

Marco Rocchetto

Curriculum Vitae



Personal information

Surname / First name	Rocchetto Marco
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Personal website	www.marcorocchetto.eu
Nationality	Italian
Date of birth	6 November 1985

Work experience

Currently since May 2017	Senior Engineer - United Technologies Research Center (UTRC), United Technologies Corporation (UTC) Member of the Security Team of the Formal Methods Group in ALES (Advanced Laboratories of Embedded Systems)
November 2016 - April 2017	Postdoctoral Researcher at the University of Luxembourg, SnT (Interdisciplinary Centre for Security, Reliability and Trust) In the context of the COMMA project (Combatting Context-Sensitive Mobile Malware)
October 2015 - October 2016	Postdoctoral Researcher at SUTD (Singapore University of Technology and Design) In the context of the ASPIRE project (Advancing Security of Public Infrastructure using Resilience and Economics), T4: Attacker Models definition
2014	Contract work - Penetration tester, ISGroup S.r.l.
2014	Contract work - Design and implementation of the first prototype of www.dnest.eu , D-Nest Web S.r.l.
January 2011 - September 2015	Research fellow - In the context of the European project FP7 SPaCIoS (Secure Provision And Consumption in the Internet of Services), University of Verona (IT) Title: Development, implementation and use of a platform for the automatic analysis of applications and industrial use cases in the context of the Internet of Services: modeling, validation and developing of the platform
May 2010 - December 2010	Research fellow - In the context of the European project FP7 AVANTSSAR (Automated VALIDationN of Trust and Security of Service-oriented ARchitectures), University of Verona (IT) Title: Development, implementation and use of a platform for the automatic analysis of Service Oriented Architecture

Education

2011-2014	Ph.D (Doctor Europaeus) program in Computer Science - XXVI cycle Graduate School in Sciences Engineering Medicine
Dissertation	Automated reasoning for the verification of security protocols and web applications. Combining Craig's interpolation and the Dolev-Yao intruder model
Supervisor	Prof. Luca Viganò
Committee	Eike Ritter, Santiago Escobar, Silvio Ranise, Nicola Bombieri
February-April 2013	Visiting student at the Swiss Federal Institute of Technology in Zürich (ETH Zürich) - CooperInt 2012 grant
2010	State professional qualifying examination in engineering University of Brescia
10 December 2009	Master's degree in Computer Science (2 years) at the faculty of Mathematical, Physical and Natural Sciences of the University of Verona
Thesis	Analysis, design and development of a web platform for the automatic protocol ana- lyzer AVISPA. Study and implementation of techniques to ensure the security proper- ties in service-oriented architecture
12 December 2007	Bachelor's degree in Computer Science (3 years) at the Faculty of Mathematical, Phys- ical and Natural Sciences of the University of Verona
Thesis	Functionality and use of IPSecurity
Supervisor	Prof. Luca Viganò
2007	Stage at University of Verona, working for the tvblob project (www.tvblob.com)
29 June 2004	Diploma at Liceo socio-psico-pedagogico (human sciences), C.Montanari - Verona

IT skills

Operating systems	Unix, Windows
Programming languages	Java, PHP, SQL, Python, BASH scripting (very good) - MATLAB, Perl, C (good) - C++, Assembly (basic)
Modeling	UML (good), SysML (basic), IBM Rhapsody (basic)
Specification languages	ASLan and ASLan++ (very good)
Versioning systems	SVN, Git
Security - Design time analysis	SPiM, AVANTSSAR platform (SATMC, OFMC, Cl-Atse), SPaCIoS tool
Security - Runtime analysis	Metasploit, Nmap, sqlmap, Wireshark, Ettercap, Nessus, Netcat, John the Ripper, Hydra, RainbowCrack and BackTrack/Kali toolset
Certificate	Machine Learning by Stanford University on Coursera (March 4, 2016)

Software development

Tool name	SPiM (Security Protocol interpolation Method)
Description	Design and implementation of a tool for: - translating security protocols into "corresponding" sequential programs - verifying correctness of security protocols by using interpolation-based techniques
Programming Language	Java (integrated with the use of Z3, iZ3)
Duration	January 2013 - December 2014

Personal skills

Mother Tongue	Italian
Additional language	English - fluent (spoken and written)

