



## **SYMPOSIUM ON MACHINE LEARNING FOR WIRELESS COMMUNICATIONS, NETWORKING, AND SECURITY**

### **IMPORTANT DATES**

#### **Call for Papers Deadlines**

**June 27, 2019**

Paper submissions due

**July 15, 2019** Notification of Acceptance

**August 15, 2019** Camera-ready paper due

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### **CALL FOR PAPERS**

New generations of wireless systems empowered by cognitive radio technologies can learn from spectrum environment and optimize themselves for a more efficient use of limited spectrum resources. Wireless communications combine various waveform, channel, traffic, and interference effects, each with its own complex structures that quickly change over time. The data underlying wireless communications comes in large volumes and at high rates, and is subject to harsh interference and security threats due to the open and broadcast nature of wireless medium. Traditional modeling and protocol tuning techniques often fall short of capturing the delicate relationship between the RF spectrum dynamics and communication design. To fill this gap, Machine Learning provides automated means to learn from and adapt to spectrum dynamics. Operating on raw RF data, Machine Learning promises to meet speed, reliability, and security requirements of wireless communication systems by revealing the complex generative processes behind the data. Applications of Machine Learning to wireless communications span the full network protocol stack and provide new design opportunities to push the performance boundaries of wireless communications. The potential benefits of Machine Learning are to be realized by the emerging computational platforms and programming capabilities specialized to answer wireless communications and networking needs. With its increasingly broader use in wireless communication systems, it is also critical to understand the security implications of Machine Learning. In this context, Adversarial Machine Learning has emerged as a viable approach to the problem of learning in the presence of an adversary and can lead to the safe adoption of Machine Learning and its applications in the wireless domain. The purpose of this symposium is to bring together leading researchers in the theory, design, and implementation of Machine Learning for wireless communications, networking and security.

### **TOPICS OF INTEREST**

- Machine learning for wireless communications
- Machine learning for wireless signal analysis and spectrum characterization
- Machine learning for situational awareness in wireless networks
- Machine learning for design and optimization of wireless network protocols
- Machine learning for cognitive radio and radar
- Machine learning for 5G
- Machine learning for wireless networks and applications
- Machine learning for wireless security
- Machine learning for Internet of Things (IoT) and mobile edge/fog computing
- Adversarial machine learning for wireless systems
- Computational aspects of machine learning in wireless systems
- Hardware and software for wireless applications with machine learning
- Datasets, experiments, and testbeds for wireless systems with machine learning.

Details about GlobalSIP Symposia and the latest updates are available at

<http://2019.ieeeglobalsip.org/pages/symposia-call-for-papers>

Submission site: <https://edas.info/newPaper.php?c=26233&track=97905>