The 2nd IEEE International Conference on Big Data Security on Cloud
IEEE BigDataSecurity 2016

The 2nd IEEE International Conference on High Performance and Smart Computing
IEEE HPSC 2016

IEEE International Conference on Intelligent Data and Security
IEEE IDS 2016

April 8th – 10th, 2016
New York, USA

Conference Program and Information Booklet

Organized By

IEEE BigDataSecurity/HPSC/IDS 2016 Committees

Sponsored By

IEEE, IEEE TCSC, IEEE Computer Society,

Pace University, Columbia University,

Longxiang High Tech Group Inc.

North America Chinese Talents Association

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TECHNICAL PROGRAM

GENERAL INFORMATION

BigDatSecurity/HPSC/IDS 2016 Program at a Glance

Friday, April 08

	Auditorium	Room 413	Room 414	Room 750
10:00 – 20:00	Registration			
14:00 – 15:30	Tutorial Sem 1			
16:00 – 17:30	Tutorial Sem 2			

Saturday, April 09

	Auditorium	Room 413	Room 414	Room 750
8:00 – 8:30	Opening			
8:30 – 9:30	KN: Xiaodong			
9:30 – 9:50	Break			
9:50 – 11:10	BDS 1	BDS 2	HPSC 1	IDS 1
11:10 – 12: 10	KN: Sun-Yuan			
12:10 – 14:00	Lunch Break			
14:00 – 15:00	KN: Bhavani			
15:00 – 16:20	BDS 3	BDS 4	HPSC 2	IDS 2
16:20 – 16:40	Break			
16:40 – 18:00	Panel	BDS 5	HPSC 3	IDS 3
19:00 – 21:30	Banquet			

Banquet location: Hunan House. 40W 56th St, New York, NY 10019.
Chinese Consulate (New York) Science and Technology Counsellor Jijun Xing will attend the banquet and deliver a speech.

Sunday, April 10

	Auditorium	Room 413	Room 414	Room 750
9:00 – 10:00	KN: Jianhui			
10:10 – 11:30	BDS 6	BDS 7	HPSC 4	IDS 4
11:30 – 11:50	Break			
11:50 – 12: 10	BDS 8	BDS 9	HPSC 5	HPSC 6
12:10– 13: 00	Lunch Break			
13:00– 14: 00	CAST Sem 1			
14:30– 16: 00	CAST Sem 2			

Note: All presentation rooms are in the Schapiro Center.
    Room 413 and Room 414 are on the 4th floor.
    Room 750 is on the 7th floor.

BigDataSecurity/HPSC/IDS Keynote

April 9th, Saturday, 11:10, Auditorium.
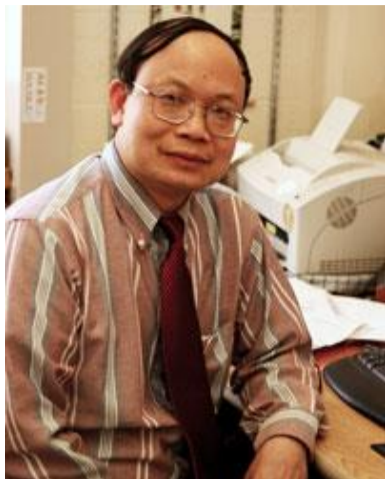
Compressive Privacy Based on Joint Optimization of Differential Utility/Cost

Sun-Yuan Kung

IEEE Fellow, Princeton University, USA

Professor S.Y. Kung received his Ph.D. Degree in Electrical Engineering from Stanford University in 1977. In 1974, he was an Associate Engineer of Amdahl Corporation, Sunnyvale, CA. From 1977 to 1987, he was a Professor of Electrical Engineering-Systems of the University of Southern California, L.A. Since 1987, he has been a Professor of Electrical Engineering at the Princeton University. In addition, he held a Visiting Professorship at the Stanford University (1984); and a Visiting Professorship at the Delft University of Technology (1984); a Toshiba Chair Professorship at the Waseda University, Japan (1984); an Honorary Professorship at the Central China University of Science and Technology (1994); and a Distinguished Chair Professorship at the Hong Kong Polytechnic University since 2001. His research interests include VLSI array processors, system modelling and identification, neural networks, wireless communication, sensor array processing, multimedia signal processing, bioinformatic data mining and biometric authentication. Professor Kung has authored more than 400 technical publications and numereous textbooks, Professor Kung has co-authored more than 400 technical publications and numerous textbooks including "VLSI and Modern Signal Processing," with Russian translation, Prentice-Hall (1985), "VLSI Array Processors", with Russian and Chinese translations, Prentice-Hall (1988); "Digital Neural Networks", Prentice-Hall (1993) ; "Principal Component Neural Networks", John-Wiley (1996); and "Biometric Authentication: A Machine Learning Approach", Prentice-Hall (2004). Professor Kung is a Fellow of IEEE since 1988.

