

## Julian L. Rrushi

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CONTACT INFORMATION	University of Illinois at Urbana-Champaign Department of Computer Science 201 N. Goodwin Avenue Office 3215 at Siebel Center Urbana, IL 61801-2302, USA.	<i>Phone:</i> +1 (217) 265-8468 <i>E-mail:</i> jrrushi@uiuc.edu <i>GPG:</i> <a href="http://www.cs.uiuc.edu/homes/jrrushi/jrrushi.gpg">http://www.cs.uiuc.edu/homes/jrrushi/jrrushi.gpg</a>
	Università degli Studi di Milano Dipartimento di Informatica e Comunicazione Via Comelico 39/41, 20135 Milano, Italy.	<i>Email:</i> julian.rrushi@dico.unimi.it
RESEARCH INTERESTS	System and network security, cryptology	
EDUCATION	<b>Università degli Studi di Milano, Milan, Italy</b> Ph.D. Candidate, Computer Science, October 2005 - Current <ul style="list-style-type: none"><li>• Dissertation: Construction and Validation of Intrusion Detection Mechanisms for Digital I&amp;C Systems in a Nuclear Power Plant</li><li>• Advisors: Carlo Bellettini (Univ. di Milano), Roy H. Campbell (Univ. of Illinois at Urbana-Champaign)</li></ul> <b>Università degli Studi di Milano, Milan, Italy</b> MS in Information and Communication Technology, July 2005 Dissertation: Vulnerability Analysis of Authentication Protocols Advisor: Emilia Rosti <b>Università degli Studi di Milano, Milan, Italy</b> BS in Computer Science, December 2003 Dissertation: Study and Analysis of the Java Security Architecture Advisor: Emilia Rosti	
HONORS AND AWARDS	Conference scholarship, Institute for Information Infrastructure Protection (I3P), 2008 Research scholarship, International Information Systems Security Certification Consortium (ISC) <sup>2</sup> , 2007 Academic award, Italian Graduate and Undergraduate Fellowships Institute (ISU), 2006 Research internship, Joint Research Center of the European Commission (JRC), 2005 Research scholarship, International Information Systems Security Certification Consortium (ISC) <sup>2</sup> , 2005 Research project recognition award, International Information Systems Security Certification Consortium (ISC) <sup>2</sup> , 2004	
ACADEMIC EXPERIENCE	<b>University of Illinois at Urbana-Champaign, Illinois, USA</b> <i>Research scholar</i> Advisor: Roy H. Campbell	<b>May, 2007 - Current</b>

**Università degli Studi di Milano**, Milan, Italy

*Teaching Assistant*

Algorithms and data structures

**October, 2006 - January, 2007**

**Università degli Studi di Milano**, Milan, Italy

*Research Assistant*

Mobile code and security implications on servers

**2004 - 2005**

**Università degli Studi di Milano**, Milan, Italy

*Research Assistant*

IPv6 security

**2003 - 2004**

## PUBLICATIONS

1. *A Product Machine Model for Anomaly Detection of Interposition Attacks on Cyber-Physical Systems*, with Carlo Bellettini, In Proceedings of 23rd International Information Security Conference, Italy, September 2008, to appear.
2. *Operation Aware Detection of Attacks on Digital I&C Systems in Nuclear Power Plants Using Stochastic Activity Networks with Activity-Marking Reward Structures*, with Roy H. Campbell, In Proceedings of 2nd Annual IFIP Working Group 11.10 International Conference on Critical Infrastructure Protection, George Mason University, Arlington, Virginia, USA, March 2008.
3. *Enforcing Logical Boundaries on Potentially Hostile Data to Defend Against Memory Corruption Attacks*, with Carlo Bellettini, In Proceedings of 2nd Annual IFIP Working Group 11.10 International Conference on Critical Infrastructure Protection, George Mason University, Arlington, Virginia, USA, March 2008.
4. *Using Deception to Facilitate Intrusion Detection in Nuclear Power Plants*, with Roy H. Campbell, In Proceedings of 3rd International Conference on Information Warfare and Security, Peter Kiewit Institute, University of Nebraska Omaha, USA, April 2008, to appear.
5. *Detecting Attacks in Power Plant Interfacing Substations through Probabilistic Validation of Attack-Effect Bindings*, with Roy H. Campbell, In Proceedings of the SCADA Security Scientific Symposium, Miami, USA, January 23-24, 2008.
6. *Low-level Coding Vulnerabilities: Research on Attack, Defense and Evasion*, with Carlo Bellettini, Handbook of Research on Information Security and Assurance, editors Jatinder Gupta (guptaj@uah.edu) and Sushil Sharma (ssharma@bsu.edu), publisher Idea Group, Inc., to appear in Spring 2008.
7. *Vulnerability Analysis of SCADA Protocol Binaries through Detection of Memory Access Taintedness*, with Carlo Bellettini, In Proceedings of the 8th IEEE SMC Information Assurance Workshop, United States Military Academy, West Point, New York, USA, June 2007.
8. *SCADA Protocol Obfuscation: A Proactive Defense Line in SCADA Systems*, with Carlo Bellettini, In Proceedings of the SCADA Security Scientific Symposium, Miami, USA, January 2007.
9. *Protecting Distributed Object Applications from Corruption of Class Bytecodes on Client Side*, In Proceedings of the 1st European Conference on Computer Network Defence, University of Glamorgan, UK, December 2005.
10. *Function Call Tracing Attacks to Kerberos 5*, with Emilia Rosti, Conference on Detection of Intrusions and Malware & Vulnerability Assessment, Vienna, Austria, July 2005.

11. *Securing IPv6-based Mobile Ad Hoc Networks Through An Artificial Immune System*, In Proceedings of the International Workshop on Natural and Artificial Immune Systems, Vietri sul Mare, Italy, June 2005.

12. *IPv6 Neighbor Discovery Protocol: A Security Case Study*, with Emilia Rosti, In Proceedings of the IADIS Applied Computing Conference, Algarve, Portugal, February 2005.

POSTERS

13. *An Intrusion Detection System for Operation in Nuclear Power Plants*, with Roy H. Campbell, Presented at the 4th ITI Workshop on Dependability and Security, Coordinated Science Laboratory, University of Illinois, Urbana, USA, November 30, 2007.

TECHNICAL  
REPORTS

14. *Acquiring Intrusion Intelligence Through Honeypot Systems*, Internal Report, Joint Research Center of the European Commission, September 2005.

OTHER WRITINGS

15. *Employing IPv6 to Improve Layer 3 Defence in SCADA Systems*, In the Newsletter of the European Coordination Project on Critical Information Infrastructure, February 2006.

REVIEWING  
ACTIVITIES

**Year 2008**

Title: Build Security In (BSI)  
Sponsor: U.S. Department of Homeland Security  
Publisher: BSI Website

**Year 2007**

Event Type: Workshop  
Title: Workshop on Privacy in the Electronic Society  
Editors: Vijay Atluri & Ting Yu  
Reviewer as non-PC

Event Type: Journal  
Title: Official Journal of the International Information Systems Security Certification Consortium  
Editors: Kamesh Namuduri  
Publisher: Taylor & Francis

Event Type: Book  
Title: Handbook of Research on Information Security and Assurance  
Editors: Jatinder N.D. Gupta, Sushil K. Sharma  
Publisher: Idea Group