

Jesus Molina

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Profile

Consultant with eight years of experience in standardization committees

Experience with virtualization technologies and cloud management

Inventor with several patents in cloud computing, computer security and E-commerce

12 years of computer security experience, including authentication protocols, biometrics, trusted computing and cryptography

Proven Ability to direct complex projects from concept to fully operational status

Education

2007 **PhD in Electrical and Computer Engineering**, *University of Maryland College Park.*

2001 **M.Sc. in Electrical and Computer Engineering (with thesis)**, *University of Maryland College Park.*

1999 **B.S. Degree in Electrical Engineering**, *UNIVERSITAT POLITÈCNICA CATALUNYA, Barcelona, Spain .*

Services

Contributor to the [OASIS TOSCA](#) for cloud orchestration

Contributor to the Big Data Working Group at the [Cloud Security Alliance](#)

Contributor and Evaluator of the Open Source [DeltaCloud](#) project

Guest editor for the IEEE Security and privacy special issue [Development of Authentication Technologies](#) (January/February 2012)

[National Science Foundation](#) Panelist

Contributor at [DMTF](#) Cloud Management Working group

Contributor at the [Cyber Security Coordination Task Force](#) (Now [SGIP-CSWW](#))

Former board member and chair at the [Trusted Computing Group](#)

Employment

Present **Jesus Molina Consulting, Owner.**

Assist standardization efforts, both technically and strategically

2007-2011 **Fujitsu Laboratories of America., Member of Research Staff.**

- Collaborated with standardization committees in the fields of authentication and trusted computing

- Oversee research projects on the fields of security, embedded systems and virtualization

- Developed new technologies and intellectual property in emerging technologies

- Published research at academic and professional conferences and journals

2002-2007 **Fujitsu Laboratories of America., Research Intern.**

- Lead and maintained software for cryptographic module (TPM) emulation

- Ported and extended on-site TPM-emulator for FRV Fujitsu based IP phone.

- 2006-2008 **Center for Risk and Reliability**, *Research Assistant*.
- Developed an evaluation method for intrusion detection systems
 - Deployed high assurance honeypots to monitor attacker actions in filesystems
- 2001-2006 **Maryland Information Systems Security Lab**, *Research Assistant*.
- Created a secure embedded filesystem integrity checker and a patent pending embedded memory integrity checker (Komoku and Copilot)

Recent Talks

- Panelist DAC 2011 Hackers and Attackers: How Safe is Your Embedded Design? Presented attacks to smart meters
- Speaker [Cloud Security Alliance congress 2010](#) Leveraging Trusted Technologies to Secure the Cloud
- Speaker [Secure Cloud 2010](#) Practical Applications of Trusted Computing in the Cloud
- Speaker [Storage Developers Conference 2010](#) Designing Secure Storage for the Cloud

Publications

Z. Song, J. Molina, and C. Strong. *Trusted Anonymous Execution: A Model to Raise Trust in Cloud*. In *Proceedings of the 2010 Ninth International Conference on Grid and Cloud Computing (GCC '10)* [[pdf](#)] [[bibtex](#)]

Chow, R.; Jakobsson, M.; Niu, Y.; Shi, E.; Molina, J.; Masuoka, R.; Song, Z. *Authentication in the clouds: a framework and its application to mobile users*. ACM Cloud Computing Security Workshop (CCSW); 2010 [[pdf](#)] [[bibtex](#)]

R. Chow, P. Golle, M. Jakobsson, E. Shi, J. Staddon, R. Masuoka, and J. Molina. *Controlling data in the cloud: outsourcing computation without outsourcing control*. In *Proceedings of the 2009 ACM workshop on Cloud computing security (CCSW '09)* [[pdf](#)] [[bibtex](#)]

Jesus Molina, "Evaluating Host Intrusion Detection Systems" Ph.D. Thesis, December 2007 [[pdf](#)]

J. Molina, Xavier Chorin, M. Cukier. *Filesystem Activity Following a SSH Compromise: An Empirical Study of File Sequences*. ICISC 2007: 144-155

Jesus Molina, Houcheng Li, Sung Lee, Zhexuan Song. *A Mobile Trusted Platform Module (mTPM) Architecture*, Workshop on Advances in Trusted Computing, Tokyo, November 2006) [[pdf](#)] [[bibtex](#)]

N. L. Petroni, J. Molina, T. Fraser, W. A. Arbaugh. *Copilot: A Coprocessor Based Runtime Integrity Monitor*. 13th Usenix Security Symposium 2004) [[pdf](#)] [[bibtex](#)]

J. Molina, W. Arbaugh. *Using Independent Auditors as Intrusion Detection Systems*. ICICS 2002: 291-302, December 9-12, 2002 Springer) [[pdf](#)] [[bibtex](#)]

J. Molina. *Using Independent Auditors for Intrusion Detection Systems*, Master's Thesis. 2001. Advisor William A. Arbaugh [[pdf](#)] [[bibtex](#)]