This talk explores the rich synergy among signal processing, information theory, estimation theory, and machine learning and, thereafter, presents a novel privacy preserving methodology, named compressive privacy (CS). The objective is to build user-collaborative machine learning systems to facilitate the intended function while protecting the privacy of owner's sensitive information. It involves the joint optimization over three design spaces: (i) Feature Space (ii) Utility Subspace; and (iii) Cost Subspace (i.e. Privacy Subspace). Mathematically, the optimal query can be derived from the joint optimization formulation where the query should be chosen to simultaneously maximize the utility and minimize the cost. In order to derive a closed form analysis/solution, we recast the information theoretical criterion (such as the log-likelihood or mutual information) in terms of (differential) error covariance matrix used in the estimation theory. More exactly, the optimal query search (or feature selection) becomes a problem of maximizing a Differential Utility/Cost (DUC) ratio, a criterion function commonly adopted by economists. More exactly, DUC is defined as the ratio between Differential Utility and Differential Cost. The DUC formulation can be extended to Machine Learning applications, where the Differential Utility and Cost are characterized by the given supervised training dataset. Furthermore, the DUC optimization can be reformulated in the kernel learning models, where nonlinear kernels afford a much expanded search space to enhance the optimized DUC ratio. Simulation results based on facial image classification (utility) and reconstruction (privacy) will be demonstrated.

BigDataSecurity/HPSC/IDS Keynote

April 9ᵗʰ, Saturday, 14:00, Auditorium

Cloud-Centric Assured Information Sharing

Bhavani Thuraisingham

Louis A. Beecherl, Jr. I, Distinguished Professor

University of Texas at Dallas, USA

Dr. Bhavani Thuraisingham is the Louis A. Beecherl, Jr. Distinguished Professor of Computer Science and the Executive Director of the Cyber Security Research and Education Institute (CSI) at The University of Texas at Dallas. She is an elected Fellow of IEEE, the AAAS, the British Computer Society, and the SPDS (Society for Design and Process Science). She received several prestigious award including IEEE Computer Society's 1997 Technical Achievement Award for "outstanding and innovative contributions to secure data management", the 2010 ACM SIGSAC (Association for Computing Machinery, Special Interest Group on Security, Audit and Control) Outstanding Contributions Award for "seminal research contributions and leadership in data and applications security for over 25 years" and the SDPS Transformative Achievement Gold Medal for her contributions to interdisciplinary research. She has unique experience working in the commercial industry (Honeywell), federal research laboratory (MITRE), US government (NSF) and academia and her 35 year career includes research and development, technology transfer, product development, program management, and consulting for the federal government. Her work has resulted in 100+ journal articles, 200+ conference papers, 100+ keynote and featured addresses, eight US patents (three pending) and fifteen books (two pending). She received the prestigious earned higher doctorate degree (DEng) from the University of Bristol England in 2011 for her published work in secure data management since her PhD. She has been a strong advocate for women in computing and has delivered featured addresses at events organized by the CRA-W (Computing Research Association) and SWE (Society for Women Engineers).

This presentation will describe our research and development efforts in assured cloud computing for the Air Force Office of Scientific Research. We have developed a secure cloud computing framework as well as multiple secure cloud query processing systems. Our framework uses Hadoop to store and retrieve large numbers of RDF triples by exploiting the cloud computing paradigm and we have developed a scheme to store RDF data in a Hadoop Distributed File System. We implemented XACML-based policy management and integrated it with our query processing strategies. For secure query processing with relational data we utilized the HIVE framework. More recently we have developed strategies for secure storage and query processing in a hybrid cloud. In particular, we have developed algorithms for query processing wherein user's local computing capability is exploited alongside public cloud services to deliver an efficient and secure data management solution. We have also developed techniques for secure virtualization using the XEN hypervisor to host our cloud data managers as well as an RDF-based policy engine hosted on our cloud computing framework. Finally, we have developed a secure social media framework hosted on our secure cloud computing framework.

