CALL FOR PAPERS

The 1ˢᵗ Workshop on Artificial Intelligence based Security for Internet of Things (AiS-IoT 2021)
July 7 - July 10, 2021 (Tentative), Washington DC, USA

(In conjunction with ICDCS 2021, July 7 - July 10, 2021 (Tentative), Washington DC, USA, https://icdcs2021.us/)

Scope:

Due to the ever-increasing growth of Internet of Things (IoT) devices and applications, wireless communications, edge-cloud computing, task control and service implementations are fused together, which makes the security situations are far more complicated than ever before. Thus, a high level of security and privacy are critical for both systems and end users. The recent progress of artificial intelligent methods, e.g., deep learning, reinforcement learning, federal learning, provide fine and accurate decision makings and adaptations to address the complicated security issues of IoT systems. However, how to customize and implement the AI based techniques for security in IoTs are still under discussion. Such techniques in the security research field are still immature and inefficient.

The goal of the **AiS-IoT** Workshop is devoted to the most recent developments of AI based technologies for IoT security and privacy. Industry experience reports and empirical studies are also welcome. We aim to bring together researchers and practitioners to discuss the latest advancements and identify further challenges for security issues in IoTs that must be overcome. Topics of interest include, but are not limited to, the following:

- **Physical Layer Securities:** Securities using AI for physical layer security in 5G wireless communications, mmWave communications, THz communications, NB-IoT, Localizations, and Reconfigurable Intelligence Surfaces.
- **Learning-based Approaches**: General AI and machine learning theories and algorithms for IoT security applications, e.g., deep learning, reinforcement learning, federal learning, transfer learning, lifelong learning.
- **Security for Platforms:** IoT related platforms, including Edge Computing, Fog Computing, Cloud Computing assisted with AI methods.
- **Decision Making:** Intelligent decision making for potential security risks in task offloading, resource allocation, profiling, modelling, content caching.
- **Hardware and SoC Designs**: Special AI or security chip designs for IoT devices, gateway, middleware, accelerators, or edge computing servers.
- **Performance Modelling, Evaluation and Optimization**: Deep learning driven latency and energy consumption model for security issues, joint security, energy consumption and performance multi-objective optimizations.
- **Security for Emerging IoT Applications**: securities in Industrial IoT systems, UAV, Autonomous Vehicle, Robots and Passive Sensors equipped with wireless power transfer techniques.

Instructions for Authors:

Submitted manuscripts must be formatted in standard IEEE camera-ready format (double-column, 10-pt font) and must be submitted via EasyChair as PDF files (formatted for 8.5x11-inch paper). The manuscripts should be no longer than 6 pages. Two additional pages are permitted if the authors are willing to pay an over-length charge at the time of publication (manuscripts should not exceed 8 pages). Submitted papers cannot have been previously published in or be under consideration for publication in another journal or conference. The workshop Program Committee reserves the right to not review papers that either exceeds the length specification or have been submitted or published elsewhere. Submissions must include a title, abstract, keywords, author(s) and affiliation(s) with postal and e-mail address(es).

Review and Publication of Manuscripts:

Submitted papers will be reviewed by the workshop Program Committee and judged on originality, technical correctness, relevance, and quality of presentation. An accepted paper must be presented at the **ICDCS 2021** venue by one of the authors registered at the full registration rate. Each workshop registration covers up to two workshop papers by an author. Accepted and presented papers will be published in the ICDCS proceedings and submitted to IEEE Xplore as well as other Abstracting and Indexing (A&I) databases. IEEE reserves the right to exclude a paper from distribution after the conference, including IEEE Xplore® Digital Library if the paper **is not presented** by the author at the conference.

Important Dates:

Papers submission: **March 5, 2021**
Notification of acceptance: **April 2, 2021**
Camera-ready paper due: **April 20, 2021**
Workshop date: **July 7, 2021**

Please refer to "Author Information" posted at the conference website for more info on paper submission and related rules/policies.

General Chairs:

Yubin Zhao, Sun Yat-Sen University, China (zhaoyb23@mail.sysu.edu.cn)
Huaming Wu, Tianjin University, China (whming@tju.edu.cn)
Xiaofan Li, Jinan University, China (lixiaofan@jnu.edu.cn)