

Special Issue

Sensing Technologies and Applied Metrology for eXtended Reality, Artificial Intelligence and Neural Engineering

Message from the Guest Editors

Research and development efforts are being increasingly dedicated to technologies like eXtended reality (XR), artificial intelligence (AI), and neural engineering (NE). The advancements in these fields are remarkable, but the aspects related to measurement are often disregarded or poorly investigated. Indeed, the abovementioned fields strongly rely on data; thus, data quality must be controlled, for example, by improving the sensors adopted to acquire such data and making a rigorous uncertainty assessment. For this reason, the role of sensing technologies and applied metrology appears crucial. Moreover, novel sensing approaches may disclose new possibilities in terms of the performance and application of XR, AI, and NE. As a further element, synergy between different expertise should be promoted. For instance, it is well known that AI is becoming increasingly pervasive and benefiting various technologies, even sensing and applied metrology. Therefore, this Special Issue invites contributions with a focus on eXtended reality, artificial intelligence methods, and neural engineering topics like brain-computer interfaces, with special attention given to sensing and measurement.

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