

Keynote Speech 1

Leveraging Artificial Intelligence in Mulsemedia Communication Networks: Challenges and Opportunities



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Abstract: Traditionally, multimedia applications have primarily engaged two of the human senses - the audio and the visual - out of the five possible. With recent advances in computational technology, it is now possible to talk of applications that engage the other three senses, as well: tactile, olfaction, and gustatory. This integration leads to a paradigm shift away from the old multimedia towards the new mulsemedia - multiple sensorial media. In his talk, Dr. Ghinea is going to focus on the issue of the perceptual experience of multimedia and how Artificial Intelligence has opened new and sometimes challenging opportunities for mulsemedia applications over modern 5G networks.

Biography: Dr. Gheorghita (George) Ghinea is a Professor in Mulsemedia Computing in the Department of Computer Science, at Brunel University. Dr. Ghinea's research activities lie at the confluence of Computer Science, Media and Psychology. In particular, his work focuses on the area of perceptual multimedia quality and how one builds end-to-end communication systems incorporating user perceptual requirements. To this end, recognising the infotainment duality of multimedia, Dr. Ghinea proposed the Quality of Perception metric as a more complete characterisation of the human side of the multimedia perceptual experience. Dr. Ghinea has applied his expertise in areas such as eye-tracking, telemedicine, multimodal interaction, and ubiquitous and mobile computing, leading a team of 8 researchers in these areas. He has over 400 publications in his research field, is in the Stanford list of top 2% cited scientists in the world, and his research has been funded by both national and international organisations. Dr. Ghinea also consults regularly for both public and private institutions in his areas of expertise.