

Jesus Molina

contact@jesusmolina.com

<http://www.jesusmolina.com>

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

UNIVERSITY OF MARYLAND, CollegePark, MD
Ph.D. Degree in Electrical Engineering, Awarded 2007
UNIVERSITY OF MARYLAND, CollegePark, MD
M.S. Degree (with thesis) in Electrical Engineering, Awarded 2001
UNIVERISTITAT POLITECNICA CATALUNYA, Barcelona, Spain
B.S. Degree in Electrical Engineering, Awarded 1999

Service & Relevant Experience

- Guest editor for the **IEEE Security and Privacy** special issue Development of Authentication Technologies (January/February 2012)
 - Active member at the **DMTF Cloud Management Working Group**
 - Former board member and co-chair at the **Trusted Computing Working Group (TCG WG)** from 2003 to 2009
 - **National Science Foundation** Panelist
 - Active member and speaker for the **Cloud Security Alliance**
 - Contributor at the **Smart Grid Cyber Security Coordination Task Force** (Now SGIP-CSWW)
 - Developed advanced intrusion detection systems and honeypots
 - Experience written embedded system code and drivers
-

Employment

- Jesus Molina Consulting.** *Owner* *Present*
- Assist standardization efforts, both technically and strategically
- Fujitsu Laboratories of America.** *Member of Research Staff* *2007-2011*
- 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

- Fujitsu Laboratories of America.** *Research Intern* 2002-2007
- Lead and maintained software for cryptographic module (TPM) emulation
 - Ported and extended on-site TPM-emulator for FRV Fujitsu based IP phone.
- Center for Risk and Reliability,** *Research Assistant* 2006-2008
- Developed an evaluation method for intrusion detection systems
 - Deployed high assurance honeypots to monitor attacker actions in filesystems
- Maryland Information Systems Security Lab ,** *Research Assistant* 2001-2006
- Created a secure embedded filesystem integrity checker and a patent pending embedded memory integrity checker (Komoku and Copilot)

Selected Talks

- Panelist:** DAC 2011 Hackers and Attackers: How Safe is Your Embedded Design?
- 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

Selected 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)
- R. 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
- 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)
- Jesus Molina, “*Evaluating Host Intrusion Detection Systems*,” Ph.D. Thesis, December 2007
- Jesus Molina, Joe Gordon, Xavier Chorin, Michel Cukier: Filesystem “*An empirical study of filesystem activity following a SSH compromise*,” Information, Communications & Signal Processing, 2007 6th International Conference
- Jesus Molina, Houcheng Lee, Sung Lee, Zhexuan Song: “*A Mobile Trusted Platform Module (mTPM) Architecture*,” Presented at The Second Workshop on Advances in Trusted Computing, 2006
- N. Petroni, T. Fraser, J. Molina, and W. Arbaugh: “*Copilot - a Coprocessor-based Kernel Runtime Integrity Monitor*,” Proc. of the 13th USENIX Security Symposium, August, 2004
- Jesus Molina, William A. Arbaugh: “*Using Independent Auditors as Intrusion Detection Systems*,” ICICS 2002: 291-302, December 9-12, 2002 Springer 2002, ISBN 3-540-00164-6
- Jesus Molina: “*Using Independent Auditors for Intrusion Detection Systems*,” M.S. Thesis, July 2001