Jesus Molina

## Cybersecurity Expert | Industrial Security |

## Public Speaker | Researcher

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**QUALIFICATION SUMMARY:**

The ability to serve as a security executive by ensuring **security** planning, testing, verification and risk analysis in accordance with the different industrial security standards and the **Industrial Internet Security Framework**. Capable of working at different levels, from **policy and standards**, to **threat evaluation** and **implementation**. Extensive experience with security standards, evaluating IoT security, and conducting security research. **Respected** leader in the security community with experience evaluating and compromising live systems. Experience with **international markets** and standards, including Japan, Israel, US and Europe.

**RECENT ACTIVITIES:**

* Thought leadership lead at **Waterfall Security Solutions**
* New Markets Manager at **Waterfall Security Solutions**
* Creation of educational content for Industrial Cybersecurity
* Lecturer on rail cybersecurity at **Universitat Politecnica de Catalunya**
* Security Chair at the **Industrial Internet Consortium**
* Author and editor of the **Industrial Internet Security Framework**
* Author and editor of the **Augmented Reality Security Framework**
* Organizer of the **IoT Sandbox** at the **RSA security conference**

**KEY COMPETENCIES:**

* **Executive** management of Industrial Cybersecurity company development in new markets
* **Research** security products, AI, Industrial cybersecurity and understand challenges to protect the evolving industrial internet
* **Create** educational content (NIS2 for OT professionals,
* **Leadership** positions in organizations with global security outreach (member of EE-SAC, UITP)
* **Write** new security policy, standards and frameworks for industrial systems
* Experience conducting **architecture reviews** and audits in industrial internet experimental testbeds
* **Evaluation** of IoT and IIoT products and supply chain security
* Research new developments in **i*ndustrial* security** in order to recommend, develop and implement new **security** policies, standards, procedures and frameworks.

**PROFESSIONAL EXPERIENCE:**  
**Business Development Director, JM consulting 2017-Current**

* Establish Unidirectional Gateways in new markets, including rail and air
* Generate revenue with new prospect through Proof of Concept
* Develop unidirectional products for specific vertical need in critical infrastructure
* Evangelize security practices for critical with talks and thought leadership

**Security Analyst and Consultant, JM consulting 2011-2017**

* Leadership position at the Industrial Internet Consortium representing Fujitsu Ltd.
* Identified vulnerabilities, recommend corrective measures and ensure the adequacy of existing information **security** controls for industrial systems.
* Educated the community in conferences, including **BlackHat, Defcon and IoT world congress**. Appear in several panels on industrial system security.
* Prepared detail reports on IoT and IIot security practices and drat recommendation with a global outreach.
* Evaluated security practices and standards across regions, including Japan, USA and Europe.
* Created threat testing cloud platform to evaluate distributed systems, including **OpenStack** and **Cloud Stack**
* Served in several standard bodies and organizations, including **NIST, NSF, OASIS, DMTF** and **CSA** representing different companies.

**Security Researcher, Fujitsu Ltd. 2007-2009**

* Performed security research, analysis and design for hardware and software.
* Develop patents on systems and protocols, including wireless payment systems, self-erasable memories, trust anchors and authentication of containers.
* Developed, implemented, and documented formal security programs and policies.
* Created hardware prototypes for cloud trusted anchors, independent system auditors, wireless payment systems and trusted execution environments.
* Represented Fujitsu in global standard bodies and conference.
* Chair and board member at the Trusted Computing Group

**SELECTED TALKS**

* Speaker at ICS Kaspersky Conference 2018
* Speaker at Smart Rail Conference 2018
* Speaker at IIC Security Forum, Sunnyvale VA, October 2016 : Managing and Monitoring the Industrial Internet of Things
* Speaker at RSA USA 2016: When Good Devices Go Bad: Live Hacking at the IoT Sandbox
* Panelist at Iot Wold Congress 2015: IoT Security
* Speaker at BLACKHAT 2014: Learn how to control every room at a luxury hotel remotely: the dangers of insecure home automation deployment

**SELECTED PUBLICATIONS**

* Multiple Authors. Evaluating the Security of Industrial IoT Testbeds. Journal of Innovation, Industrial Internet Consortium
* Multiple Authors. Augmented Reality Security Framework. AREA. September 2017
* Multiple Authors. Industrial Internet Security Framework. Industrial Internet Consortium. September 2016
* J. Molina. 2007. Evaluating Host Intrusion Detection Systems. Ph.D. Dissertation. University of Maryland at College Park, College Park, MD, USA
* J. Molina and M. Cukier. 2009. Evaluating Files to Audit for Detecting Intrusions in FileSystem Data. In Proceedings of the 2009 Eighth IEEE International Symposium on Network Computing and Applications
* N. L. Petroni, J. Molina, T. Fraser, W. A. Arbaugh. Copilot: A Coprocessor Based Runtime Integrity Monitor. 13th Usenix Security Symposium 2004)

**EDUCATION:**  
University of Maryland, College Park, MD. Ph.D. in Electrical Engineering, 2007.

Dissertation: Evaluating Host Intrusion Detection Systems Advisor: Michel Cukier

University of Maryland, College Park, MD. M.S. in Electrical Engineering, 2001.

Dissertation: Using Independent Auditors for Intrusion Detection Systems

Advisor: William A. Arbaugh

Universitat Politecnica de Catalunya, Spain. Bachelor in Ingenieria de Telecomunicaciones, 1999.

Dissertation: Hardware Implementation of an Authentication Protocol Using Kerberos