

## Lecture: 'Energy Harvesting, Sensing and Neuromorphic Computing at Fraunhofer-IIS'

**Data:** martes, 9 abril, 2019 -09:30 - 11:30

**Lugar:** CiTIUS Assembly Hall

**Poñente(s):** Loreto Mateu (Fraunhofer-IIS)

**Idioma:** Inglés

**Streaming:** Por confirmar

The Fraunhofer-Gesellschaft is the leading organization for applied research in Europe with research activities conducted by 72 institutes throughout Germany and an annual research budget totaling more than 2.3 billion euros. Founded in 1985, the Fraunhofer Institute for Integrated Circuits IIS in Erlangen, Germany, ranks first among the Fraunhofer Institutes concerning headcount and revenues. With the development of the audio coding method MPEG Layer-3, short mp3, Fraunhofer IIS has reached a worldwide recognition.

We develop customized solutions in the field of integrated circuits and systems to meet the constantly evolving requirements of industrial applications. Our focus is on mixed-signal ASIC design for industrial, communications and automotive applications. Research activities on the topic of energy harvesting will be presented. Moreover, two projects where ICS' Department is involved will be presented: USEP (Universal Sensor Platform) and TEMPO (Technology & hardware for Neuromorphic computing).



### Bio

Dr. María Loreto Mateu Sáez obtained her B.S. in Industrial Engineering in 1999, her M.S. in Electronic Engineering in 2002 and her Ph.D. degree in June 2009 with a thesis titled 'Energy Harvesting from Human Passive Power' at the Universidad Politècnica de Catalunya. In June 2007, she joined the Power Efficient Systems Department at Fraunhofer IIS, Nuremberg (Germany), where she worked as research engineer and since 2012 as chief scientist of the Power Efficient Systems Department at Fraunhofer IIS. In 2018 she changed to the Fraunhofer department of Integrated Circuits and Systems, where she is responsible for an Advanced Analog Design Group. Her research interests include ultra-low power design, analog signal processing, AC-DC and DC-DC converters as well as electrical models for energy harvesting generators. She has published several papers in international journals and conferences and she has been granted four patents. Moreover, she is editor of one book dealing with the topic of energy harvesting and author of one book chapter about wearable sensors.