English courses	MYes institute - 2015 - level: CEF C1 Wall Street Institute - 2010-2011 - level: CEF B2 Speak your Mind - 2011 - level: CEF B2
Driving Licenses	A, B
Advising	
CoAdvising	Master Thesis (2017), Aleksandar Djokic Architecture-based Security Risk Assessment for Cyber-Physical Systems University of Trento, Italy
CoAdvising	PhD Thesis (2016), Katia Santacà A Topological Categorization of Agents for the Definition of Attack States in Multi-Agent Systems University of Verona, Italy
CoAdvising	Master Thesis (2015), Diego Sempredoni Analysis of The Onion Router (TOR) and attack scenarios for de-anonymization University of Verona, Italy
CoAdvising	Master Thesis (2014), Katia Santacà The Combinatorial Structure of Public Announcements University of Verona, Italy
CoAdvising	Master Thesis (2014), Marco Palamà Interpolation for security protocol analysis: formal methodology University of Verona, Italy
CoAdvising	Master Thesis (2014), Fabio Pettenuzzo Interpolation for security protocol analysis: design and implementation University of Verona, Italy
CoAdvising	Master Thesis (2013), Giacomo Dalle Vedove From model checking to testing in security protocol analysis. Mutations, interpolation and code annotation for test case generation University of Verona, Italy

Activities

Technical Program Committee	IWCMC-MC (2016-2017), CCN-CPS (2016-2017), CPSS (2017), SecCPS (2016),
Steering Committee	Computer Security Foundation Symposium (CSF), 2015
Reviewer	Journal of Formal Aspects of Computing, 2016 Ad-hoc Networks Journal, 2016 Security and Trust Management (STM), 2016 European Symposium on Research in Computer Security (ESORICS), 2016 Special Issue of the Journal of Automated Reasoning on Interpolation Techniques for Program Verification and Synthesis, 2014

Publications

Authors	Marco Rocchetto, Marco Volpe, Luca Viganò
Title	An Interpolation-based Method for the Verification of Security Protocols Journal of Computer Security (JCS), 2017
Authors	Marco Rocchetto, Nils Ole Tippenhauer
Title	Towards Formal Security Analysis of Industrial Control Systems

- In Proceedings of the Asia Conference on Computer and Communications Security (AsiaCCS), 2017
- Authors Katia Santacà, Matteo Cristani, Marco Rocchetto, Luca Viganò
 Title A Topological Categorization of Agents for the Definition of Attack States in Multi-Agent Systems
 In Proceedings of the European Conference on Multi-Agent Systems (EUMAS), 2016
- Authors Marco Rocchetto, Nils Ole Tippenhauer
 Title CPDY: Extending the Dolev-Yao Attacker with Physical-Layer Interactions
 In Proceedings of the International Conference on Formal Engineering Methods (ICFEM), 2016
- Authors Marco Rocchetto, Nils Ole Tippenhauer
 Title On Attacker Models and Profiles for Cyber-Physical Systems
 In Proceedings of the European Symposium on Research in Computer Security (ESORICS), 2016
- Authors Federico De Meo, Marco Rocchetto, Luca Viganò
 Title Formal Analysis of Vulnerabilities of Web Applications Based on SQL Injection
 In Proceedings of International Workshop on Security and Trust Management (STM), 2016
- Authors Marco Rocchetto, Martín Ochoa, Mohammad Torabi Dashti
 Title Model-based Detection of CSRF
 In Proceedings of the International Conference on Information Security and Privacy (IFIP-SEC), 2014
- Authors Marco Rocchetto, Luca Viganò, Marco Volpe, Giacomo Dalle Vedove
 Title Using Interpolation for the Verification of Security Protocols
 In Proceedings of the Workshop on Security & Trust Management (STM), 2013
- Authors Alessandro Armando, Wihem Arzac, Tigran Avanesov, Michele Barletta, Alberto Calvi, Alessandro Cappai, Roberto Carbone, Yannick Chevalier, Jorge Cuéllar, Gabriel Erzse, Simone Frau, Marius Minea, Sebastian Mödersheim, David von Oheimb, Giancarlo Pellegrino, Serena Ponta, Marco Rocchetto, Michael Rusinowitch, Mohammad Torabi Dashti, Mathieu Turuani, Luca Viganò
 Title The AVANTSSAR Platform for the Automated Validation of Trust and Security of Service-Oriented Architectures
 In Proceedings of the International Conference on Tools and Algorithms for the Construction and Analysis of Systems (TACAS), 2012

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