



Call for Papers
IEEE Aerospace and Electronic Systems Magazine

Special Issue on
Navigation and Positioning Systems

The widespread usage of the U. S. GPS has revolutionized positioning and navigation over the past quarter century. However, recent research and development has been directed far beyond GPS to augment and expand position, navigation and timing (PNT) capabilities. Global navigation satellite systems (GNSS) have been and are being developed including Beidou, Galileo, Glonass and IRNSS. Multi-constellation GNSS receivers are being developed to provide users with increased robustness. Concerns over the vulnerability of GNSS to interference and jamming have spurred research in the area of interference detection and mitigation. Additionally, so-called 'alternate positioning, navigation and timing systems' (APNT) are being developed to serve as independent backups to satellite-based systems. Furthermore, the highly complementary nature of inertial navigation has ensured that hybrid GNSS/inertial systems continue to be developed and deployed. Recent developments include the integration of GNSS with MEMS inertial sensors in applications varying from unmanned aerial vehicle guidance and control to smart phone navigation. At the other end of the inertial spectrum, miniature 'navigation grade' inertial sensors are being developed that may eventually replace the current generation of ring-laser gyros and fiber-optic gyro-based inertial systems.

This special issue will present recent work performed in the aforementioned areas.

Key Topic Areas

- Performance investigations of Beidou, Galileo, Glonass and/or IRNSS
- Multi-constellation receiver development and testing
- GNSS interference/jamming/spoofing detection and mitigation
- Alternate PNT design, development, implementation and testing
- Integration of low-cost inertial sensors with GNSS
- Development of next-generation navigation-grade inertial sensors

For information on paper submission and the requisite contents for a full paper, prospective authors should consult <http://ieee-aess.org/main/index.php/publications/systems-magazine> (under *Author's Instructions*). Submission and review of manuscripts are handled via the IEEE AESS Magazine's online system at http://sysaes.msubmit.net/cgi-bin/main.plex?form_type=home. Manuscripts will be peer reviewed according to the standard IEEE AESS process.

Important Dates

- Manuscript submission deadline: August 15, 2016
- First review completed: October 15, 2016
- Revised manuscript due: December 15, 2016
- Second review completed: February 15, 2017
- Final manuscript due: March 15, 2017

Guest Editors

- Prof. Michael Braasch – Ohio University, USA – braaschm@ohio.edu
- Prof. Andrew Dempster – University of New South Wales, Australia – a.dempster@unsw.edu.au