

Special Session on

“Low Power Smart Sensors Powered by Energy Harvesting Solutions”

Organized by

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Call for Papers

Harvesting energy from the environment where a smart sensor operates is a very attractive solution. This powering option avoids batteries and the associated work of replacing it, promoting energetic independence. The increasing appearing of new harvesting technologies is contributing to the ability to scavenge energy from the most diversity of sources and convert it in electrical useful energy. Energy sources span among a variety of energetic manifestations, such as vibrations, thermal, electromagnetic radiation, chemical or biological. At the same time, the scientific community is researching about the energy conversion process efficiency, power regulation and storage, maximum power point tracking methods, low power operation, DC/DC and AC/DC converters. Energy has also a paramount impact on smart sensor connectivity. Because of that, low power network protocols are being proposed, originating new standards ready to be adopted by the industry. Papers targeting these challenges are invited for this special session.

Topics of the Session:

- Energy conversion transduce
- Low power methods and techniques
- Maximum power point tracking
- DC/DC and AC/DC converters
- Energy storage
- Energy harvest in real-world smart sensor application
- Developments and actions related with standardization
- Advanced techniques and platforms for development, verification, validation and benchmarking