

## Mohamed Shehab

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### CONTACT INFORMATION

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### RESEARCH INTERESTS

Information & Network Security - Distributed Access Control, Secure Distributed Collaboration in Multi-Domain Environments, WebServices Security, Security for Social Networks, Watermarking Relational Data, and Hierarchical Key Generation.

### EDUCATION

**Purdue University**, West Lafayette, IN, August 2007  
Ph.D. in Computer Engineering  
Topic: Secure Collaboration in Mediator-Free Environments  
Advisor: Arif Ghafoor, Co-Advisor: Elisa Bertino

**UAE University**, Al-Ain, United Arab Emirates, Jan. 2000  
B.Sc. with Honors in Electrical & Computer Engineering, GPA: 3.98/4.0

### WORK EXPERIENCE

**University of North Carolina at Charlotte**, Charlotte, NC, USA.

College of Computing and Informatics, Department of Software and Information Systems.

*Assistant Professor*

August 2007 - Present

Director of the Laboratory of Information Integration, Security and Privacy (LIISP) at University of North Carolina at Charlotte (<http://www.sis.uncc.edu/LIISP/>). He is leading a research team consisting of 7 PhD students and 4 master's students that are supported by NSF. His research has been funded by NSF, and NSA, and DoD.

**Purdue University**, West Lafayette, IN, USA.

*Research Assistant*

2003 - 2007

Member of Center for Education and Research in Information Assurance and Security (CERIAS) and the Indiana Center for Database Systems(ICDS) at Purdue University. Have been involved with several research projects which include developing multimedia document authentication techniques, distributed access control protocols and data mining tool for XML-based data for a Predictive Maintenance project.

**Purdue University**, West Lafayette, IN, USA.

*SURF Coordinator*

Fall 2006 - Fall 2007

Coordinated the Summer Undergraduate Research Fellowship (SURF) program at Purdue university. Conducted the student search and selection committee. Managed and implemented the SURF year round and the SURF abroad programs.

**IBM T.J. Watson Research Center**, Yorktown Heights, USA.

*Research Intern*

May 2006 - Sept. 2006

Proposed a messaging protocol based on encapsulating SOAP messages to enable secure collaboration in a Web Services environment. Investigated several other research topics such as Trust Management in Global Services Environment and Data Provenance for Business Environments.

**Purdue University**, West Lafayette, IN, USA.

*Course Coordinator*, Electrical & Computer Engineering,

Fall 2000 - Fall 2003

Taught Microcontroller Programming and Interfacing ECE 326, which uses the MC68HC12 and Intel 8052.

Designed course exams and lab material. Managed and advised five graduate teaching assistants. Course instructor during Summer 2002.

**Purdue University**, West Lafayette, IN, USA.

*Course Instructor*, Electrical & Computer Engineering, Summer 2002  
Was the course lecturer for Microcontroller Programming and Interfacing ECE 326. Was responsible for managing all the course logistics, giving course lectures, preparing course material, and managing and guiding five graduate teaching assistants.

**Schlumberger**, Sugar Land, TX, USA.

*Summer Intern* Summer 2001  
Designed and implemented various automated LabVIEW test programs for the evaluation of logging while drilling tools.

**UAE University**, Al-Ain, UAE.

*Teaching Assistant*, Electrical & Computer Engineering, Spring 2000  
Taught data acquisition lab using LabVIEW and LabWindows. Taught signals and systems, instrumentation & measurements, and Assembly language programming for Intel 8088. Coordinated freshman design projects.

**UAE University**, Al-Ain, UAE.

*Summer Intern* Summer 1999  
Developed LabVIEW instrument drivers for the electronic lab. Designed and developed lab experiments for electronics lab.

**Schlumberger**, Ras-Shukeir, Egypt.

*Industrial Trainee* Fall 1998  
Oil field services training, offshore training on logging equipment.

