16:00-17:00

12. Visual and Acoustic Inference on Low-Cost IoT Systems

Jorge Fernández Berni, Professor, University of Sevilla

Abstract: *The irruption of deep learning (DL) into the fields of artificial vision and audio recognition in the last few years has led to a paradigm change with respect to classical hand-crafted algorithms. These days, accurate but computationally heavy neural networks are ubiquitously employed. The demanding processing and storage requirements of such networks come into conflict with the limited hardware resources available in IoT devices. Meanwhile, a great deal of technological components at both hardware and software levels have been released to support DL-based deployments. Each of these components claims specific advantages in terms of performance, system integration, energy consumption, etc. This talk will provide insight to navigate this complex scenario in an effective manner. Concepts, figures of merit, procedures, and methodologies to assist on the selection of components for inference on edge devices will be presented. Practical examples in the application framework of remote animal monitoring will be described. In short, a variety of theoretical and practical guidelines will be set out in this presentation about the implementation of visual and acoustic inference on cyber-physical systems with scarce computational and memory resources.*

18:00-19:15 Social Event II: USC heritage visit

20:30-22:30 Dinner

| DAY 5 | *Friday, September 24, 2021* |

09:00-10:00 **13. ESR Committee Meeting (ESC) (only for ESC members)**

10:00-12:00 **14. Supervisory Board Meeting (SB) (only for SB members)**

12:00-12:30 Coffee break

12:30-14:00 **15. External Advisory Board Meeting (EAB)**

14:00-16:00 Lunch

18:00-22:00 **16. European Researchers' Night**