BigDataSecurity/HPSC/IDS Keynote

April 9ᵗʰ, Saturday, 8:30, Auditorium

Real-time Big Data - Signal Processing Perspectives

### Xiaodong Wang

IEEE Fellow, Columbia University, USA

Professor Xiaodong Wang was an assistant professor from July 1998 to December 2001 at the Department of Electrical Engineering at Texas A&M University. In January 2002, he joined the Department of Electrical Engineering at Columbia University as an assistant professor. Dr. Wang's research interests fall in the general areas of computing, signal processing, and communications. He has worked and published extensively in the areas of wireless communications, statistical signal processing, parallel and distributed computing, nanoelectronics, and quantum computing. Dr. Wang has received the 1999 NSF CAREER Award. He has also received the 2001 IEEE Communications Society and Information Theory Society Joint Paper Award.

In many applications that involve big data, real-time or online data processing and information extraction is necessary. In this talk, I will discuss a number of signal processing aspects of real-time processing of big data through examples. The first issue is efficient data acquisition (i.e., where to sample) through active learning, which is illustrated by a fine-grained indoor localization technique with adaptively sampled RF fingerprint. The second issue is low-rate sampling (i.e., how to sample) for distributed information extraction, illustrated by a cooperative spectrum sensing system. Then I will discuss statistical inference for big data based on sequential Monte Carlo through an example of gene binding site discovery. Finally, I will discuss the application of quickest change detection to detecting cyber-attack and faults in smart grids.

BigDataSecurity/HPSC/IDS Keynote
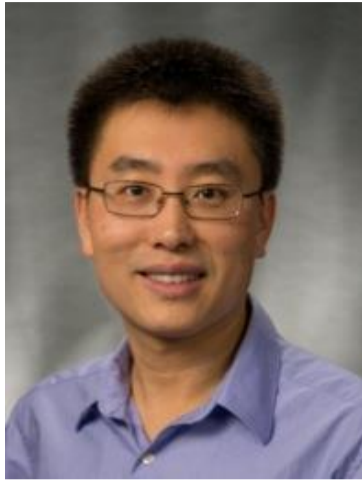
Grid Modernization: Challenges, Opportunities, and Solutions

Jianhui Wang

Argonne National Laboratory

Dr. Jianhui Wang is the Section Manager for Advanced Power Grid Modeling at Argonne National Laboratory. He is the Secretary of the IEEE Power & Energy Society (PES) Power System Operations Committee. He has authored/co-authored more than 150 journal and conference publications. He is an editor of Journal of Energy Engineering and Applied Energy. He received the IEEE Chicago Section 2012 Outstanding Young Engineer Award and is an Affiliate Professor at Auburn University and an Adjunct Professor at University of Notre Dame. He has also held visiting positions in Europe, Australia and Hong Kong including a VELUX Visiting Professorship at the Technical University of Denmark (DTU). Dr. Wang is the Editor-in-Chief of the IEEE Transactions on Smart Grid and an IEEE PES Distinguished Lecturer. He is the recipient of the IEEE PES Power System Operation Committee Prize Paper Award in 2015.

Our aging grid infrastructure faces increasing challenges from multiple sources including greater demand variability, stricter environmental regulations and growing cyber security concerns. Advanced smart grid technologies provide possible solutions to tackle these challenges. Meanwhile how to best utilize these new devices and technologies such as PMUs and electric vehicles remains a challenge by itself. In this talk, I will address various topics which span a multitude of areas including cloud computing applications, large-scale optimization and computation, and cyber security. I will present the technical issues in implementing these technologies and corresponding potential solutions.

