

Daniel Ricardo dos Santos

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| PERSONAL AND CONTACT INFORMATION | E-mail: danielricardo.santos@gmail.com Website: daniel-rs.github.io LinkedIn: linkedin.com/in/danielricardosantos | Skype: danielricardo.santos Phone: +39 388 634 0742 Location: Trento, Italy |
| AREAS OF INTEREST | Computer and Information Security; Software Engineering and Formal Methods. | |
| EDUCATION | University of Trento (UNITN), Italy PhD. in Computer Science <i>Thesis:</i> Automatic Security Analysis of Business Processes Expected graduation: 02/2017 Federal University of Santa Catarina (UFSC), Brazil MSc. in Computer Science <i>Thesis:</i> Dynamic Risk-based Access Control for Cloud Computing 2013 BSc. in Computer Science <i>Thesis:</i> Identity Management and Privacy in Cloud Computing 2011 | |
| WORK EXPERIENCE | Fondazione Bruno Kessler - Trento, Italy <i>Junior Researcher</i> 09/2016 - Current Static and dynamic security analysis of Android applications, in collaboration with the PosteItaliane Cyber Security Innovation lab. <i>Early Stage Researcher</i> 09/2013 - 08/2016 Designed and developed techniques and tools based on formal methods for security analysis and enforcement of workflow-driven applications and web applications. Part of the Marie-Curie ITN SECENTIS project. SAP Labs (FBK collaboration) - Sophia Antipolis, France <i>Early Stage Researcher</i> 09/2013 - 08/2016 Designed and developed a tool to test web application exploits in multiple environments (TestREx), using Selenium and Docker. Integrated a research tool for the synthesis of run-time monitors into the SAP HANA Operational Intelligence platform. Part of the Marie-Curie ITN SECENTIS project. SecPlus - Florianópolis, Brazil <i>Information Security Consultant</i> 10/2012 - 07/2013 Conducted penetration testing and security assessments for several companies. Contributed to open source projects for the analysis of Linux malware (Maleficus) and for secure development in PHP (secplus-php). AltoQi - Florianópolis, Brazil <i>C++ developer</i> 10/2011 - 04/2012 Implemented parts of the graphics and database modules of QiBuilder, a CAD software for civil engineering, using the Windows API and SQLite. Networks and Management Laboratory, UFSC - Florianópolis, Brazil <i>Research Assistant</i> 07/2010 - 07/2013 Participated in projects related to identity management, access control, and security monitoring in cloud computing, using technologies such as Shibboleth and OpenStack. | |

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| SKILLS | Programming languages: Python, Java, C/C++, PHP, JavaScript. | |
| | Technical expertise: Penetration testing, Web and Mobile security, Formal methods. | |
| | Soft skills: Quick learner with good communication (verbal and written). Capable of working independently and in teams. Efficient project manager. | |
| | Languages: Portuguese (Native), English (Fluent), Italian (Intermediate). | |
| FURTHER EDUCATION | Summer/Winter Schools: | |
| | European Summer School in Logic, Language, and Information | 2016 |
| | SECENTIS Winter School - Security of Enterprise Information Systems | 2016 |
| | IEEE Italy Section School of Career Boosting | 2015 |
| | Marktoberdorf Summer School - Dependable Software Systems Engineering | 2014 |
| | UFSC Mathematics Summer School - Axiomatic Set Theory, Real Analysis | 2011 |
| | Online: | |
| | Machine Learning (Coursera - Andrew Ng, Stanford) | 2015 |
| | Introduction to Philosophy (edX - Caspar Hare, MIT) | 2014 |
| AWARDS AND SCHOLARSHIPS | Best Student Paper Award (DBSec Conference, IFIP WG11.3) | 2015 |
| | Scholarship for PhD. studies (Marie-Curie Actions, European Union) | 2013 |
| | Scholarship for MSc. studies (CNPq, Brazil) | 2012 |
| | Scholarship for BSc. studies (CNPq, Brazil) | 2010 |
| PATENTS | “Secure and Compliant Execution of Processes”, S.E. Ponta, L. Compagna, D.R. dos Santos , S. Ranise, filed on 13/04/2016 (under USPTO review) | |
| | “Multi-context Exploit Test Management”, A. Sabetta, L. Compagna, S.E. Ponta, S. Dashevskyi, D.R. dos Santos , F. Massacci, filed on 22/04/2015 (under USPTO review) | |
| VULNERABILITIES DISCLOSED | CVE-2013-2618, CVE-2013-2619. | |
| TEACHING ASSISTANCE | Applied Security - Offensive Technologies (MSc.) - UNITN, Italy | 2014 |
| | Operating Systems (BSc.) - UFSC, Brazil | 2013 |
| | Computer Networks (BSc.) - UFSC, Brazil | 2013 |
| SCIENTIFIC AND PROFESSIONAL ASSOCIATIONS | Association for Computing Machinery (ACM) | |
| | Working Group on Data and Applications Security and Privacy (IFIP WG11.3) | |
| | European Joint Conferences on Theory and Practice of Software (ETAPS) | |
| OTHER INTERESTS (HOBBIES) | Martial arts: Wado-ryu Karate black belt (1st dan) | |
| | Volunteering: Boy Scout leader (2010-2013) | |