## PUBLICATIONS

### Journal Publications

1. Gail-Joon Ahn, Jing Jin and Mohammed Shehab, "Role-based Access Management for Ad-hoc Collaborations," submitted to IEEE Transactions on Dependable and Secure Computing (TDSC), (Accepted with revisions).
2. Mohamed Shehab, Arif Ghafoor, and Elisa Bertino, "Secure Collaboration in a Mediator-Free Distributed Environment", *IEEE Transactions on Parallel and Distributed Systems (TPDS)*, Volume 19, Issue 10, Oct. 2008, Page(s):1338-1351.
3. Mohamed Shehab, Elisa Bertino, Arif Ghafoor, "Watermarking Relational Databases using Optimization Based Techniques", *IEEE Transactions of Knowledge and Data Engineering (TKDE)*, Volume 20, Issue 1, Jan. 2008 Page(s):116-129.
4. Mohamed Shehab, Kamal Bhattacharya, and Arif Ghafoor, "Web Services Discovery in Secure Collaboration Environments", *ACM Transactions on Internet Technology (TOIT)*, Volume 8, Issue 1, 2008.
5. Mohamed Shehab, Elisa Bertino, and Arif Ghafoor, "Workflow Authorisation in Mediator-free Environments", *International Journal of Security and Networks*, Volume 1, Issue 1, 2006.
6. Rafae Bhatti, Basit Shafiq, Mohamed Shehab, and Arif Ghafoor, "Distributed Access Management in Multimedia IDCs", *IEEE Computer*, Volume 38, Issue 9, September 2005.

### Conference Publications

1. Said Marouf, Mohamed Shehab, Anna Cinzia Squicciarini, and Smitha Sundareswaran, Efficient XACML

Policy Evaluation with a Statistics Based & Clustering Framework. *Submitted to SIGMOD Conference 2009.*

2. Andrew Besmer, Heather Lipford, Mohamed Shehab, and Gorrell Cheek, Social Applications: Towards A Secure Framework. *Submitted to 5th Symposium on Usable Privacy and Security (SOUPS), 2009.*
3. Anna C. Squicciarini, Mohamed Shehab, and Federica Paci, Collective Privacy Management in Social Networks. *in Proceedings of the 18th International World Wide Web Conference (WWW'09)*, Madrid, Spain. Acceptance rate: 11.8% (104/879).
4. Mohamed Shehab, Anna C. Squicciarini and Gail-Joon Ahn, Beyond User-to-User Access Control for Online Social Networks. *in Proceedings of the 10th International Conference on Information and Communications Security (ICICS)*, Birmingham, UK, Oct 2008: 174-189.
5. Mohamed Shehab, Elisa Bertino, and Arif Ghafoor, Proactive Role Discovery in Mediator-Free Environments. *in Proceedings of the IEEE International Conference on Peer-to-Peer Computing (P2P)*, RWTH Aachen, Germany, Sept. 8-11, 2008: 150-159.
6. Gail-Joon Ahn, Moonam Ko and Mohamed Shehab, Portable User-Centric Identity Management. *in Proceedings of the IFIP TC 11 23rd International Information Security Conference.* 2008: 573-587.
7. Wenjuan Xu, Mohamed Shehab and Gail-Joon Ahn, Visualization Based Policy Analysis: Case Study in SELinux, *in Proceedings of ACM Symposium of Access Control, Models and Technologies (SACMAT'08)*, June 2008, Estes Park, CO, USA.
8. Jing Jin, Gail-Joon Ahn, Mohamed Shehab, Hongxin Hu, Towards Trust-aware Access Management for Ad-hoc Collaborations, *in Proceedings of the IEEE International Workshop on Trusted Collaboration (TrustCol'07)*, White Plains, New York, November, 2007.
9. Mohamed Shehab, Elisa Bertino and Arif Ghafoor, "Secure Collaboration in Mediator-Free Environments", *in Proceedings of the 12th ACM Conference on Computer and Communications Security (CCS)*, Alexandria, Virginia, November 2005. Acceptance rate: 15% (38/249).
10. Mohamed Shehab, Elisa Bertino, Arif Ghafoor, "Efficient Hierarchical Key Generation and Key Diffusion for Sensor Networks", *in Proceedings of the Second Annual IEEE Communications Society Conference on Sensor and AdHoc Communications and Networks (SECON)*, Santa Clara, California, USA, September 2005.
11. Mohamed Shehab, Elisa Bertino and Arif Ghafoor, "SERAT : Secure Role mApping Technique for Decentralized Secure Interoperability", *in Proceedings of the ACM Symposium on Access Control, Models and Technologies (SACMAT'05)*, Stockholm, Sweden, June 2005, Acceptance rate: 21% (19/90).

### Professional Service

- Workshop Chair, Third International Workshop on Trusted Collaboration (TrustCol'08).
- Workshop Chair, The Workshop on Trusted Web 2.0 (W2Trust'08).
- Program committee member, ACM Symposium on Access Control Models and Technologies (2009).
- Program committee member, International World Wide Web Conference (2009), Security and Privacy Track.
- Program committee member, International World Wide Web Conference (2009), Posters Track.

