Call for Papers
IET Radar, Sonar & Navigation

Special Issue:
Sonar multi-sensor applications and techniques

The underwater domain is one of the most challenging environments for naval and commercial operations. Much of the research and technological innovation of recent years has been focused on the design of autonomous systems capable of operating without the direct control of humans. Sophisticated autonomous underwater vehicles (AUVs) are now available for many applications and able to accomplish numerous tasks by using a wide range of sensor payloads. Acoustic sensors in particular are critical for underwater operations, and are frequently used for navigation, mapping, target detection, tracking and classification, and communications. Additionally, there is growing interest in the design, development, and deployment of such AUV systems in distributed networks, in which AUVs make autonomous decisions and operate collaboratively in order to accomplish their given tasks efficiently.

Submissions are solicited that report recent progress in methods and applications of acoustic sensing and processing in a multi-sensor or multi-platform environment.

Specific topics of interest include:

- Anti-submarine warfare using cognitive networked AUVs
- Adaptive sampling using network of AUVs
- Automatically adjusting tracking parameters by bi- and multistatic sonar measurements
- Tracking and fusion with acoustic and non-acoustic data
- Applications of sonar to mapping, navigation, and collision avoidance
- Multistatic sonar signal processing and tracking
- Feature-aided tracking
- Self-tuning sonar by connecting tracking filter results to improve signal processing and contact generation
- Acoustic communications for AUV coordination
- Sensor performance and mission planning for AUVs under uncertainty

All submissions are subject to the journal’s peer-review procedures. The authors should follow the journal’s Author Guide at http://digital-library.theiet.org/journals/author-guide when preparing papers for submission to the Special Issue.

Important dates:
Submission deadline: 22 Feb 2017
Publication date: Dec 2017

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