List of publications

JOURNALS

1. **D.R. dos Santos**, R. Marinho, G.R. Schmitt, C.M. Westphall, C.B. Westphall. “*A Framework and Risk Assessment Approaches for Risk-based Access Control in the Cloud*” in Journal of Network and Computer Applications, vol. 74, October, 2016
2. C.B. Westphall et al. “*Operation, Management, Security and Sustainability for Cloud Computing*” in Revista de Sistemas de Informação da FSMA, vol. 2014, no. 13, 2014
3. E.A. Rigon, C.M. Westphall, **D.R. dos Santos**, C.B. Westphall. “*A Cyclical Evaluation Model of Information Security Maturity*” in Information Management and Computer Security, vol. 22, no. 3, 2014
4. **D.R. dos Santos**, T.J. Nascimento, C.M. Westphall, M.A.P. Leandro, C.B. Westphall. “*Privacy-preserving identity federations in the cloud: a proof of concept*” in International Journal of Security and Networks, vol. 9, no. 1, 2014
5. R.F. de Souza, C.B. Westphall, **D.R. dos Santos**, C.M. Westphall. “*A Review of PACS on Cloud for Archiving Secure Medical Images*” in International Journal of Privacy and Health Information Management, vol. 1, no. 1, 2013

CONFERENCES AND WORKSHOPS

1. **D.R. dos Santos**, S.E. Ponta, S. Ranise. “*Modular Synthesis of Enforcement Mechanisms for the Workflow Satisfiability Problem: Scalability and Reusability*” in Proceedings of the 21st ACM Symposium on Access Control Models and Technologies (SACMAT), 2016
2. L. Compagna, **D.R. dos Santos**, S.E. Ponta, S. Ranise. “*Cerberus: Automated Synthesis of Enforcement Mechanisms for Security-sensitive Business Processes*” in Proceedings of the 22nd International Conference on Tools and Algorithms for the Construction and Analysis of Systems (TACAS), 2016
3. **D.R. dos Santos**, S. Ranise, L. Compagna, S.E. Ponta. “*Assisting the Deployment of Security-Sensitive Workflows by Finding Execution Scenarios*” in Data and Applications Security and Privacy XXIX (DBSec), 2015
4. C. Bertolissi, **D.R. dos Santos**, S. Ranise. “*Automated Synthesis of Run-time Monitors to Enforce Authorization Policies in Business Processes*” in Proceedings of the 10th ACM Symposium on Information, Computer and Communications Security (ASIACCS), 2015
5. S. Dashevskiy, **D.R. dos Santos**, F. Massacci, A. Sabetta. “*TESTREX: a Testbed for Repeatable Exploits*” in Proceedings of the 7th Workshop on Cyber Security Experimentation and Test (CSET), 2014
6. P.A.F. Vitti, **D.R. dos Santos**, C.B. Westphall, C.M. Westphall, K.M.M. Vieira. “*Current Issues in Cloud Computing Security and Management*” in Proceedings of the 8th International Conference on Emerging Security Information, Systems and Technologies (SECURWARE), 2014
7. **D.R. dos Santos**, C.M. Westphall, C.B. Westphall. “*A dynamic risk-based access control architecture for cloud computing*” in Proceedings of the IEEE/IFIP Network Operations and Management Symposium (NOMS), 2014
8. P. Silva, C.B. Westphall, C.M. Westphall, M. Mattos, **D.R. dos Santos**. “*An Architecture for Risk Analysis in Cloud*” in Proceedings of the 10th International Conference on Networking and Services (ICNS), 2014
9. **D.R. dos Santos**, C.M. Westphall, C.B. Westphall. “*Risk-based Dynamic Access Control for a Highly Scalable Cloud Federation*” in Proceedings of the 7th International Conference on Emerging Security Information, Systems and Technologies (SECURWARE), 2013
10. R.F. de Souza, C.B. Westphall, **D.R. dos Santos**, C.M. Westphall. “*Challenges of Operationalizing PACS on Cloud Over Wireless Networks*” in Proceedings of the 9th International Conference on Wireless and Mobile Communications (ICWMC), 2013

11. R.B. Brinhosa, C.M. Westphall, C.B. Westphall, **D.R. dos Santos**, F. Grezele. *“A Validation Model of Data Input for Web Services”* in Proceedings of the 12th International Conference on Networks (ICN), 2013
12. M.A.P. Leandro, T.J. Nascimento, **D.R. dos Santos**, C.M. Westphall, C.B. Westphall. *“Multi-Tenancy Authorization System with Federated Identity for Cloud-Based Environments Using Shibboleth”* in Proceedings of the 11th International Conference on Networks (ICN), 2012
13. **D.R. dos Santos**, C.M. Westphall, *“Uma aplicação de privacidade no gerenciamento de identidades em nuvem com uApprove”* in Anais do Simpósio Brasileiro em Segurança da Informação e de Sistemas Computacionais (SBSEG), 2011