IEEE 2016 BigDataSecurity/HPSC/IDS
Plenary Panel Sessions

Plenary Panel 1: Big Data and Security

April 9th, Saturday, 16:40 - 18:00, Auditorium

Moderator: Meikang Qiu, Pace University, USA;

Panelists:
- Sun-Yuan Kung, Princeton University, USA, Page 4
- Bhavani Thuraisingham, The University of Texas at Dallas, USA, Page 5
- Jianhui Wang, University of Notre Dame, USA, Page 7

Abstract:

Current rapid increasing demands of big data have driven a remarkable growth of the implementations of data mining, data analysis, and smart data in multiple domains. Big data is changing people's life style, work habits and thinking mode. Data security and privacy protection issues in applying big data have become a great concern for big data practitioners.

About the Moderator:

Meikang Qiu received the BE and ME degrees from Shanghai Jiao Tong University, China in 1992 and 1998. He received the M.S. and Ph.D. degree of Computer Science from University of Texas at Dallas in 2003 and 2007, respectively. Currently, he is an Associate Professor of Computer Science at Pace University and Adjunct Professor at Columbia University. He had worked at Chinese Helicopter R&D Institute, IBM, etc. for 9 years. Currently, he is an IEEE Senior member and ACM Senior member. His research interests include cloud computing, big data storage and security, embedded systems, cyber security, hybrid memory, heterogeneous systems, mobile and sensor networks, operating systems, optimization, intelligent systems, cyber-physical systems, etc. A lot of novel results have been produced and most of them have already been reported to research community through high-quality journal and conference papers.

He has published 4 books, 300 peer-reviewed journal and conference papers (including 140 journal articles, 160 conference papers, 40+ IEEE/ACM Transactions papers), and 3 patents. He has won ACM Transactions on Design Automation of Electrical Systems (TODAES) 2011 Best Paper Award. His paper about cloud computing has been published in JPDC (Journal of Parallel and Distributed Computing, Elsevier) and ranked \#1 in Top Hottest 25 Papers of JPDC 2012. He has won another 6 Conference Best Paper Award (IEEE/ACM ICESS'12, IEEE GreenCom'10, IEEE EUC'10, IEEE CSE'09) in recent four years. Currently he is an associate editor of IEEE Transactions on Computer and IEEE Transactions on Cloud Computing. He is the General Chair of IEEE HPCC/ICESS/CSS 2015, IEEE CSCloud 2015 (Cyber Security and Cloud Computing) and NSS'15 (Network and System Security), Steering Committee Chair of IEEE BigData Security 2015, and Program Chair of IEEE SOSE/MobileCloud/BigData 2015. He has won Navy Summer Faculty Award in 2012 and Air Force Summer Faculty Award in 2009. His research is supported by US government such as NSF, Air Force, Navy and companies such as Nokia, NVIDIA, and Cavium.

Technical Program

The 2nd IEEE International Conference on Big Data Security on Cloud (BigDataSecurity 2016)

BDS 1: Cloud and Cluster Computing

Saturday 9:50, Auditorium   *Session Chair: Peng Zhang*

Computing Large Connected Components Using Map Reduce in Logarithmic Rounds
> *Amar Sharma and Rajiv Misra*

Differential Privacy of Big Data: An Overview
> *Xiaoming Yao, Xiaoyi Zhou and Jixin Ma*

Authentication and Access Control in e-Health Systems in the Cloud
> *Nafiseh Kahani, Khalid Elgazzar and James R. Cordy*

Trust Issues for Big Data About High-Value Manufactured Parts
> *Anku Adhikari, Avesta Hojjati, Juanli Shen, Jui-Ting Hsu, William P. King and Marianne Winslett*

BDS 2: Cloud and Cluster Computing

Saturday 9:50, Room 413   *Session Chair: Ignacio Arnaldo*

Privacy Preserving Rack-based Dynamic Workload Balancing for Hadoop MapReduce
> *Xiaofei Hou, Doyel Pal, Ashwin Kumar T K, Johnson Thomas and Hong Liu*

Improve the Prediction Accuracy of Naïve Bayes Classifier with Association Rule Mining
> *Tianda Yang, Kai Qian, Dan Lo, Ying Xie, Yong Shi and Lixin Tao*

Assessing Security Vulnerabilities in a Bluetooth Low Energy (BLE) Wireless Network based IoT System
> *Philip Chan and Yanzhen Qu*

AI^2: Training a big data machine to defend
> *Ignacio Arnaldo and Kalyan Veeramachaneni*

