

YOUSSEF HANNA

407 S 5th St. Unit 135,

Ames, IA 50010

E-mail: ywhanna@cs.iastate.edu

Homepage: <http://www.cs.iastate.edu/~ywhanna>

Phone: 515-441-6682

EDUCATION

Doctor of Philosophy in Computer Science, *Iowa State University, USA (January 2006 – current)*

- Topic: “Automatic Topology Independent Technique for Parameterized Systems Verification”

Master of Science in Computer Science, *Iowa State University, USA (January 2006 – December 2008)*

- Dissertation title: “Verifying Sensor Network Security Protocol Implementations”

Bachelor of Science in Computer Science, *The American University in Cairo, Egypt (September 2000 – December 2004) – Magna Cum Laude*

- Dissertation title: “Nedgty: Web Services Firewall”
- Minors: Business Administration, Electronics

MAJOR PUBLICATIONS

1. **Youssef Hanna**, Samik Basu, and Hridesh Rajan, "Behavioral Automata Composition for Automatic Topology Independent Verification of Parameterized Systems", The 7th joint meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE 09), August 2009, Amsterdam, The Netherlands.
2. **Youssef Hanna**, Hridesh Rajan, and Wensheng Zhang, "Slede: A Domain-Specific Verification Framework for Sensor Network Security Protocol Implementations", in the Proceedings of the First ACM Conference on Wireless Network Security (WiSec 2008), March 31 - April 2, 2008. Alexandria, VA.
3. Ramy Bebawy, Hesham Sabry, Sherif El-Kassas, **Youssef Hanna**, Youssef Youssef. "Nedgty: Web Services Firewall," *icws*, pp. 597-601, IEEE International Conference on Web Services (ICWS'05), 2005.
4. **Youssef Hanna**, David Samuelson, Samik Basu and Hridesh Rajan, "Automatic Cut-off Generation for Verifying Parameterized Systems", in preparation to ACM Transactions on Software Engineering and Methodology (TOSEM).

OTHER PUBLICATIONS

1. **Youssef Hanna** and Hridesh Rajan, "Slede: Framework for Automatic Verification of Sensor Network Security Protocol Implementations", Demo Paper in the 31st International Conference on Software Engineering (ICSE '09), May 2009, Vancouver, Canada.

2. **Youssef Hanna**, "SLEDE: Lightweight Verification of Sensor Network Security Protocol Implementations", Doctoral Symposium, 6th joint meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE 2007), Dubrovnik, Croatia.
3. **Youssef Hanna**, Hridesh Rajan, "SLEDE: Event Based Specification of Sensor Network Security Protocols", poster paper in the proceedings of Fourteenth ACM SIGSOFT Symposium on Foundations of Software Engineering (FSE 2006), Portland, OR.
4. Hridesh Rajan, Robert Dyer, **Youssef Hanna**, Harish Narayanappa, "Preserving Separation of Concerns through Compilation", Software Engineering Properties of Languages and Aspect Technologies (SPLAT 06), A workshop affiliated with AOSD 2006, Mar 21, 2006. Bonn, Germany.

ACTIVITIES, SERVICES AND HONORS

- Student Volunteer, International Conference on Software Engineering (ICSE 2009).
- Dean's List – 5 consecutive semesters, Iowa State University (Spring 2007 – Spring 2009)
- Colloquium Committee member in the Graduate Advisory Committee, Iowa State University (2007).
- Two consecutive annual Academic Honor received for "Outstanding academic achievement in Computer Science", The American University in Cairo (2003 – 2004)
- First Category Student Scholarship, The American University in Cairo (Spring 2001 – Fall 2004)
- Dean's List, The American University in Cairo (Fall 2000 – Fall 2004).

INVITED PRESENTATIONS

- **Youssef Hanna**, Samik Basu, and Hridesh Rajan, "Behavioral Automata Composition for Automatic Topology Independent Verification of Parameterized Systems", Midwest Verification Day (MVD 2009), University of Iowa, 2009.

WORK EXPERIENCE

Research Assistant, Laboratory of Software Design, Iowa State University, January 2006 – current

- Developed a framework for verification of sensor network security protocol implementations by automatic extraction of verifiable models from the implementation and merging them with generated intruder models.
- Collaborated in implementation of the Nu project that strives to maintain separation of concerns for aspect-oriented programs even after compilation phase in order to improve their incremental compilation.

Software Engineer, ITWorx, Egypt, January 2005 – December 2005

- Built a system for managing workflow processes for United Technologies Corporation (UTC) using iPlanet Process Manager Software and JSP.
- Implemented a system for helping the Treasury department in UTC in taking decision in dividend requests received by the department. This project was done using ASP.NET technology.
- Participated in a project for UTC for merging two Plumtree portals.

Software Engineer, IBM, Egypt, Summer Training, 2004

- Designed a program that retrieves information from a LDAP server and transforms it into a tree of objects readable by the IBM's WebSphere Business Modeler Software.
- Technology used: Java.

SKILLS

- C/C++, Java, C# and nesC.
- Oracle, SQL Server.
- Linux/Windows.
- Mentor Graphics H/W design tool (including VHDL language).
- SPIN model checker.
- Excellent command of English, French and Arabic.
- Basic speaking ability in Spanish