

Na Meng

3370 Lake Austin Boulevard
Apartment C
Austin, TX 78703

Phone: 512-897-0593
Email: mengna09@cs.utexas.edu
<http://userweb.cs.utexas.edu/~mengna09/>

Research Interests

I am interested in program static analysis and software evolution. I find it very exciting to explore new approaches that span these areas. For instance, I have been working to apply program static analysis techniques when comparing difference between versions of a project in order to identify systematic change patterns and suggest syntactic edits when necessary to enforce the change patterns within the project.

Education

- 9/2009-present University of Texas, Austin, TX
Ph.D. Student in the Department of Computer Science
Advisor: Kathryn S. McKinley, co-advised by Miryung Kim
- 9/2006-7/2009 Peking University, China
Master of Science in Computer Science
Advisor: Qianxiang Wang
- 9/2002-7/2006 Northeastern University, China
Bachelor of Engineering in Software Engineering

Honors

- 2009 College of Natural Sciences Dean's Excellence Award
- 2008 Wusi Scholarship of Peking University
- 2007 Excellent Learning Award of Peking University
- 2007 Guanghua Scholarship of Peking University
- 2005 Hewlett-Packard Scholarship
- 2005 Honorable Mention in Mathematical Contest in Modeling (MCM)
- 2004 IBM Scholarship
- 2004 Outstanding Student of Liaoning Province, China
- 2003 NEUSoft Scholarship
- 2003-2006 Northeastern University Scholarship Award Winner (five times)

Publications

Na Meng, Miryung Kim, Kathryn S. McKinley, Systematic Editing: Generating Program Transformations from an Example. *ACM SIGPLAN conference on Programming language design and implementation (PLDI '11)*. June 2011, San Jose, USA.

Qianxiang Wang, **Na Meng**, Jinhui Li, Hong Mei, Towards SOA-based Code Defect Analyzing. *Proceedings of the 4th IEEE International Symposium on Service-Oriented System Engineering (SOSE 2008)*, December 2008, Taiwan, China.

Na Meng, Qianxiang Wang, Qian Wu, Hong Mei, An Approach to Merge Results of Multiple Static Analysis Tools. *Proceedings of the 8th International Conference on Quality Software (QSIC 2008)*, August 2008, Oxford, UK.

Qianxiang Wang, Min Li, **Na Meng**, Yonggang Liu, Hong Mei, A Pattern based Constraint Description Approach for Web Services. *Proceedings of the the Seventh International Conference on Quality Software (QSIC 2007)*, October 2007, Portland, Oregon, USA.

Qianxiang Wang, Min Li, **Na Meng**, A Visual Constraint Specifying Approach for Adaptive Software. *Proceedings of the Third International Workshop on Software Cybernetics, in conjunction with COMPSAC 2006*, Chicago, USA, September 2006.

Research Experience

- 9/2009-present **Graduate Research Assistant**
Advisor: Kathryn S. McKinley, co-advised by Miryung Kim
To improve programmer productivity and program correctness by automating systematic source code transformation, we design and implement an approach to derive syntactic edits from comparison between two versions of a given program, and then automatically generate similar syntactic edits to a prescribed code fragment which is expected to change similarly. This approach will facilitate programmers to add functionality, do refactoring or remove bugs consistently.
- 2/2006-7/2009 **Graduate Research Assistant**
Advisor: Qianxiang Wang
(I) To help programmers enforce certain kinds of constraints on software runtime behaviors, we designed and implemented a visualized software constraint specification approach. When getting input from users, this approach automatically converts the constraint specification to monitoring code and instruments it to target software in order to enforce the value or temporal order constraints at runtime.
(II) There are a lot of static analysis tools looking for software defects based on predefined defect patterns. However, adding new defect patterns to existing tools is not easy because the patterns are always hardcoded in source code. With consideration of easy extensibility of defect pattern repository, we designed and implemented an extensible defect finding tool, in which users specify new defect patterns involving with method invocation sequence in a visualized way.
- 10/2007-12/2009 Intern, IBM China Research Lab (CRL)
Manager: Heyuan Huang
To help customers from small and medium enterprises have proper access control to the web services they are using while minimizing the number of user logins, we designed a system by customizing the standard Federated Single-sign On (SSO) security mechanisms based on their limited computing resources.

Service and Professional Activities

Diversity Activities

- Participant, CRA-W Grad Cohort. April, 2011.
Volunteer, DigCS groundbreaking event, the Department of Computer Science, the University of Texas at Austin.
Member, Graduate Representative Association of Computer Science, the University of Texas at Austin. Spring 2010-Spring 2011.
Volunteer, GradFest of Computer Science Department, the University of Texas at Austin. February 2010.
Reviewer, NCWIT Award for Aspirations in Computing 2010. December 2009.

Other Activities

- Sub-reviewer, the 27th IEEE International Conference on Software Maintenance (ICSM 2011).
Sub-reviewer, the 32nd ACM SIGPLAN conference on Programming Language Design and Implementation (PLDI 2011).
Sub-reviewer, the 4th International Symposium on Empirical Software Engineering and Measurement (ESEM 2010).

Personal Details

Date of birth: December 16th, 1983
Place of birth: Shenyang, China
Citizenship: China

References

Kathryn S. McKinley

Miryung Kim

Qianxiang Wang

Professor
University of Texas at Austin
mkinley@cs.utexas.edu
Austin TX 78712-0233
Phone: 512-232-7467
Fax: 512-232-1413

Assistant Professor
University of Texas at Austin
miryung@ece.utexas.edu
Austin TX 78712-0240
Phone: 512-232-1501
Fax: 512-471-5120

Professor
Peking University
wqx@pku.edu.cn
Beijing, China 100871
Phone: 86-10-6275 9074