, 7th International Symposium on Component-Based Software Engineering (CBSE-7), Edinburgh, Scotland, May 2004.
- Student Volunteer, 18th Annual ACM SIGPLAN Conference on Object-Oriented Programming, Systems, Languages, and Applications, Anaheim, California, USA, October 2003.
- Publishing Editor, Windows on the World, 21st International Conference on Software Engineering (ICSE'99), Los Angeles, California, USA, May 1999.

University Service

- President, Computer Science Graduate Organization, 1999-2000.

9 Professional Association Memberships

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