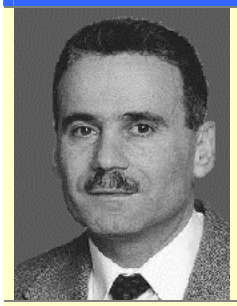
THE 2007 INTERNATIONAL CONFERENCE
ON
NEW TECHNOLOGIES, MOBILITY AND SECURITY

NTMS'2007
PARIS- FRANCE
May 2-4, 2007

Thursday, May 3rd, 9:30-10:30 - Keynote Speech



Security Challenges and Autonomic Solutions in Sensor Networks

Prof. Salim Hariri

Department of Electrical and Computer Engineering - the University of Arizona, USA

THE UNIVERSITY OF ARIZONA.

ABSTRACT There is a growing interest in wireless ad-hoc sensor networks because of their potential in many diverse applications such as ubiquitous computing and services, agriculture, environmental monitoring, remote health care, and security. The recent advances in sensing hardware, communications and low-power computing have resulted in the proliferation of low-cost sensor nodes. Security of sensor networks is a big challenge that must be addressed before the applications of sensors networks can be widely used and deployed. This talk will review security technologies and identify their limitations when applied to sensor networks. I will review the basic security requirements, types of wireless network attacks, protection techniques and standards, routing protocols and their vulnerabilities to attacks, vulnerabilities of wireless communications and how to protect them. I will also review how autonomic computing paradigm has the potential to efficiently address the security challenges facing sensor networks.

BIOGRAPHY of S. Hariri

Salim Hariri is a Professor in the Department of Electrical and Computer Engineering at The University of Arizona. He received his Ph.D. in computer engineering from University of Southern California in 1986, and an MSc from The Ohio State University in 1982. Dr. Hariri is the Editor-In-Chief for the CLUSTER COMPUTING JOURNAL (Springer, http://www.springer.com/journal/10586). He is the Founder of the IEEE International Symposium on High Performance Distributed Computing (HPDC) and the co-founder of the IEEE International Conference on Autonomic Computing. His current research focuses on autonomic computing, self-protection, self-optimization, self-configuration and self-healing of networked systems and services. Dr. Hariri has developed an innovative Physics Aware Programming (PaP) paradigm and autonomic computing middleware and for large scale Grid Scientific and Engineering applications that was funded by NSF, Intel, Raytheon and DOE. He is co-author/editor of four books on parallel and distributed computing: Autonomic Computing: Concepts, Infrastructure, and Applications (CRC Press, 2007), Tools and Environments for Parallel and Distributed Computing (Wiley, 2004), Virtual Computing: Concept, Design and Evaluation (Kluwer, 2001), and Active Middleware Services (Kluwer, 2000).
For further information, please visit http://www.ece.arizona.edu/~hpdc

Thursday, May 3rd, 14:00-15:00 - Keynote Speech

Key Technologies for Wireless Networking in the Next Decade

Prof. Ian F. Akyildiz
Broadband and Wireless Networking Lab School of Electrical and Computer Engineering
Georgia Institute of Technology - Atlanta, USA

ABSTRACT Key technologies such as Wireless Sensor Networks, Sensor and Actor networks, WiMAX, Wireless Mesh Networks, Dynamic Spectrum Access Networks, will be presented and several research challenges will be highlighted. Predictions about the wireless technology development for the next decade will be listed.

BIOGRAPHY OF I.F. AKYILDIZ IAN

Prof. Akyildiz is the Ken Byers Distinguished Chair Professor and Director of Broadband and Wireless Networking Laboratory at School of Electrical and Computer Engineering at Georgia Institute of Technology since 20 years.

Professor Akyildiz is Editor-in-Chief of Computer Networks (Elsevier) Journal, and Ad Hoc Networks (Elsevier) journal. Professor Akyildiz is an IEEE Fellow (1995), an ACM Fellow (1996). He received several IEEE and ACM Awards including IEEE Leonard Abraham Best paper award from IEEE JSAC in 1997, IEEE Best Tutorial paper award in 2003, IEEE Harry Goode Memorial Award (IEEE Computer Society), 2003 ACM SIGMOBILE award for his pioneering contributions in mobility and resource management in wireless networks, ACM Best Distinguished Lecturer Award in 1994, Georgia Tech Faculty Research Author Award in 2004 and School of ECE/Georgia Tech Distinguished Faculty Award in 2005.

Prof. Akyildiz guest edited several special issues and organized many leading conferences such as IEEE INFOCOM 1998, IEEE ICC 2003, ACM MOBICOM 1996 and 2002 and many others. His current research interests are Wireless Sensor Networks, Next Generation Wireless Networks and Interplanetary Internet.

Friday, May 4th, 9:30-10:20 Keynote Speech

Operating Systems: Trends for scale and security

James Hughes,
Solaris Chief Technologist, Sun Fellow,
Sun Microsystems

ABSTRACT The goal of this talk is to discuss the technical issues that are molding future

trends in operating systems. Solaris is one of the widest deployed operating systems in banking, telecommunications and other large enterprises. This talk will cover the features of Solaris that separate it from other operating systems, touch on future trends in processors, High Performance Computing, operating system scaling, developer languages and tools. The needs of the OS will be juxtaposed against the needs for information security. The result of this talk will be a higher understanding where all operating systems are going and why.

BIOGRAPHY OF J. Hugues

James currently is a Sun Fellow and vice president in the Solaris Operating System organization at Sun Microsystems. He has 35 years in the computer industry in the areas of Networking, Storage and Security. In his current role, he is responsible for guiding the future direction for the Solaris operating system. Prior to this position, he was a Fellow at Network Systems Corporation, a fellow at Storage Technology Corporation now Sun, each through acquisition.

James' technical focus includes High Performance Computing, Storage, Networking, Security and Cryptography. James has been a member of several IEEE and ANSI standards organization in the areas of communication, security and storage, and is currently the chair of the IEEE P1619 working group to standardize encrypted storage.