

Esteban Alejandro ARMAS VEGA

PERSONAL INFORMATION

PLACE OF BIRTH: Quito, Ecuador
DATE OF BIRTH: 31 May 1985
DNI: 55313292V
HOME ADDRESS: C/ Arciniega 23 4 -IZQ, 28039, Madrid, Spain
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CONTACT INFORMATION

WORK ADDRESS: C/ Prof. José García Santesmases 9, 28040, Madrid, Spain
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WORK EMAIL: esarmas@ucm.es

EDUCATION

NOV. 2020 PhD in COMPUTER SCIENCE,
Complutense University of Madrid
Thesis: "Passive Techniques for Detecting Manipulations in Digital Images"
Advisor: Prof. Luis Javier GARCÍA VILLALBA

OCT. 2016 Master of Science in COMPUTER SCIENCE,
Complutense University of Madrid
Thesis: "Tools for Dynamic Analysis of Vulnerabilities in Web Applications"
Advisor: Prof. Luis Javier GARCÍA VILLALBA

JULY 2009 Undergraduate Degree in INFORMATICS ENGINEERING
Technological University of Habana "José Antonio Echeverría"
Thesis: "Software Management and Search System "BuSo"
Advisor: Prof. Frank Abel CANCIO BELLO

SCHOLARSHIPS AND CERTIFICATES

SEPT. 2014 2 years Master Scholarship by Secretariat of Higher Education of Ecuador
(€50,000)

LANGUAGES

SPANISH: Mother tongue
ENGLISH: Fluent – Spoken and Written (C1 Equivalent)

COMPUTER AND GENERAL SKILLS

Programming Languages: Python, PHP, Java, C, C++, C#, JavaScript, Ruby, Swift, SQL, Maude, Prolog
ML Frameworks: Keras, PyTorch, Tensorflow, Scikit-learn, Caffe
DevOps Tools: Git, Docker, Travis CI, Prometheus, Snort, Squid
OS and Cloud Platforms: LINUX, Windows, macOS, GCP, AWS, Azure
Security: OSINT tools, YARA, Cuckoo Sandbox

COMPUTER AND GENERAL SKILLS

Active listening, Ability to take part in technical discussions, Self-starter, Proactive, Problem-solving, Leadership, Management Skills

INTERESTS AND ACTIVITIES

Computer Vision, Machine Learning, Deep Learning, Data Mining, Cybersecurity, Cryptography, Computer Forensics

WORK EXPERIENCE

<i>Current</i> Nov. 2016	Researcher at COMPLUTENSE UNIVERSITY OF MADRID <i>GASS Cybersecurity Researcher</i> "RAMSES" H2020 Project Researcher. Development of multimedia forensic analysis tool for law enforcement agencies use. Analysis of images and video, detection of manipulations and identification of source of acquisition. Development of Computer Vision Algorithms. Deployment of virtualized environments and containers during pilots. Development of crawlers and scrapers to gather information (use of OSINT). Development of H2020 RIA and IA project proposals.
Nov. 2015 OCT. 2016	Developer at ESRI Geosystems, Spain <i>Web and Mobile Applications Developer</i> Development of prototype applications for client use, using ESRI technology. Development done in languages: Python, JavaScript, Swift, Objective-C, C#, Spring, MongoDB, Bootstrap. Use of different DevOps tools such as: GitHub, Maven, JUnit, Subversion, Docker, puppet, etc.
SEPT. 2009 SEPT. 2014	IT Manager at ARMAS VEGA ASOCIADOS S.A., Quito - Ecuador <i>Network Administration and Implementation of Computer Systems</i> Design of software applications for inventory management. Design and Implementation of the data network infrastructure, installation and deployment of Servers and Network Equipment. Design and Implementation of Websites and Web Applications (PHP, MySQL).

