



# IEEE Sensors Council



## CALL FOR PAPERS

IEEE Sensors Journal Special issue on  
**Power-efficient sensors for long-term applications**

Today sensor technologies are gaining popularity, with people surrounded by many sensor devices. Connected sensor products are made possible by major improvements in processing power, and by the device miniaturization, as well as the availability of ubiquitous wireless connectivity. Such trends are leading towards a trillion connected devices, which create formidable research challenges, and open problems. The main challenges are to prolong the operating lifetime and to enhance usability, maintenance, and mobility while keeping a small and unobtrusive form factor. Power-efficient sensing systems have to provide continuous data monitoring, acquisition, processing, and classification of the data. This Special Issue emphasizes the challenges, issues, and opportunities in the research, design, and engineering of energy efficient sensing; focusing on techniques, strategies, and algorithms applied to real-application achieving long lifetime. It also welcomes contributions in deployments, in-field tests, and measurements of low-power devices. All submissions must be original and not previously published. Related areas including (but not limited to):

- Low power circuit design for specific sensors and sensing systems
- Power management algorithms for energy harvesting sensing systems
- Experiences of real-world low power sensing applications and deployments
- Power efficient machine learning for sensors data optimized for battery operated devices.
- Resilient energy-neutral sensors
- Semantic technologies for interoperability and context awareness achieving energy efficient sensing.
- Long-term applications involving low power sensing and control
- Architectures for energy-neutral and self-sustaining sensing systems
- Ultra-low power communication and wake-up radio devices for sensor networks

Solicited and invited papers shall undergo the standard IEEE Sensors Journal peer review process. All manuscripts must be submitted on-line, via the *IEEE Manuscript Central*<sup>™</sup>, see <http://mc.manuscriptcentral.com/sensors>. When submitting, please indicate in the “Manuscript Type” roll down menu, and also by e-mail to Ms. Gina Colacchio ([g.colacchio@ieee.org](mailto:g.colacchio@ieee.org)) that the paper is intended for the “Low-power sensors for long-lifetime applications” Special Issue. Authors are particularly encouraged to **suggest names of potential reviewers** for their manuscripts in the space provided for these recommendations in *Manuscript Central*. For manuscript preparation and submission, please follow the guidelines in the *Information for Authors* at the IEEE Sensors Journal web page, <http://www.ieee-sensors.org/journals>

### **Deadlines:**

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| • Manuscript Submission:                     | March 3, 2017  |
| • Notification of Acceptance :               | June 15, 2017  |
| • Final Manuscript published in IEEEExplore: | July 15, 2017  |
| • Tentative date of paper issue:             | September 2017 |

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