The 3rd International Workshop on Quality of Experience Management (QoE-Management 2019, https://www.icin-conference.org/QOE.php) was a successful full day event held on February 18, 2019 in Paris, France, where it was co-located with the 22nd Conference on Innovation in Clouds, Internet and Networks (ICIN). After the success of the previous QoE-Management workshops, the third edition of the workshop was also endorsed by the QoE and Networking Initiative (http://qoe.community). It was organized by workshop co-chairs Michael Seufert (AIT, Austrian Institute of Technology, Austria), Lea Skorin-Kapov (University of Zagreb, Croatia) and Luigi Atzori (University of Cagliari, Italy). The workshop attracted 24 full paper and 3 short paper submissions. The Technical Program Committee consisted of 33 experts in the field of QoE Management, which provided at least three reviews per submitted paper. Eventually, 12 full papers and 1 short paper were accepted for publication, which gave an acceptance rate of 48%.

On the day of the workshop, the co-chairs welcomed 30 participants. The workshop started with a keynote given by Martín Varela (callstats.io, Finland) who elaborated on “Some things we might have missed along the way”. He presented open technical and business-related research challenges for the QoE Management community, which he supported with examples from his current research on the QoE monitoring of WebRTC video conferencing.

Afterwards, the first two technical sessions focused on video streaming. Susanna Schwarzmann (TU Berlin, Germany) presented a discrete time analysis approach to compute QoE-relevant metrics for adaptive video streaming. Michael Seufert (AIT Austrian Institute of Technology, Austria) reported the results of an empirical comparison, which did not find any differences in the QoE between QUIC- and TCP-based video streaming for naïve end users. Anika Schwind (University of Würzburg, Germany) discussed the impact of virtualization on video streaming behavior in measurement studies. Maria Torres Vega (Ghent University, Belgium) presented a probabilistic approach for QoE assessment based on user’s gaze in 360° video streams with head mounted displays. Finally, Tatsuya Otoshi (Osaka University, Japan) outlined how quantum decision making-based recommendation methods for adaptive video streaming could be implemented.

The next session was centered around machine learning-based quality prediction. Pedro Casas (AIT Austrian Institute of Technology) presented a stream-based machine learning approach for detecting stalling in real-time from encrypted video traffic. Simone Porcu (University of Cagliari, Italy) reported on the results of a study investigating the potential of predicting QoE from facial expressions and gaze direction for video streaming services. Belmoukadam Othmane (Cote D’Azur University & INRIA Sophia Antipolis, France) introduced ACQUA, which is a lightweight platform for network monitoring and QoE forecasting from mobile devices.

After the lunch break, Dario Rossi (Huawei, France) gave the second keynote, entitled “Human in the QoE loop (aka the Wolf in Sheep’s clothing)”. He used the main leitmotiv of Web browsing and showed relevant practical examples to discuss the challenges towards QoE-driven network management and data-driven QoE models based on machine learning.

The following technical session was focused on resource allocation. Tobias Hoßfeld (University of Würzburg, Germany) elaborated on the interplay between QoE, user behavior and system blocking in QoE management. Lea Skorin-Kapov (University of Zagreb, Croatia) presented studies on QoE-aware resource allocation for multiple cloud gaming users sharing a bottleneck link.

Quality monitoring was the topic of the last technical session. Tomas Boros (Slovak University of Technology, Slovakia) reported how video streaming QoE could be improved by 5G network
orchestration. Alessandro Floris (University of Cagliari, Italy) talked about the value of influence factors data for QoE-aware management. Finally, Antoine Saverimoutou (Orange, France) presented WebView, a measurement platform for web browsing QoE.

The workshop co-chairs closed the day with a short recap and thanked all speakers and participants, who joined in the fruitful discussions. To summarize, the third edition of the QoE Management workshop proved to be very successful, as it brought together researchers from both academia and industry to discuss emerging concepts and challenges related to managing QoE for network services. As the workshop has proven to foster active collaborations in the research community over the past years, a fourth edition is planned in 2020.

We would like to thank all the authors, reviewers, and attendants for their precious contributions towards the successful organization of the workshop!

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QoE-Management 2019 Workshop Co-Chairs