BDS 3: Cloud and Cluster Computing

Saturday 15:00, Auditorium   *Session Chair: Baijian Yang*

A Scalable Meta-Model for Big Data Security Analyses
> *Baijian Yang and Tonglin Zhang*

OwlSight: Platform for Real-time Detection and Visualization of Cyber Threats
> *Vasco Carvalho, Maria João Polidoro and João Paulo Magalhaes*

Clouds for Hit-and-Run Wireless Attacks
> *J. Jenny Li and Fernando Neto*

Secure Data Outsourcing with Adversarial Data Dependency Constraints
> *Boxiang Dong, Hui Wang and Jie Yang*

BDS 4: Performance Evaluation and Measurement

Saturday 15:00, Room 413   *Session Chair: Thaier Hayajneh*

An Ultra lightweight encryption design for security in pervasive computing
Gaurav Bansod, Abhijit Patil, Swapnil Sutar and Narayan Pisharoty

A Secure Framework for Ensuring EHR's Integrity using Fine-Grained Auditing and CP-ABE
Gandikota Ramu and Eswara Reddy B

Reverse TCP and Social Engineering Attacks in the Era of Big Data
Christine Atwell, Thomas Blasi and Thaier Hayajneh

BDS 5: Big Data Infrastructure and Applications

Saturday 16:40, Room 413   *Session Chair: Javier Navarro-Machuca*

Arithmetic Correlation used in Mobile Cloud ID-based multiple authentication
Wang Hui-Juan, Jiang Yong and Shi Ruisheng

Security Techniques for Big Data Environments
Udaya Tupakula and Vijay Varadharajan

Towards Performance Evaluation of Oblivious Data Processing Emulated with Partially Homomorphic Encryption Schemes
Vasily Sidorov and Wee Keong Ng

Embedding Model-Based Security Policies in Software Development
Javier Navarro-Machuca and Li-Chiou Chen

BDS 6: Big Data Infrastructure and Applications

Sunday 10:10, Auditorium   *Session Chair: Srinivasan Shanmugam*

A Novel Approach to Predictive Graphs using Big Data
Srinivasan Shanmugam and Harish Ragavan

A Big Data architecture for security data and its application to phishing characterization
Pedro Las-Casas, Vinícius Vitor Dos Santos Dias, Wagner Meira Jr. and Dorgival Guedes

Aspects of Data Cataloguing for Enterprise Data Platforms
Srinivasan Shanmugam and Gokul Seshadri

Security-Aware Efficient Mass Distributed Storage Approach for Cloud Systems in Big Data
Keke Gai, Meikang Qiu and Hui Zhao

BDS 7: Parallel and Distributed Computing

Sunday 10:10, Room 413   *Session Chair: Mingquan Hong*

Towards Efficient Authentication Scheme with Biometric Key Management in Cloud Environment
Zaid Ameen Abduljabbar, Hai Jin, Zaid Alaa Hussien, Ali A. Yassin, Mohammed Abdulridha Hussain and Salah H. Abbdal

Homomorphic Encryption Scheme Based on Elliptic Curve Cryptography for Privacy Protection of Cloud Computing
Mingquan Hong, Pengyu Wang and Wenbo Zhao

A Secure Management Scheme Designed in Cloud
Pengyu Wang and Mingquan Hong

Cooperative Monitoring Mechanism for Cluster Based on Message Routing Queue
Guan Yang and Xiaolong Xu

Quantitative Analysis of Graph Algorithms: Models and Optimization Methods
Xu Wang, Yongxin Zhu and Yufeng Chen

BDS 8: Parallel and Distributed Computing

Sunday 11:50, Auditorium   *Session Chair: Kutub Thakur*

A Novel Secure Big Data Cyber Incident Analytics Framework for Cloud-Based Cybersecurity Insurance
Keke Gai, Meikang Qiu and Sam Adam Elnagdy

Privacy in the Cloud: Anonymous Tax Preparation
Emmanuel Peters and Nicholas Maxemchuk

Information Security Policy for E- Commerce in Saudi Arabia
Kutub Thakur, Md Ali, Meikang Qiu and Keke Gai

Security-Aware Information Classifications Using Supervised Learning for Cloud-Based Cyber Risk Management in Big Data
Keke Gai, Meikang Qiu and Sam Adam Elnagdy

