

Munawar Hafiz

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OBJECTIVE

An intellectually gratifying position involving security and software engineering.

EDUCATION

May 2010

- **Ph.D. Candidate**
Dept of CS, University of Illinois at Urbana-Champaign (UIUC),
Specialization in Program Transformation, Security, Software Architecture, Patterns, Program Analysis.
Thesis: *Security on Demand*. Advisor: Ralph Johnson, Dept of CS, UIUC.

Aug 2005

- **MS in Computer Science**
Dept of CS, University of Illinois at Urbana-Champaign. CGPA: 4.0/4.0.

RESEARCH AND PROFESSIONAL EXPERIENCE

2007 -

- Program transformation to retrofit/introduce security. Developed a catalog of 37 security-oriented program transformations that prevent the most important security problems faced by today's developers: input validation vulnerabilities, authentication and access control vulnerabilities, improper error handling issues and denial of service attacks. Developed several proof-of-concept tools and applied them to prevent real vulnerabilities from real systems.
- Working with several undergraduate and graduate students to develop Eclipse plugins for security-oriented program transformations. These plugins target C, Java and PHP programs.
- Serving as a teaching assistant in the Senior Projects course at UIUC. Managing student groups as they develop software for real clients for over a year. Our clients are companies such as Adobe, Rockwell Collins, United States Geological Service, Spot Trading, State Farm etc.

2006-2007

- Worked with Professor Carl Gunter's Security Research Group in the Adaptive Messaging Policy project.

2004-2007

- Worked with Microsoft's Patterns and Practices (P&P) group on Web Service security patterns and security pattern classification. Reviewed several publications of P&P group.

Spring, 2004

- Developed file system access control for GAIA, an OS for ubiquitous computing developed at UIUC.

2002-2003

- Served as a Lecturer in Bangladesh University of Engineering and Technology. Taught OOAD.
- Share Holder and Project Leader of Information Engineers and Consultants Bangladesh (IECB).

SELECTED PUBLICATIONS

- M. Hafiz, P. Adamczyk and R. Johnson. Systematically eradicating data injection attacks using security-oriented program transformations. International Symposium on Engineering Secure Software and Systems (ESSOS), 2009.
- M. Hafiz and R. Johnson. Evolution of mail transfer agent architecture: The impact of security. Software—Practice and Experience, 38(15):1569-1599, Dec 2008.
- Security-oriented Program Transformations (Or how to add security on demand). Poster, OOPSLA 2008.
- M. Hafiz, P. Adamczyk and R. Johnson. Organizing Security Patterns. IEEE Software, 24(4):52-60, 2007.
- R. Afandi, J. Zhang, M. Hafiz and C. Gunter. AMPol: Adaptive Messaging Policy. European Conference on Web Services (ECOWS), 2006.

COMPUTING SKILLS

- Extensive knowledge in variants of Linux and Windows Operating Systems.
- Proficiency in Java, C/C++, C#, Perl, PHP, Prolog, PASCAL, OCaml, PL/SQL, 80x86 Assembly Language.
- Experience in J2EE Web service development and Jakarta Struts framework.
- Worked in all major database platforms - Oracle, MS SQL, MS Access, MySQL, DB2, PostgreSQL.
- Advanced level experience with refactoring tools and frameworks.

AWARDS AND HONORS

- Best Shepherd Award, Hillside Group, 2006.
- Second Prize, National Software Competition, Bangladesh, 1999.

SYNERGIC ACTIVITIES

- PC Member, International Workshop on Software Engineering for Secure Systems (SESS 2010).
- Editorial Review Board, International Journal of Secure Software Engineering (IJSSE).
- Member, Hillside Group, ACM.

REFERENCES

Available upon request.