Welcome to Hongxin Hu's Webpage

My research interests centrally focus on the area of Cyber Security. More specifically, I strives to ground my research in practical problems with an eye towards developing effective solutions to address realistic security issues created by today?s emerging technologies, such as social networking, cloud computing, software-defined networking, and mobile computing. The innovative use of cross-field methods and collaborative synergy characterize my research approach.

I have authored over 60 research papers. My work has published in many top-tier academic venues including USENIX Security, ACM SACMAT, ACSAC, ESORICS, ACM ASIACCS, ACM CODASPY, ACM CCS, ACM IHI, IEEE INFOCOM, IEEE Transactions on Knowledge and Data Engineering, IEEE Transactions on Dependable and Secure Computing, IEEE Transactions on Systems, Man, and Cybernetics, IEEE Transactions on Parallel and Distributed Systems, and IEEE Transactions on Services Computing.I am a member of the ACM and the IEEE.

***** For more details about my research and pubmications, please visit this web site [1] *****

SELECTED PUBLICATION [DBLP [2]]

Referred Journal Publications (From 2009):

2013

1. **Discovery and Resolution of Anomalies in Web Access Control Policies**
   Hongxin Hu, Gail-Jooh Ahn and Ketan Kulkarni
   *IEEE Transactions on Dependable and Secure Computing (**TDSC**).* (To appear)
2. **Multiparty Access Control for Online Social Networks: Model and Mechanisms**
   Hongxin Hu, Gail-Joon Ahn and Jan Jorgensen
   *IEEE Transactions on Knowledge and Data Engineering (**TKDE**)*. (To appear)
3. **Dynamic Audit Services for Outsourced Storages in Clouds**
   Yan Zhu, Gail-Joon Ahn, Hongxin Hu, Stephen S. Yau, Ho G. An and Shimin Chen
   *IEEE Transactions on Services Computing (**TSC**),* (To appear)
4. **Formal Analysis of Information Card Federated Identity-Management Protocol**
   Juan Wang, Hongxin Hu, Bo Zhao, Fei Yan, Huangguo Zhang and Qianhong Wu
   *Chinese Journal of Electronics (**CJE**)*, Vol. 22, No. 1, January, 2013.

2012

1. **Towards HIPAA-compliant Healthcare Systems in Cloud Computing**
   Ruoyu Wu, Gail-Joon Ahn and Hongxin Hu
   *International Journal of Computational Models and Algorithms in Medicine (**IJCMAM**)*, Special Issue on Privacy in Health Informatics, Vol. 3, No. 2, December, 2012.
2.

Cooperative Provable Data Possession for Integrity Verification in Multi-Cloud Storage
Yan Zhu, Shanbiao Wang, Hongxin Hu, Gail-Joon Ahn and Di Ma
*IEEE Transactions on Parallel and Distributed Systems (**TPDS**),* Vol. 23, No. 12, December, 2012.

3. **Collaborative Integrity Verification in Hybrid Clouds**
   Yan Zhu, Hongxin Hu, Gail-Joon Ahn, Yujing Han and Shimin Chen
   *International Journal of Cooperative Information Systems (**IJCIS**)*, World Scientific, Vol. 21, No. 03, November, 2012. (Invited and accepted as one of best papers presented at CollaborateCom'11)
4. **Detecting and Resolving Firewall Policy Anomalies**
   Hongxin Hu, Gail-Jooh Ahn and Ketan Kulkarni
   *IEEE Transactions on Dependable and Secure Computing (**TDSC**),* Vol. 9, No. 3, May/June 2012.
5. **Comprehensive Two-Level Analysis of Role-Based Delegation and Revocation Policies**
   Karsten Sohr, Mirco Kuhlmann, Martin Gogolla, Hongxin Hu and Gail-Joon Ahn
   *Information and Software Technology (**IST**), Elsevier*, Vol. 54, No. 12, December, 2012. (Invited as the SSIRI'11 best paper)
6. **Efficient Constructions of Provably Secure Steganography under Ordinary Covert Channels**
   Yan Zhu, Mengyang Yu, Hongxin Hu, Gail-Joon Ahn and Hongjia Zhao
   Science China - Information Sciences, Springer, Vol. 55, No. 7, July, 2012.
7. **Remote Attestation with Domain-based Integrity Model and Policy Analysis**
   Wenjuan Xu, Xinwen Zhang, Hongxin Hu, Gail-Joon Ahn and Jean-Pierre Seifert
   *IEEE Transactions on Dependable and Secure Computing (**TDSC**),* Vol. 9, No. 3, May/June 2012.
8. **Efficient Audit Service Outsourcing for Data Integrity in Clouds**
   Yan Zhu, Hongxin Hu, Gail-Joon Ahn and Stephen S. Yau
   *Journal of Systems and Software (**JSS**),* Elsevier, Vol. 85, No 5, May 2012.
9. **Risk-Aware Mitigation for MANET Routing Attacks**
   Ziming Zhao, Hongxin Hu, Gail-Joon Ahn and Ruoyu Wu
   *IEEE Transactions on Dependable and Secure Computing (**TDSC**),* Vov. 9, No. 2, March/April 2012.

2011

1. **Provably Secure Role-Based Encryption with Revocation Mechanism**
   Yan Zhu, Hongxin Hu, Gail-Joon Ahn, Huaixi Wang and Shanbiao Wang
   *Journal of Computer Science and Technology (**JCST**),* Springer, Vol. 26, No. 4, July, 2011.
2. **Patient-centric Authorization Framework for Electronic Healthcare Services**
   Jing Jin, Gail-Joon Ahn, Hongxin Hu, Michael Covington and Xinwen Zhang
   *Computers & Security (**COSE**),* Elsevier, Vol. 30, No. 2-3, March-May, 2011.
3. **Zero-knowledge Proofs of Retrievability**
   Yan Zhu, Zexing Hu, Huaixi Wang, Gail-Joon Ahn and Hongxin Hu
   Science China - Information Sciences, Springer, Vol. 54, No. 8, August, 2011.

2010

1. **Constructing Authorization Systems Using Assurance Management Framework**
   Hongxin Hu and Gail-Joon Ahn

*IEEE Transactions on Systems, Man, and Cybernetics (**TSMC**),* Part C, Special Issue on Availability, Reliability, and Security, Vol. 40, No. 4, July, 2010.
Acceptance rate for the special issue: 6/70 = 8.6%

2009

1. **Security-enhanced OSGi Service Environments**
   Gail-Joon Ahn, Hongxin Hu and Jing Jin
   *IEEE Transactions on Systems, Man, and Cybernetics (**TSMC**),* Part C, Vol. 39, No. 5, September, 2009.

Source URL: http://www.desu.edu/~hhu

Links:
[1] http://www.cis.desu.edu/~hhu
[2] http://www.informatik.uni-trier.de/~ley/pers/hd/h/Hu:Hongxin.html