BDS 9: Parallel and Distributed Computing

Sunday 11:50, Room 413   *Session Chair: Keke Gai*

A Novel Secure Big Data Cyber Incident Analytics Framework for Cloud-Based Cybersecurity Insurance
Keke Gai, Meikang Qiu and Sam Adam Elnagdy

The Impact of Cyber-Attacks On Critical Infrustructure
Kutub Thakur, Md Ali, Ning Jiang and Meikang Qiu

The 2nd IEEE International Conference on High Performance and Smart Computing (HPSC 2016)

HPSC 1: Energy and Power Management

Saturday 09:50, Room 414   *Session Chair: David Tagatac*

Parallelization of Error Weighted Hashing for Approximate k-Nearest neighbour search on GPUs
Siddharth Bhatia and Mohan Pavan Kumar Badarl

Using Diversity to Harden Multithreaded Programs Against Exploitation
David Tagatac, Michalis Polychronakis and Salvatore Stolfo

Exploiting Redundant Computation in Communication-Avoiding Algorithms for Algorithm-Based Fault Tolerance
Camille Coti

Parallel Simulation of Full-Field Polymer Flooding
Kun Wang, Hui Liu, Jia Luo, Song Yu, Zhangxin Chen and Peng Zhang

HPSC 2: Multicore and GPU Systems

Saturday 15:00, Room 414   *Session Chair: Andrew Burke*

Investigation of Reconfigurable FPGA Design for Processing Big Data Streams

Usamah Algemili and Simon Berkovich

LA-Credit: A Load-Awareness Scheduling Algorithm for Xen Virtualized Platforms

Jun Wu, Chen-Yuan Wang and Jian-Fu Li

Energy Efficent VM Allocation Approach for Data Centers

Ilksen Çağlar and Deniz Turgay Altilar

Performance of Partitioned Homogeneous Multiprocessor Real-Time Scheduling Algorithms in Heterogeneous Environments

Andrew Burke

HPSC 3: Real-Time Systems

Saturday 16:40, Room 414   *Session Chair: Melody Moh*

Traffic Aware Virtual Machine Packing in Cloud Data Centers

Jun Liu, Jinhua Guo and Di Ma

A New Replica Placement Policy for Hadoop Distributed File System

Wei Dai, Ibrahim Ibrahim and Mostafa Bassiouni

Energy Efficient Traffic-Aware Virtual Machine Migration in Green Cloud Data Centers

Veena Reddy Reguri, Swetha Kogatam and Melody Moh

Large-scale Reservoir Simulations on Parallel Computers

Yan Chen, Hui Liu, Kun Wang, Zhangxin Chen, Yanfeng He, Bo Yang and Peng Zhang

HPSC 4: Wireless and Sensor Systems

Sunday 10:10, Room 414   *Session Chair: Peng Zhang*

Multiscale Modeling of Mechanotransduction Processes in Flow-Induced Platelet Activation

Chao Gao, Peng Zhang and Danny Bluestein

GPU-accelerated Preconditioned GMRES Solver

Bo Yang, Hui Liu, Zhangxin Chen and Xuhong Tian

Coupled Geomechanics and Reservoir Flow Modeling on Distributed Memory Parallel Computers

Jia Luo, Kun Wang, Hui Liu and Zhangxin Chen

A Classification Algorithm Using Ensemble Feature Selections for Imbalanced-Class Dataset

Hua Yin and Keke Gai

HPSC 5: Virtualization and Architecture

Sunday 11:50, Room 414   *Session Chair: Li Liao*

A Component Based Graphical Parallel Programming Approach for Numerical Simulation Development

Li Liao, Zeyao Mo and Aiqing Zhang

Algorithms in ParAFEMImp: A Parallel and Wideband Impedance Extraction Program for Complicated 3-D Geometries

Tao Cui, Junqing Chen, Hengliang Zhu and Xuan Zeng

HPSC 6: Virtualization and Architecture

Sunday 11:50, Room 750   *Session Chair: Qingkai Liu*

A programming framework for large scale numerical simulation based on unstructured mesh
> *Qingkai Liu, Weibo Zhao, Jie Cheng, Zeyao Mo, Aiqing Zhang and Jianjun Liu*

