SUMMER**SIM'19**

2019 Summer Simulation Conference

AIMS AND SCOPE

The goal of the **22nd International Symposium on Performance Evaluation of Computer and Telecommunication Systems (SPECTS)** is to provide a forum for researchers to discuss and disseminate the most promising contributions on performance evaluation of computer and telecommunication systems. In particular, papers describing results of theoretic and/or practical significance, experimental, modeling, and simulation studies as well as works presenting novel performance evaluation methods or providing insights on design and runtime tradeoffs are particularly solicited. Some of the sub-tracks included in the SPECTS track are listed below.

SUB-TRACKS

Security and Performance in Computer and Telecommunication Systems (SePerCTS)

Track Chairs: Jean-Pierre Seifert, Altaf Shaik, Robert Buhren

Data security is vital to ensure protection against cyber threats that continue to raise and diversify at a rapid speed. But often, while deploying security mechanisms, the performance of the system is affected in adverse ways. A key challenge in the design of computer and telecommunication systems is to identify a neutral ground between security and performance. Whilst the widespread of devices spanning into networks and generating countless amounts of data absolutely require high performance systems. This makes us to rethink our security systems that can guarantee a high level of performance and also an acceptable level of security. In this respect, we invite researchers and security enthusiasts to submit papers that study and analyze various issues but not limited to such as tradeoff between security and performance, new security protocols in secure communication systems.

AREAS

Edge Computing and Edge-enabled AI for Network Management (EAINM)

Track Chairs: Paolo Bellavista, Luca Foschini, Carlo Giannelli

Edge computing is rapidly emerging as the most relevant architectural approach to manage some hard and open technical challenges associated with wide-scale and quality-sensitive Internet of Things (IoT) applications, which typically exploit the elastic availability of cloud resources on the server side. EAINM specifically focuses on network quality configuration, optimization, configuration, control, and management enabled by edge computing in three-layer deployment environments (device, edge, cloud). In particular, EAINM considers as central all methodological, design, implementation, and deployment experiences that investigate digital twin creation at the cloud layer and distributed enforcement of twin control actions also at the edge, typically with complex machine learning processing at the cloud side and more lightweight digital twin execution and refinement at edge nodes. Contributions about enabling AI techniques for these architectures and practical application prototyping/deployment experiences (e.g., for manufacturing production quality control and optimized management of distributed caching) are strongly welcome.

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Aspects and trends of software evaluation (ASE)
Track Chairs: George Tsihrintzis, Maria Virvou

Software applications are evolving rapidly and are expanding their use to all the areas of human activity by the means of all sorts of hardware, including computers, handheld devices, smart things, digital signage etc. The vast use of software in many contexts imposes the need for the development of new evaluation methodologies, frameworks and processes to address software quality characteristics that include reliability, reusability, effectiveness, correctness, accuracy and also security and privacy that conform to new law regulations. Moreover, the important software quality characteristics of usability, user friendliness and utility have to be ensured for end users of a vast range of disciplines and backgrounds. Thus, measuring and evaluating the quality of software applications has become of critical importance and should attract a lot of research energy. The aim of ASE is to address current aspects and trends of software evaluation.

Modeling and Evaluation of Wireless Body Area Networks (MEWBAN)
Track Chair: Yahya Osais

Wireless Body Area Not (WBAN) are networks of medical sensors which are attached or implanted into the body of a human being or animal to monitor and control biological processes. Their performance is limited by their constrained resources and side effects such as heat. Before the full potential of WBANs can be realized, many fundamental issues must be studied using performance evaluation tools and measurements. The aim of MEWBAN is to provide the necessary insights to make the needed progress.

Social Network Analysis and Performance Aspects of Socially - Aware Networking (SANet)
Track Chairs: Magdalini Eirinaki, Iraklis Varlamis, Malamati Louta

The rapid development of wireless communications and the rise of social networks established a new research field that stands between telecommunications and social network theory. Smart and wearable mobile devices act as alternative gateways for participation in social networks and introduced "mobility" as a new aspect of social networking and applications. The aim of SANet is to provide a forum where researchers from the fields of Social Network Analysis and Telecommunication Systems Performance will come together, exchange ideas and generate new collaborations that bring us a step closer to Socially-Aware Networking.