

CALL FOR PAPERS

IEEE Sensors Journal Special Issue on

Advancing Standards for Smart Transducer Interfaces

ISO/IEC/IEEE 21451-x Standards (previously known as IEEE 1451.x) is a family of standards which allows designer to project Smart Transducers and Sensors with reference to protocols, XMPP, TEDS, signal treatment, networks, Web services, RFID, etc. In order to meet industry's needs and the growing demands for reliable sensing systems with higher performances, currently working groups are revising the family of standards with the joint effort between IEEE and ISO/IEC/JTC1.

Several perspectives and open research problems have to be investigated such as the treatment of the signal, standardized communication protocols, security, architecture, reliability, maintenance, accuracy and management. For these reasons the ISO/IEC/IEEE 21451-x Standards have been reconsidered and many new features have been introduced. Therefore new challenges are stimulating researchers and scientists in order to improve performances and features of sensing systems by including issues such as green communication, reliability assurance, high accuracy and system maintenance.

Scope

The scope of this Special Issue is to present and highlight the advances and the latest novel and emergent technologies, implementations and applications in the field of Smart Transducers and Sensors according to the Guidelines of the family of Standards. So to provide readers with a clearer understanding of the current Standards features and the related state of the art.

Original research contributions, tutorials, and review papers are encouraged. Manuscripts should provide content to be accessible to general audiences working in the field.

This ISO/IEC/IEEE 21451-x Standards call invites contributions on, but not limited to, the following topics:

- Smart transducers and sensors
- Smart wireless and networked sensors
- Smart sensor modelling and design techniques
- Sensor interface and architecture
- Security, privacy and management
- Multisensor data fusion models
- Auto-learning algorithms
- Data processing algorithms
- Testing and simulation techniques for sensors
- E-calibration and auto-traceability
- Sensor reliability and maintenance
- High efficiency and accuracy

Submission Guideline

All manuscripts shall undergo the standard IEEE Sensors Journal peer review process. All manuscripts must be submitted on-line, via the *IEEE Manuscript Central*TM, see <http://sensors-ieee.manuscriptcentral.com/sensors>. When submitting, please indicate in the "Manuscript Type" roll down menu, and also by e-mail to Ms. Alison Larkin, a.larkin@ieee.org, that the paper is intended for the "Advancing Standards for Smart Transducer Interfaces" 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>.

Schedule

- **Submissions deadline:** March 31, 2014
- **Author notifications:** July 15, 2014
- **Final manuscripts due:** September 15, 2014
- **Expected Publication date:** December, 2014

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