

**Title:**

Security and Privacy in Edge Computing, Services and People (SP-ECSP)

**Abstract:**

In the envisaged Future Internet, edge computing defines a cloud-based middle layer connection between the fast but distant cloud resources and the end users/smart devices/IoT infrastructure through edge resources, hardware and software that provide specialized services. Interconnecting central cloud, edge resources and people via the edge computing boosts productivity, enhances flexibility, saves energy and costs, and generates new revenue opportunities through innovative business models. However, because of the heterogeneous nature of the ECSP, more connected devices mean more attack vectors and more possibilities for hackers to target it. The frightening vulnerabilities found on edge computing devices and services have brought ECSP security and privacy further up the stack of issues that need to be addressed quickly. The ECSP requires a very strong foundation with security, trust and privacy as a top priority. Without effective solutions for securing ECSP-related data, qualified services with security and privacy concern and enhanced user acceptance and experience cannot be achieved.

**Scope and Topics:**

The proposed special session on security and privacy in Edge Computing, Services and People (ECSP) aims to bring academia researchers as well as industry partners to meet together and exchange ideas on recent research and future directions for ECSP security and privacy. The cutting edge results and innovative solutions will be presented with a specific focus on the safety, reliability, cyber security and data privacy challenges in ECSP, including usable and theoretical security and privacy for software, algorithms, protocols, systems and infrastructure.

The technical topics of interest to the special issue include, but are not limited to:

- ✧ ECSP secure network infrastructure
- ✧ ECSP security protocols
- ✧ Authentication and identification technologies and solutions
- ✧ Threat landscapes and potential countermeasures and technologies
- ✧ Cyber-attacks detection and prevention
- ✧ Risk analysis, mitigation, and management
- ✧ Intrusion and Malware Detection
- ✧ Applied Cryptography and lightweight security solutions



- ✧ Reliable Interactions with Network Services
- ✧ System and Data Integrity
- ✧ Security of Big data in ECSP
- ✧ Identity Management and biometrics in ECSP
- ✧ Trustworthiness in ECSP
- ✧ Privacy and anonymization techniques in ECSP
- ✧ Adaptive Security in ECSP

### **Program Committee Chairs:**

**Biao Song**, King Saud University, Saudi Arabia

Email: [bsong@ksu.edu.sa](mailto:bsong@ksu.edu.sa)

Web: <http://fac.ksu.edu.sa/bsong/>

Song Biao received his Ph.D. degree in Computer Engineering from Kyung Hee University, South Korea in 2012. Currently he is with King Saud University, Kingdom of Saudi Arabia as Assistant Professor, in College of Computer and Information Science. He is currently on the editorial boards of several journals, and has been the session chair and technical committee for several reputable international conferences. He is the chief author of “Towards a Privacy-aware Mechanism for Cloud-based Information System” (LAMBERT Academic Publishing). He has participated more than ten national and industrial projects in Korea and Saudi Arabia such as National IT industry and National Research Foundation. Besides, he also works as PI and Co-PI in several projects including National Plan for Science, Technology and Innovation (NPSTI). His current research interests are security, Cloud computing, remote display technologies and dynamic VM resource allocation.

**Mznah Al-Rodhaan**, King Saud University, Saudi Arabia

Email: [rodhaan@ksu.edu.sa](mailto:rodhaan@ksu.edu.sa)

Web: <http://fac.ksu.edu.sa/rodhaan/>

She has received her BS in Computer Applications (Hon) and MS in Computer Science both from King Saud University on 1999 and 2003 respectively. In 2009, she received her Ph.D. in Computer Science from University of Glasgow in Scotland, UK. She is currently working as the Vice Chair of the Computer Science Department in College of Computer & Information Sciences, King Saud University, Riyadh, Saudi Arabia. Moreover, she has served in the editorial boards for some journals such as the Ad Hoc journal (Elsevier) and has participated in several international conferences. Her current research interest includes: Mobile Ad Hoc Networks, Wireless Sensor Networks, Multimedia Sensor networks, Cognitive Networks, and Network Security.



**Jalal Al-Muhtadi**, Center of Excellence in Information Assurance, Saudi Arabia

Email: [jalal@ksu.edu.sa](mailto:jalal@ksu.edu.sa)

Web: <http://fac.ksu.edu.sa/jalal/>

He is the Director of the Center of Excellence in Information Assurance (CoEIA) at King Saud University. He is also an Assistant Professor at the department of Computer Science at King Saud University. Areas of expertise include cybersecurity, information assurance, privacy, and Internet of Things. He received his PhD and MS degrees in Computer Science from the University of Illinois at Urbana-Champaign, USA. He has over 50 scientific publications in the areas of cybersecurity and the Internet of Things.

### **Program Committee:**

*Vidy Potdar, Curtin University, Australia*

*Muhammad Fahim, Institute of Information Systems Innopolis University, Russia*

*Donghai Guan, Nanjing University of Aeronautics and Astronautics, China*

*Asad Masood Khattak, Zayed University, UAE*

*Eui-Nam Huh, Kyung Hee University, South Korea*

*Weiwei Yuan, Nanjing University of Aeronautics and Astronautics, China*

*Abdullah Al-Dhelaan, King Saud University, Saudi Arabia*

*Ting Huai Ma, NanJing University of Information Science & Technology, China*

*Najla Abdulrahman Al-Nabhan, King Saud University, Saudi Arabia*

*Zhoubingyin, Hebei normal university, China*

*Mohammad Mehedi Hassan, King Saud University, Saudi Arabia*