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EDUCATION ◇ **Indiana University at Bloomington**, Bloomington, IN (Sept. 2004 – Present).

Ph.D. in Computer Science.

Research area: *Distributed system, Web2.0, and security*

◇ **New York University**, New York, NY (Sept. 2002 – May 2004).

Diploma M.Sc. in Computer Science, May 2004.

◇ **Hanyang University**, Hanyang University, Seoul, Korea (1992 – 1998).

Diploma BS. in Industrial Chemistry (a.k.a, Chemical Engineering), Feb 1998.

RESEARCH ◇ **Project**

EXPERIENCE

- Collaborative Virtual Lab (V-Lab) for Gene Analysis (2007) - Building a virtual lab, named Collaborative Virtual Lab (V-Lab), by using recent advancement of Web 2.0 technology. V-Lab will provide virtual computing resources by using Amazon's EC2 and S3 services and workflow engine with user-friendly graphic workflow composer [1].
- Big Red Portal (2007) - A portal development for IU's Big Red super computer, including MEME job submission and job dashboard portlet [2].
- NetSpy (2007) Developing anti-spyware architecture. This architecture can be used to defeat spyware activated through Browser Helper Object (BHO) or toolbar plug-ins of the Internet Explorer. Paper in submission.
- Packet Vaccine (2006) Developing network-based malicious packet detection system. This system can detect exploit code inside a packet by using a fast black-box method [3].
- Tamper-evident Signature Scheme (2005) Developing a tamper-evident signature scheme. We proposed a new signature scheme which is tamper-evident so that a user can decide whether a signer is corrupted or not [4].
- Tamper-evident Mix Networks (2005) Designing a tamper-evident property in mix networks. Users of mix networks can easily detect any malicious attempt to tamper with mix-net servers [5].
- Virtual Private Network (2004) Research on IPSec overheads for VPN servers [6].
- Vehicular Network Protocol (2005) Designing a vehicular network protocol. Through the proposed protocol, we can achieve both auditability and privacy in vehicular networks [7].

◇ **Peer-reviewed Papers**

- [1] **Jong Youl Choi**, Youngik Yang, Sun Kim, and Dennis Gannon. "V-Lab-Protein: Virtual Collaborative Lab for Protein Sequence Analysis." IEEE Workshop on High-Throughput Data Analysis for Proteomics and Genomics, Workshop at BIBM 2007. Silicon Valley, USA, Nov. 2-4, 2007
- [2] Mehmet A. Nacar, **Jong Y. Choi**, Marlon E. Pierce, and Geoffrey C. Fox. "Building a Grid Portal for TeraGrid's Big Red. Proceedings of TeraGrid." 2007 Conference, Madison, Wisconsin, June 4-8, 2007

- [3] XiaoFeng Wang, Zhuowei Li, Jun Xu, Michael K. Reiter, Chongkyung Kil, and **Jong Youl Choi**. “Packet Vaccine: Black-box Exploit Detection and Signature Generation.” In proceedings of CCS '06. ACM Press. 2006. pp 37–46.
- [4] **Jong Youl Choi**, Philippe Golle, and Markus Jakobsson. “Tamper-Evident Digital Signatures: Protecting Certification Authorities Against Malware.” In *Proceedings of DASC '06*. 2006. pp. 37–44
- [5] **Jong Youl Choi**, Philippe Golle, and Markus Jakobsson. “Auditable Privacy: On Tamper-evident Mix Networks.” In *Proceedings of FC '06*. LNCS 4107, Springer, 2006.
- [6] Craig Shue, Youngsang Shin, Minaxi Gupta, and **Jong Youl Choi**. “Analysis of IPSec Overheads for VPN Servers.” In *Proceedings of the first IEEE ICNP Workshop on Secure Network Protocols (NPSec)*, Boston, Massachusetts, USA, 2005. pp. 25–30.

◇ **Invited Paper**

- [7] **Jong Youl Choi**, Markus Jakobsson, and Susanne Wetzel. “Balancing Auditability and Privacy in Vehicular Networks.” In *Q2SWinet '05*. ACM Press, 2005. pp. 79–87.

WORK
EXPERIENCE

- ◇ **Research Internship** (June. 2007 – Sept. 2007) – Microsoft Technical Computing Group, Seattle
 - Project : Developing e-Science platform
 - Advisor: Savas Parastatidis , Architect, Technical Computing, Microsoft
- ◇ **Research Assistantship** (Sept. 2006 –) – Indiana University at Bloomington
 - Advisor: Geoffrey Fox, Professor of Computer Science and Director of Community Grids Lab
- ◇ **Research Assistantship** (Sept. 2004 – May. 2006) – Indiana University at Bloomington
 - Advisor: Markus Jakobsson, Associate professor of School of Informatics.
- ◇ **Research Internship** (Oct. 2005 – Jan. 2006) – Ecole Polytechniques Fédérales de Lausanne (EPFL) in Switzerland
 - Project : Design of authentication protocols for vehicular networks
 - Advisor: Jean-Pierre Hubaux, Professor of Laboratory for Computer Communications.
- ◇ **Software Engineer** – Samsung SDS, Korea (Feb. 1998 – Sept. 2001)
 - Major Projects : Electronic Data Interchange(EDI) system and e-Government Finance Management system for the Korean government.
 - Involvement : Software engineer and project manager.
 - Environments : Sun Solaris, Oracle Web Application Server, Oracle 9i, C/C++, and Delphi.

OTHER
EXPERIENCE

- ◇ **Presentation** at DIMACS workshop on Security of Web Services and E-Commerce (May 5-6, 2005)
 - Title : Tamper-Evident Digital Signatures

SKILLS

- ◇ **Programming Skills**
 - 5 years : Java, C/C++, Delphi, and PL/SQL.
 - 3 years : Scheme, Ada, MATLAB, and VB.
- ◇ **Database Skills**
 - Excellent knowledge of Oracle DBMS, DB tuning, and DB backup and recovery
 - Oracle Certified Professional(OCP) with 3 year experience.