### REFEREEING FOR CONFERENCES & JOURNALS

- ACM Conference on Computer and Communications Security (CCS)
- ACM Symposium on Access Control Models and Technologies(SACMAT)
- IEEE Symposium on Security and Privacy (IEEE-SSP)
- Annual Computer Security Applications Conference (ACSAC)
- Annual International Computer Software and Applications Conference (COMPSAC)
- International Conference on Web Services (ICWS)
- IEEE Security and Privacy (S&P)
- ACM Transactions on Information and System Security (TISSEC)
- IEEE Transactions on Knowledge and Data Engineering (TKDE)
- IEEE Transactions on Dependable and Secure Computing(TDSC)

### STUDENTS

#### Ph.D. Students:

- Moo Nam Ko, User Centric Identity Management (2007-Expected 2010).
- Said Marouf, (2008-Expected 2012)
- Christopher G. Hudel, (2008-Expected 2012)
- Gorrell P. Cheek, (2008-Expected 2012)

#### Masters Students:

- Ebonie N. Williams, (2008-Expected 2010)
- Shitij Kulshreshtha, (2008-2009)
- Sarah Khan, (2009-Expected 2010)

#### Examination Committee for the following students:

- Jing Jin (Ph.D.)
- Wenjuan Xu (Ph.D.)
- Napoleon Paxton (Ph.D.)

#### COURSES TAUGHT

All at the University of North Carolina at Charlotte.

- ITIS 6210/8210 - Access Control and Security Architecture, Fall 2008
- ITIS 5250/4250 - Computer Forensics, Spring 2008
- ITIS 6210/8210 - Access Control and Security Architecture, Fall 2007

#### LEADERSHIP

- Member of the Organizing Committee for the Yearly ECE Gala at Purdue University. 2001 - 2007
- Treasurer of the Egyptian Student Association at Purdue University. Fall 2006 - 2007
- Vice President of the ECE Graduate Students Association at Purdue University. 2003 - 2004
- Treasurer of the IEEE Student Branch at UAE University. 1998 - 1999

#### HONORS AND AWARDS

- Best Questioner Award, IBM Summer Seminars, IBM T.J. Watson Research Lab. Summer 2006
- Nominated for Microsoft Research Fellowship by ECE, Purdue University. 2006
- Research Poster Competition Award (3rd place), Sixth Annual Information Security Symposium, Center for Education and Research in Information Assurance and Security, Purdue University. March 2005
- CERIAS, Awarded Student Travel Grant (CCS'05, SACMAT'05). 2005
- Purdue Research Foundation (PRF) Summer Research Scholarship. Summer 2003
- Estus H. and Vashti L. Magoon Award for Excellence in Teaching, School of Electrical and Computer Engineering, Purdue University. 2002 - 2003
- Scholarship to Study Abroad at Wollongong University, Wollongong, Australia. Summer 1999

#### GUEST LECTURES

- Guest lecture at (ITIS 6010/8010) Privacy and Security: a HCI Perspective. Sept. 2007
- "Watermarking Relational Data", CCI Graduate Seminar Series 2007, UNC-Charlotte. Aug. 2007
- "Distributed Secure Collaboration", Florida International University, Miami, Florida. Apr. 2007
- "Distributed Secure Collaboration", Concordia University, Montreal, Canada. Apr. 2007
- "Distributed Secure Collaboration", University of Michigan in Detroit, Detroit, Michigan. Mar. 2007
- "Distributed Secure Collaboration", Aspera Systems, Berkeley, California. Mar. 2007
- "Distributed Secure Collaboration", UNC-Charlotte, Charlotte, North Carolina. Mar. 2007
- "Distributed Secure Collaboration", UNC Charlotte, Charlotte, North Carolina. Mar. 2007
- "Distributed Secure Collaboration", Intel, Portland, Oregon. Feb. 2007
- Guest lecture at CS 526 Computer Security Class, Purdue University. Oct. 2006
- "Security in Distributed Services" presented at IBM T. J. Watson Research Lab. Aug. 2006
- "Secure Collaboration" presented at IBM T. J. Watson Research Lab. May 2006
- Guest lecture at CS 526 Computer Security Class, Purdue University. Nov. 2005

- Guest lecture at Database Reading Group, Purdue University. May 2005
- CERIAS Security Seminar, Purdue University. Apr. 2005
- Guest lecture at Security Reading Group, Purdue University. Feb. 2005
- Guest lecture at CS 590S Database Security class, Purdue University. Oct. 2004