Annual International Symposium on Industrial Electronics (ISIE) 2023

Special Sessions on

"Edge AI for Empowering the Next Generation of Robotic and Automation Technologies"

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Call for Papers

Theme:

Edge AI is one of the latest raising ground-breaking technologies that is creating an evolution on the way that we think and use the edge infrastructure in emerging key applications. As such, new architectures are deployed that can provide increased capacity of processing in computational mediums close to the real applications. Towards this emerging area, the ability to offload to the edge, critical components that were previously on-board operated, introduces novel capabilities for allowing the generation of novel robotic and automation technologies, applications that can take advantage of the large-scale computational capacities and the related scalability and data processing capabilities. In this framework, the related robotics and automation software and hardware are also advancing, resulting in the next generation of massive amounts of high-quality data and computationally demanding and complex algorithms that push the limits of the classical approaches in autonomy, control, and perception, while trying to retain the real-time characteristics and the bounded time

delays control schemes realizations. In that context, Edge AI technologies address these needs by enabling the new generation of interconnected robots, autonomous vehicles, distributed process control, massive synchronization of multiple control loops, smart cities, collaborative robotic missions, multi-sensorial fusion, real tile multi-object tracking, massive and multidimensional optimization, intense augmented reality interfaces, and large-scale mapping, to name a few. Thus, the aim of this special session is to gather all the latest theoretical and technological advances in the field of Edge AI, with a particular focus on the next generation connected Robotic and Automation applications.

Topics of interest include, but are not limited to:

1	Edge based close loop architectures
2	Edge massive optimisation
3	Perception on the edge
4	Multi-sensorial data fusion
5	Offloading of time critical applications
6	Multi robot edge-based orchestrations
7	Edge based XR (eXtended Reality)
8	MIMO (Multiple Input Multiple Output) control architectures at the edge

Submissions Procedure:

All the instructions for paper submission are included in the conference website:
https://2023.ieee-isie.org/

Deadlines:

Full paper submission:	January 31, 2023
Paper acceptance notification:	April 15, 2023
Camera-ready paper submission:	April. 30, 2023