

## THIRD INTERNATIONAL WORKSHOP ON QUALITY OF EXPERIENCE MANAGEMENT: QOE-MANAGEMENT 2019 (IN CONJUNCTION WITH ICIN 2019)

The Third International Workshop on Quality of Experience Management (QoE-Management) will be held in conjunction with the 22nd Conference on Innovation in Clouds, Internet and Networks (ICIN 2019) in Paris, France, from February 18-21, 2019. After the success of the previous QoE-Management workshops, also the third edition of the workshop is endorsed by the QoE and Networking Initiative (<http://qoe.community>).

Recent technological advances have enabled a constant proliferation of novel immersive and interactive services that pose ever-increasing demands to our communication ecosystem and offer a plethora of service consumption possibilities. Examples include: social TV, immersive environments, mobile gaming, Ultra High Definition (4K/8K), 3D virtual worlds, and Virtual and Augmented Reality. While service and application management has typically been centered around a set of Quality of Service parameters (e.g., packet loss, delay, jitter), there is a clear need to understand and model the impact of management decisions on Quality of Experience (QoE) metrics as perceived by the end user. To date, a significant amount of research has been devoted to understanding, measuring, and modeling QoE for a variety of media services. The next step is to explore methods that actively exploit such knowledge to improve and manage the quality of multimedia services, while at the same time ensuring efficient and cost-effective network operations. Moreover, with many different players involved in the end-to-end service delivery chain, identifying the root causes of QoE impairments and finding effective solutions for meeting the end users' requirements and expectations in terms of service quality is a challenging and complex problem. Going beyond technical aspects of actually implementing QoE management schemes, there is a need to address the business and economic aspects which are critical for those schemes to become viable in practice.

*QoE-Management 2019* aims at providing an international forum for researchers addressing emerging concepts and challenges related to managing QoE for networked services. The workshop will aim to address QoE management in the context of ongoing developments, such as the move to 5G and virtualized networks; the exploitation of big data analytics and machine learning in the domains of QoE modeling and monitoring; and solutions targeting emerging complex, interactive, and immersive service scenarios. The workshop will combine original full and short paper presentations with a motivating keynote to thoroughly explore this challenging topic.

### Topics of interest:

#### *Characterization and modeling of QoE*

- > Relationship between QoE and QoS in multimedia networking
- > New objective & subjective methods and algorithms
- > Use of crowdsourcing techniques
- > Active learning and data-driven techniques
- > Move towards personalized QoE

#### *QoE monitoring and measurement*

- > Big Data and analytics-driven QoE monitoring approaches
- > Effects of Internet performance on QoE
- > QoE monitoring approaches in the wild
- > QoE monitoring challenges related to traffic encryption
- > Challenges related to deployment and placement of monitoring probes

#### *QoE-aware network and application management*

- > Open source platforms for QoE management
- > QoE management in heterogeneous networks
- > Energy efficient QoE management
- > Cooperative approaches towards QoE management
- > Adaptive QoE management
- > Self-organization techniques for the management of multimedia services
- > QoE assurance loops

#### *Quality management applied to different business sectors and use cases*

- > Smart city, transport, and automotive
- > Healthcare and AAL
- > Intelligent manufacturing, Industry 4.0 and tactile Internet
- > Immersive Media (3D, AR and VR)
- > Real-time, Web- and Cloud applications
- > Business aspects of quality management

#### *5G and QoE*

- > Network slicing for quality management
- > Edge-computing for quality management
- > QoE guarantees in 5G end-to-end network slices

#### *QoE oriented coding*

- > Streaming aware video encoding
- > QoE oriented coding for multimedia streaming
- > Energy aware media coding and decoding

#### *Experimental approaches for QoE management*

- > Subjective studies in commercial settings and controlled lab environments
- > Experimental facilities for evaluation of algorithms and services in QoE management

### Important dates:

- Paper submission deadline: Nov. 15, 2018
- Acceptance notification: Dec. 21, 2018
- Camera ready papers: Jan. 10, 2019 (hard deadline!)

### Submission guidelines:

Paper submissions must present original, research or experiences. Late-breaking advances and work-in-progress reports from ongoing research are also encouraged. Only original papers that have not been published or submitted for publication elsewhere can be submitted. Each submission must be written in English, accompanied by a 75 to 200 word abstract and a list of up to 5 key words. There is a length limitation of 6 A4 (210 mm x 297 mm) pages for full papers and 3 pages for short papers (including title, abstract, figures, tables, and references). Submissions must be in 2-column IEEE conference style with a minimum font size of 10 pt. Papers exceeding these limits, multiple submissions, and self-plagiarized papers will be rejected without further review.

Authors should submit their papers electronically via the EDAS online submission system: <http://edas.info/N25394>.

### Proceedings:

Papers accepted for QoE-Management 2019 will be included in the conference proceedings and IEEE Xplore. The IEEE reserves the right to remove any paper from IEEE Xplore if the paper is not presented at the workshop.

### Workshop co-chairs:

- **Michael Seufert**, AIT Austrian Institute of Technology, Austria
- **Lea Skorin-Kapov**, University of Zagreb, Faculty of Electrical Engineering and Computing, Croatia
- **Luigi Atzori**, University of Cagliari, Italy