

## **Smart Sensing and Embedded Intelligence**

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Just as senses represent the basis of any intelligent life form, which is characterized by being capable of learning from the interaction with its environment, sensors represent the fundamental interface to humans and the outside world, and the source of all information for any current and future learning, intelligent and automated system. The relevance of smart sensor developments is therefore increasing in the context of many future developments, such as “Smart Cities & Smart Technologies”. In the field of advanced and modern sensor technology, there are currently numerous opportunities from excellent research to enhance the capabilities, performance and embedded learning capabilities of future sensors, which must be used in a convergent synergetic view. An overview of relevant challenges and emerging future developments will be discussed in this presentation, including innovative technical challenges and perspectives, but also human-oriented design, a sovereign data-saving information processing and participative implementation. Innovative embedded intelligent sensors will increasingly drive new applications and stimulate public and private investment to create economic, technological and societal value for society, businesses, citizens and the environment, and providing the fundamental basis for a human-centred, trustworthy European vision of AI. The path ahead is about reshaping the eyes and senses of intelligent systems.