A Scalable, Parallel Module for Overlapping Grids and its Applications
> *Hong Guo, Aiqing Zhang, Zeyao Mo and Ye Pu*

IEEE International Conference on Intelligent Data and Security (IDS 2016)

IDS 1: Distributed Systems and Cloud Security

Saturday 09:50, Room 750   *Session Chair: Melody Moh*

A Security-aware Placement Mechanism for Big Data Cloud Storage Systems
> *Seungmin Kang, Bharadwaj Veeravalli and Khin Mi Mi Aung*

Secure Mobile Payments Based on Cloud Services: Concepts And Experiments
> *Pascal Urien and Xavier Aghina*

Contextual-Aware Hybrid Recommender System for Mixed Cold-Start Problems
> *Vicky Na Zhao, Melody Moh and Teng Moh*

A Secure Biometric Identification Technique Using Spread Spectrum Audio Watermarking
> *Yekta Said Can*

Using UAVs to Secure Linear Wireless Sensor Networks
> *Nader Mohamed, Haya Aldhaheri, Khadeijah Almurshidi, Mahra Al-Hammoudi, Salama Al-Yalyali, Imad Jawhar and Jameela Al-Jaroodi*

IDS 2: Active Defense Techniques and Systems

Saturday 15:00, Room 750   *Session Chair: Chen Zhong*

Self-Healing Intrusion Detection System Concept
> *Viktoriya Degeler, Richard French and Kevin Jones*

Automate Cybersecurity Data Triage by Leveraging Human Analysts' Cognitive Process
> *Chen Zhong, John Yen and Peng Liu*

Compressing Large Amounts of NetFlow Data Using a Pattern Classification Scheme
> *Remon Cornelisse, Mortaza S. Bargh, Sunil Choenni, Debora Moolenaar and Luc de Zeeuw*

Adaptive Combinatorial Key Scheme for Mobile Heterogeneous Wireless Sensor Networks
> *Wael Hosny Fouad Aly*

IDS 3: Internet and Network Forensic

Saturday 16:40, Room 750   *Session Chair: J. Jenny Li*

Vulnerability evaluation accelerator for lightweight ciphers
> *Masaya Yoshikawa*

TRAS: A Trust-Based Routing Protocol for Ad Hoc and Sensor Networks
Imad Jawhar, Frahan Mohammed, Jameela Al Jaroodi and Nader Mohamed

Towards Trusted and Efficient Based UAV Communications
Farhan Mohammed, Imad Jawhar, Nader Mohamed and Ahmed Idries

Intelligent Data Mining for Translator Correctness Prediction
J. Jenny Li, Yulia Rossikova and Patricia Morreale

IDS 4: Internet and Network Forensic

Sunday 10:10, Room 750   *Session Chair: Keke Gai*

Towards Extracting Drug-Effect Relation From Twitter: A Supervised Learning Approach
Fan Yu, Melody Moh and Teng Moh

Spectral Clustering Technique for Classifying Network Attacks
Anna Little, Xenia Mountrouidou and Daniel Moseley

An Efficient Public Verifiability and Data Integrity Using Multiple TPAs in Cloud Data Storage
Salah H. Abbdal, Hai Jin, Ali A. Yassin, Zaid Ameen Abduljabbar, Zaid Alaa Hussien, Mohammed Abdulridha Hussain and Deqing Zou

Research and Application of Social Network Access Control Model RuleSN
Li Ma, Lixin Tao, Yong Zhong and Keke Gai

Tutorial Seminar 1

Friday, 14:00 - 15:30, Auditorium   *Session Chair: Wenjia Li*

Title: Security, Trust and Privacy in the Internet of Things (IoT) Era
Presenter: Wenjia Li

Tutorial Seminar 2

Friday 16:00 - 17:30, Auditorium   *Session Chair: Thaier Hayajneh*

Title: High Speed Transfer Protocols for Big Data: Design Challenges and Comparisons
Presenters: Sukhnain Singh and Thaier Hayajneh

CAST Seminar 1

Sunday 13:00 - 14:00, Auditorium

CAST Seminar 2

Sunday 14:30 - 16:00, Auditorium

Social Events

Banquet Dinner, starts at 19:00 April 9th. **Address: 40W 56th St, New York, NY 10019.**

Chinese Consulate (New York) Science and Technology Counsellor Jijun Xing will attend the banquet and deliver a speech.