RESEARCH ACTIVITIES

Publications

- E. A. Armas Vega, E. Gonzalez Fernández, A. L. Sandoval Orozco and L. J. García Villalba, "Copy-Move Forgery Detection Technique Based on Discrete Cosine Transform Blocks Features", Neural Computing and Applications. Submission state: Accepted, Sept. 2020.
- E. A. Armas Vega, E. Gonzalez Fernández, A. L. Sandoval Orozco and L. J. García Villalba, "Image Tampering Detection by Estimating Interpolation Patterns", Future Generation Computer Systems. June 2020. doi: 10.1016/j.future.2020.01.016.
- E. A. Armas Vega, E. Gonzalez Fernández, A. L. Sandoval Orozco and L. J. García Villalba, "Passive Image Forgery Detection Based on the Demosaicing Algorithm and JPEG Compression", IEEE Access, 2020. doi: 10.1109/ACCESS.2020.2964516
- E. A. Armas Vega, A. L. Sandoval Orozco, L. J. García Villalba: "Digital Images Authentication Technique Based on DWT, DCT and Local Binary Patterns", Sensors, October 1 2018.
- A. Lopez Vivar, E. A. Armas Vega, A. L. Sandoval Orozco, L. J. García Villalba, T. Kim: "Ransomware Automatic Data Acquisition Tool", IEEE Access, September 1 2018.
- F. Román, E. A. Armas Vega, L. J. García Villalba: "Analyzing the traffic of penetration testing tools with an IDS", The Journal of Supercomputing, 19 November 2016.

J. Rosales Corripio, E. A. Armas Vega, A. L. Sandoval Orozco, L. J. García Villalba: “**Uso de Características en la Identificación de la Fuente de Imágenes de Dispositivos Móviles**”, in Proceedings of the 15th Spanish Meeting on Cryptology and Information Security (RECSI), Maó Menorca, Spain, November 2016.

E. A. Armas Vega, F. Román, L. J. García Villalba: “**Herramientas de Análisis Dinámico de Aplicaciones Web con Snort**”, in Proceedings of the 8th International Congress of Computing and Telecommunications (COMTEL), Lima, Peru, September 2016.

E. A. Armas Vega, A. L. Sandoval Orozco, L. J. García Villalba: “**Poster: Evaluating Black-Box Testing Tools**”, in Proceedings of the 2nd IEEE European Symposium on Security and Privacy, Paris, France, April 26 – 28, 2017.

E. A. Armas Vega, A. L. Sandoval Orozco, L. J. García Villalba, J. Hernandez-Castro, T. Silva, A. Prada: “**Poster: Internet Forensic Platform for Tracking the Money Flow of Financially-Motivated Malware**”, in Proceedings of the 2nd IEEE European Symposium on Security and Privacy, Paris, France, April 26 – 28, 2017.

E. A. Armas Vega, A. L. Sandoval Orozco, L. J. García Villalba: “**Benchmarking of Pentesting Tools**”, in Proceedings of the 19th International Conference on Information Technology, Paris, France, May 18 – 19, 2017.

Participation on EU Projects

- Project:* **RAMSES** – Internet Forensic Platform for Tracking the Money Flow of Financially-Motivated Malware
- CODE:* H2020-FCT-2015, Innovation Action, Proposal Number: 700326.
- FINANCING:* European Commission, Horizon 2020 research and innovation Programme.
- PARTICIPATING:* Treelogic Telematica y Logica Racional para la Empresa Europea S.L. (España), Policia Judiciaria (Portugal), University of Kent (UK), Research Centre on Security and Crime (Italy), Universidad Complutense de Madrid (Spain), College of the Bavarian Police (Germany), Trilateral Research and Consulting (UK), Politecnico di Milano (Italy), Belgian Federal Police (Belgium), Saarland University (Germany), Spanish National Police (Spain)
- DURATION:* **Since** September 01 2016 **to** September 01 2019
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- Project:* **SELFNET** – Framework for Self-Organized Network Management in Virtualized and Software Defined Networks
- CODE:* H2020-ICT-2014-2, Innovation & Research Action (RIA), Proposal Number: 671672.
- FINANCING:* European Commission, Horizon 2020 research and innovation programme.
- PARTICIPATING:* EURESCOM - European Institute for Research and Strategic Studies in Telecommunications (Germany), InnoRoute (Germany), The German Research Center for Artificial Intelligence (Germany), Universidad Complutense de Madrid (Spain), Universidad de Murcia (Spain), Creative Systems Engineering Monoprosopi EPE (Greece), Alvarion Technologies Ltd. (Israel), Nextworks Srl (Italy), PT Inovação e Sistemas (Portugal), Proef (Portugal), Ubiwhere Lda. (Portugal), University of the West of Scotland (UK)
- DURATION:* **Since** July 1 2015 **to** June 30 2018

Project: **CRYPTACUS** – Cryptanalysis of Ubiquitous Computing Systems

CODE: ICT (Information and Communication Technologies) COST Action IC1403.

FINANCING: COST (European Cooperation in Science and Technology).

PARTICIPATING: Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Denmark, Estonia, Finland, France, FYR Macedonia, Germany, Greece, Hungary, Ireland, Israel, Italy, Luxembourg, Netherlands, Norway, Poland, Portugal, Romania, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom

DURATION: **Since** December 12 2014 **to** November 11 2018