

Special Session on
Machine Learning in Big Data and
Information Security Issues
of The Sixteenth International Conference on
Machine Learning and Applications (ICMLA 17)

<http://www.icmla-conference.org/icmla17/>
December 18-21, 2017, Cancun, Mexico

Recent developments in information and communication technologies (ICTs) are to require better analysis and to secure information and systems in designing, developing, testing, understanding, accessing, processing, storing, and sharing information in electronic environments. The importance of information and system security increases all the time in diversity as well as in quantity because of continuous threats encountered in many new forms on internet and systems. In order to provide better solutions to secure information and communication systems, new approaches, methods, techniques, technologies and concepts are always required. It is known that big data analytics enables new perceptions and solutions to security systems.

Advances in Machine Learning (ML) and big data (BD) provide new challenges and solutions to information security problems encountered in applications and theories. ML and BD techniques have found widespread applications and implementations in security issues. Many ML and BD techniques, approaches, algorithms, methods and tools are extensively used by security experts and researchers to achieve better results and to develop and design better and more robust security systems.

The aim of this special session on Big Data and Information Security Issues is to:

- share the current and new research topics.
- bring researchers and experts together to discuss and share their experiences,
- enhance personal, enterprise, national and international awareness,
- increase the collaboration among university – industry - institutions, and
- help to develop and design better security systems

in applications of ML and BD methods to the information and system security fields.

This session aims to provide a platform to present and discuss recent advancements in big data and security applications using BD and ML methods. The main topics are given below:

- Big Data Analytics
- Privacy Issues in Big Data

- Big Data Security
- Applications and Implementation of Big Data and Information Security,
- Information Security
- Cryptography and Cryptoanalysis
- Steganography and Steganalysis
- Security Risk Analysis, Modelling, Evaluation and Management
- Software Security
- Secure Coding, Source Code Auditing and Review
- Critical Information and Infrastructure Security
- Security Standards, Protocols and Policies
- Trust Models
- Key and Identity Management
- Smart Card, RFID, NFC, 3G, 4G, etc. Security
- Operating System Security
- Clouds and Virtual Machine Security
- Biometrics
- Mobile Communication and Application Security
- Data Privacy, Privacy Theory and Engineering
- e-Governance and e-Government Security
- E-Sign and Public Key Infrastructure
- Digital Forensics, Procedures, Tools, Techniques, Surveillance Technology
- Securing Networks, Computers, Services, Systems, Databases.
- Securing Mobile Networks and Devices
- Wireless, Ad Hoc and Sensor Network Security
- Web and Web Application Security
- Information Security Audits
- Securing Digital Rights and Management
- Security Weaknesses on Information and Communication
- Penetration Tests, Tools and Techniques
- Social Engineering Attacks and Prevention
- Intrusion Detection and Prevention Systems
- Content Protection
- Malicious Software Threats and Protection
- Artificial Intelligence Techniques
- Public Awareness and Education
- Recent Theory, Trends, Technologies and Applications
- Future Directions and Challenges

In addition, a selected number of accepted papers will be invited for possible inclusion, in an expanded and revised form, in special issue of *International Journal of Information Security Science*, IJISS (www.ijiss.org)

Papers submitted for this special session should be submitted by 6 August 2017, at the regular paper submission website (<http://www.icmla-conference.org/icmla17/>). Papers should not exceed a maximum of **6 pages** (including abstract, body, tables, figures, and references), and should be submitted as a pdf in 2-column IEEE format. Detailed instructions for the authors can be found at the conference website. Accepted papers

will be published in the conference proceedings, as a hardcopy. All accepted papers must be presented by one of the authors to be published in the conference proceedings.

If you have any question please do not hesitate to direct your questions to the special session organizer Dr. Seref Sagiroglu (ss@gazi.edu.tr).

Special Session Organizer:

Dr. Seref SAGIROGLU, Gazi University, Turkey.

Special Session Co-Organizers:

Dr. Sedat AKLEYLEK, Darmstadt Technical University, Germany

Dr. Cihan VAROL, Sam Houston State University, USA

Dr. Tiago A. ALMEDIA, Federal University of Sao Carlos, Brazil

The important dates for this special session are:

Submission Deadline	: August 31, 2017
Notification of Acceptance	: September 18, 2017
Camera-ready papers & Pre-registration	: October 1, 2017, 11:59pm PST
The ICMLA Conference	: December 18-21, 2017