Recommended route: take No. 1 subway line at 116 St - Columbia University stop; get off at 59 St - Columbus Circle stop; head southwest; at the traffic circle, take the 2nd exit onto Broadway; turn left onto W 56th St; banquet place will be on your right.

General Information

Registration Desk

The Registration Desk will be open to assist you at the following times:

- Friday, April 8, 2016, 10:00 – 20:00
- Saturday, April 9, 2016, 08:00 – 18:00
- Sunday, April 10, 2016, 08:00 – 12:00

Location: **Main Lobby, Schapiro Center, Columbia University**.

Conference materials, name badges, and the proceedings will be distributed at the registration desk.

Name Badges

All delegates, sponsors, speakers, and attendees of BigDataSecurity/HPSC/IDS 2016, associated workshops, and summit will be provided with a name badge, to be collected upon registration. This badge must be worn at all times as it is your official pass to all sessions of the conferences, lunches, morning and afternoon coffee breaks, and banquet.

Presentation Instruction

You are required to arrive at the room (in which you will deliver your talk) at least 15 minutes before the commencement of the session. Upon arrival please confirm your attendance with the Session Chair and familiarize yourself with the venue. Upon arrival, please copy your slides file to the presentation computer. If you plan to use your own equipment, please ensure it is ready to go prior to the session commencing, since there is very little time between presentations. If you have requested optional equipment, ensure that is in the room. For all assistance, please speak to the Session Chair.

Message Board

Any program changes or urgent announcements from the secretariat and private messages will be posted on the message board in the registration area. Please check the message board occasionally.
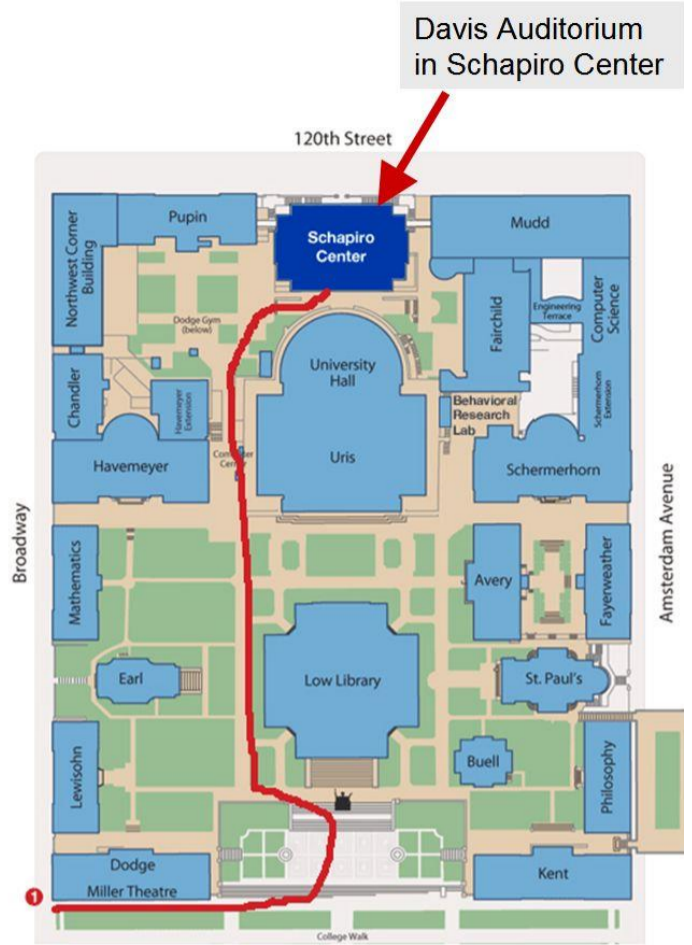
Co-located Event

CAST (Chinese Association for Science and Technology) will have two seminars in Sunday afternoon, April 10th.

Venue

Davis Auditorium in Schapiro Center

Davis Auditorium,
Schapiro Center,
Columbia University

Subway Stop:

Presentation Rooms: Davis Auditorium, Room 413, Room 414 and Room 750.

Room 413 and Room 414 are on the 4th floor.
Room 750 is on the 7th floor.