Call for Papers

Track 8 – WEARABLE COMPUTING SYSTEMS: DEVICES, APPLICATIONS, AND ANALYTICS

Track Chairs:

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Scope and Motivation:

Modern computing has evolved from classical desktops, laptops, and servers to pervasive and ubiquitous scenarios where wearable smart Internet-of-Things (IoT) objects and mobile computing devices are essential to provide final users with uninterrupted services in mobility. The set of personal devices has expanded in the last few years, and new smart wearable accessories and mobile devices constantly appear in the market. Wearable computing systems have extremely diversified applications spanning from mobile health, wellness, virtual and augmented reality, security, effective human-machine interaction, among others. To effectively support this growing technology, methods, tools, techniques, as well as design, implementation, simulation, and deployment middleware and platforms have appeared to cope with the several related challenges that arise at all levels of abstraction from the device, network, middleware, data processing, to high-level analysis and machine learning.

In this context, the "*Wearable Computing Systems: Devices, Applications, and Analytics*" Track seeks innovative and significant research results examining the design, evaluation, and deployment of wearable and mobile devices, services, and applications.

Main Topics of Interest:

The "*Wearable Computing Systems: Devices, Services and, Applications*" seeks original contributions in the following topic areas, in addition to others closely related but not explicitly listed:

- applications of wearable and mobile computing
- cognitive wearable devices
- context- and situation-aware systems
- 5G and 6G technologies for wearable and mobile devices
- Deep-learning analytics
- embedded machine learning
- on-device deep learning
- human-in-the-loop learning
- federated learning
- transfer learning
- active learning
- multi-task learning
- model personalization
- neurotech interfaces
- power-optimization
- resource-efficient computing
- backscatter communication
- energy harvesting
- adaptive sensing
- knowledge distillation
- multi-sensor data fusion
- model compression
- wearable biometric security
- smart garments
- electronic skin
- user experience, interaction, and human factors
- just-in-time interventions
- novel applications, including mobile health, digital health, assisted living, affective computing
- software middlewares, platforms, tools, and programming frameworks
- cloud and edge architectures
- wearable computing systems in smart environments