

Special Session on **“VR, AR and MR: Theories and Applications for the benefits of Society”**

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Session Co-Chair: Dr. Subhransu Ranjan Samantaray, Associate Prof. IIT, Bhubaneswar

The emerging technology involving Virtual Reality (VR), Augmented Reality (AR) and Mixed Reality (MR) is pregnant with huge possibilities having significant positive contributions and noteworthy impact towards the advancement of technology, knowledge, know-how and the society at large. These are the cutting-edge technologies that enable advanced visualization in 3D of a complex product or process giving users complete, partial or mixed immersive experience of the phenomenon. Virtual environments, created through these cutting-edge technologies, provide a unique, efficient and effective tool for understanding complex physical processes and phenomena. Even the creation of digital twins as digital replica of physical product, object, system or processes require the advanced 3D visualization technologies to be of full benefit across its entire life cycle. And these are increasingly being experimented towards real time machine and equipment health monitoring purposes and possible predictive assets maintenance purposes. It is believed that visualization technologies combined with advanced computer simulation can bring significant benefits to industry and society, through its applications to the area of education, healthcare, manufacturing, utilities and other resource intensive sectors. Thus, the increasing convergence of physical and digital world; coupled with increasing avenues for immersive analytics is likely to benefit businesses and society significantly.

The **Special Session aims at** bringing together industrial experts and practitioners and researchers from academia and industry to present and deliberate on the newest advances and developments of theories and applications in this vital area.

The papers and case studies are invited in, but not limited to, the following topics:

- Virtual Reality (VR), Augmented Reality (AR) and Mixed Reality (MR)
- VR, AR, MR research and training applications
- VR, AR, MR research and education applications
- VR, AR, MR research and gaming applications
- VR, AR, MR research and industry applications
- Digital Twin and Immersive Analytics
- VR, AR, MR and Digital twin research and applications for steel industry

Important dates for the Special Session’s Paper Submission:

Submission Deadline: June 30, 2019

Paper Notification date: August 15, 2019

Camera-Ready: August 30, 2019

Authors are invited to submit full paper (Maximum 6 pages, double- column US letter size) as PDF using the IEEE templates. The submission and review process will be done through the TENCON website www.tencon2019.org. Papers should conform to the IEEE format and specifications. Please visit www.tencon2019.org for guidelines and more information.