

CALL FOR PAPERS

ELMAR 2015 Special Session

From 3G to 5G

Summary:

According to some forecast projects 18-fold growth in global mobile internet data traffic from 2011 to 2016 has to be expected. In this context, maintaining good network performance and satisfactory user experience in increasing usage of 3G and 4G cellular networks creates a host of new challenge. Furthermore, the evolution of mobile networks towards an all-IP (LTE) introduces new challenges for traditionally circuit-switched voice service, where it is critical for operators to guarantee minimum levels of performance and improve them where possible. Moreover, demands for 5G are set and lots of research of promising technologies for 5G is underway. This translates into a need to:

- Overcome the challenges of LTE deployment
- Create effective traffic load balancing strategies over legacy 2G, 3G and upcoming 4G
- Understand the benefits of mobile data offload solutions
- Determine the right moment for HetNet and SON solutions
- Utilize advanced antenna techniques in 4G deployment
- Investigate advances antenna techniques for 5G
- Define all possible drivers for 5G in the future

Therefore, this session will be focused on activities related to HSPA+ and LTE standard and its implementation, traffic balancing and offloading strategies using legacy or cooperative networks, handling circuit-switched services over 4G, advanced antenna techniques utilization, state-of-the-art in upcoming 5G etc.

The topics for this special session should cover:

- QoS and QoE monitoring
- Software defined\ cognitive radio
- Mobile data traffic load balancing and offloading strategies
- Capacity and coverage optimization
- Handling voice service in a 4G network: VoLTE, CSFB, VoIP
- MIMO, MU-MIMO and massive MIMO techniques
- HetNet, FemtoCell, Wifi integration and SON solutions
- Smart antennas and beamforming
- 4G standards: current and emerging
- 5G future – demands, new modulation formats, deployment of mmWave band etc.

Submission

Authors should prepare their papers according to [ELMAR-2015 paper sample](#), convert them to PDF (based on IEEE requirements), and submit them by **April 30, 2015** to one of the e-mail addresses listed below.

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