15th Workshop on Privacy in the Electronic Society (WPES 2016)

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ABSTRACT

The advancements in the Information and Communication Technologies (ICTs) have introduced new computing paradigms (e.g., cloud computing, pervasive and ubiquitous computing, ambient intelligence and aware-computing) where the techniques for processing, storing, communicating, sharing, and disseminating information have radically changed. These novel computing paradigms bring enormous benefits: the availability of a universal access to data; the reduction in power, storage, hardware, and software costs; and the availability of elastic storage and computation services. While these advantages are appealing, as a side effect there is a tremendous risk of exposure of confidential or sensitive information to privacy breaches. WPES is a yearly forum, this year at its 15th edition, aiming at discussing the open privacy challenges, emerging directions, and original novel approaches for guaranteeing privacy in today's global interconnected society.

Keywords

Privacy; electronic society; workshop

1. INTRODUCTION

The collection and use of personal data are becoming ubiquitous: every action we perform and every transaction we start produce data that are collected, stored, exchanged, communicated, and shared with multiple third parties in the digital infrastructure. The amount of data related to, for example, our communications with family, friends, and colleagues, our interests, and our personal life (e.g., photos and videos) available through the network is escalating. Although this scenario brings significant benefits, it has the drawback of leaving private data exposed: users lose control of what information others know or collect about them, how it is used, and how and to whom it is disclosed. Also, the advances in ICT, including the possibility of combining and analyzing more information from several data sources, intensify the privacy problem. Security and privacy problems caused by the widespread use of technology are therefore receiving growing attention, not only from the research and industrial communities, but also from legislators and governments, as well as from single final users.

WPES aims to bring together researchers and practitioners who are interested in discussing on privacy issues arising in the electronic society. The workshop encourages participation by experts both in the technological aspects of privacy, and in related fields (e.g., law and business), thus establishing a bridge among these communities. WPES represents an opportunity for researchers to share their ideas and results, to discuss about new technological trends and the security and privacy issues they may cause, and to draw new research directions in the security and privacy domain. Like past editions, WPES is held in conjunction with ACM Computer and Communications Security (CCS) conference, the flagship annual conference of ACM SIGSAC (Special Interest Group on Security, Audit and Control). The co-location of these two events brings advantages to both, as well as to the community itself. WPES complements ACM CCS with a specific forum on privacy, which a crucial aspect of security, at the same time benefiting from the presence of a wide audit interested in information security.

The workshop solicited submissions from academia and industry presenting novel research on all theoretical and practical aspects of electronic privacy, as well as experimental studies of fielded systems. The workshop also encouraged submissions from other communities such as law and business that present these communities' perspectives on technological issues. Topics of interest for paper submission included, but were not limited to:

- anonymization and transparency
- crowdsourcing for privacy and security
- data correlation and leakage attacks
- data security and privacy
- data and computations integrity in emerging scenarios
- electronic communication privacy
- economics of privacy
- information dissemination control
- models, languages, and techniques for big data protection
- personally identifiable information
- privacy-aware access control

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- privacy and anonymity on the Web
- privacy in biometric systems
- privacy in cloud and grid systems
- privacy and confidentiality management
- privacy and data mining
- privacy in the Internet of Things
- privacy in the digital business
- privacy in the electronic records
- privacy enhancing technologies
- privacy and human rights
- privacy in health care and public administration
- privacy metrics
- privacy in mobile systems
- privacy in outsourced scenarios
- privacy policies
- privacy vs. security
- privacy of provenance data
- privacy in social networks
- privacy threats
- privacy and virtual identity
- user profiling
- wireless privacy

This year, the workshop received 72 submissions from 28 different countries.

2. WORKSHOP COMMITTEES

The program chair of the workshop is Sabrina De Capitani di Vimercati. She is a Professor at the Computer Science Department, Università degli Studi di Milano, Italy. Her research interests are in the area of security, privacy, and data protection. She has been a visiting researcher at SRI International, CA (USA), and George Mason University, VA (USA). She chairs the IFIP WG 11.3 on Data and Application Security and Privacy. (More information available at http://www.di.unimi.it/decapita).
The program committee is composed of the following experts in the topics of interest for the workshop.

- Vijay Atluri, Rutgers University, USA
- Carlo Blundo, Università degli Studi di Salerno, Italy
- Andrey Bogdanov, Technical University of Denmark, Denmark
- Yazan Boshmaf, Qatar Computing Research Institute, Qatar
- Sherman S. M. Chow, Chinese University of Hong Kong, Hong Kong
- Josep Domingo-Ferrer, Universitat Rovira i Virgili, Spain
- Sara Foresti, Università degli Studi di Milano, Italy
- Sushil Jajodia, George Mason University, USA
- Florian Kerschbaum, SAP, Germany
- Adam J. Lee, University of Pittsburgh, USA
- Yingjiu Li, Singapore Management University, Singapore
- Peng Liu, The Pennsylvania State University, USA
- Catherine Meadows, NRL, USA
- Muhammad Naveed, University of Southern California, USA
- Guevara Noubir, Northeastern University, USA
- Panos Papadimitratos, KTH, Sweden
- Gerardo Pelosi, Politecnico di Milano, Italy
- Roberto Perdisci, University of Georgia, USA
- Indrakshi Ray, Colorado State University, USA
- Pierangela Samarati, Università degli Studi di Milano, Italy
- Nitesh Saxena, University of Alabama at Birmingham, USA
- Andreas Schaad, Huawei European Research Center, Germany
- Jessica Staddon, NC State University, USA
- Willy Susilo, University of Wollongong, Australia
- Paul Syverson, NRL, USA
- Vicenç Torra, University of Skövde, Sweden
- Jaideep Vaidya, Rutgers University, USA
- Meng Yu, University of Texas at San Antonio, USA
- Ting Yu, Qatar Computing Research Institute, Qatar
- Moti Yung, Snapchat and Columbia University, USA
- Jianying Zhou, Institute for Infocomm Research, Singapore
- Sencun Zhu, The Pennsylvania State University, USA

WPES steering committee is chaired by Pierangela Samarati, from the Università degli Studi di Milano, Italy, and is composed of the following four members.

- Sabrina De Capitani di Vimercati, Università degli Studi di Milano, Italy
- Sushil Jajodia, George Mason University, USA
- Pierangela Samarati, Università degli Studi di Milano, Italy
- Paul Syverson, Naval Research Laboratory, USA

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