

# EURASIP Journal on Applied Signal Processing

## Special Issue on Machine Perception on a Chip

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### Topics of interest

- Smart sensing
- Image understanding
- Recognition
- Configurable and FPGA-based perception architecture
- Intelligent architecture
- Network of sensors
- Sensor fusion
- Internet imaging
- Motion and stereo vision
- Active vision
- Emerging technologies
- Others

Perception is where different functional modules-sensing, computing, information processing, and machine interfacing-merge in different technologies-MEMS, optics, and semiconductors, etc. It is one of the most active areas in both academia and industry. Perception is what differentiates a smart computer and system from a standard number crunching and storage machine. Perception is in its way to have more intelligence in future machines.

With the emergence of the "System-on-a-Chip" technology, perception systems have found a natural technological fit where a heterogeneous system-both in function and technology-can be implemented in a single chip. Although "perception on a chip" is not a reality, yet, several research groups have been working towards this goal.

The focus of the proposed special issue is to bring to the research and development community the latest research results and efforts at different levels: technologies, design paradigms, system integration, software-hardware codesign, high level architectures, sensors technologies, etc. The proposed issue will be a very useful resource for people who are just starting in this area, and will provide an update to those who have been working in the area. It will address some of the challenges these researchers are facing. Several examples of existing systems and prototypes will be included.

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