Abstract Submission: Due October 28, 2022

Submit abstracts electronically via the ION Abstract Management Portal, no later than October 28, 2022. To submit an abstract, sign in at ion.org/abstracts. If you have not used the Abstract Management Portal before, click “Create My Account.” Click on the PLANS conference and complete the form:

• Abstracts should describe objectives, anticipated or actual results, conclusions, any key innovative steps and the significance of your work.
• Authors will be notified of acceptance in late November and provided with an electronic author’s kit with presentation and publication guidelines. Papers will be circulated in the public domain. Classified or ITAR restricted abstracts and papers will not be accepted.
• Authors will be required to present in person in Monterey, California; no virtual presentation options will be made available.
• All authors attending the meeting are required to pay registration fees.

Final Manuscripts

Completed manuscripts must be uploaded to the ION’s Abstract Management Portal (AMP) by February 3, 2023. Manuscripts will be reviewed by independent referees and designated as a primary or alternate paper in the onsite program based on peer review of the full manuscripts. Manuscripts not received by February 3 are subject to withdrawal from the program. Manuscripts will only be peer reviewed one time. Authors will have the opportunity to make corrections/revisions to manuscripts through May 5, 2023. However, manuscripts not meeting peer review standards during the first review are not re-reviewed for inclusion in the IEEE Xplorereceedings.

To be included in the conference proceedings:
1. manuscripts must be uploaded into AMP by February 3, 2023;
2. the submitted manuscript must be representative of the original abstract submitted;
3. the manuscript must meet the peer review requirements;
4. an author listed on the manuscript must present at the conference and pay the conference registration fee;
5. the presenting author must attend the mandatory speakers’ breakfast the morning of their session.

PLANS manuscripts will be eligible for Best Paper Awards, including the IEEE’s Walter Fried Award, PLANS Student Award and the Best Paper in Track Award. Papers will be posted on the PLANS website for eligible conference registrants to view on a complimentary basis until the electronic proceedings are circulated.

Tutorials: Monday, April 24

Pre-conference tutorials will be offered on Monday, April 24, to provide in-depth learning of specific PNT-related disciplines complementing the technical program. Tutorials will be taught in person, in a classroom setting. Additional registration fees will be required. Electronic notes will be provided to registered attendees via the meeting website and a link provided for advance download. Specific course offerings will be promoted on the conference website in early 2023.

Registration Information

Full registration includes all technical sessions, conference meal functions, events, and access to electronic proceedings. Registration for tutorials will be additional. Individual registration benefits are non-transferable.

Attendees and Presenters, staying at the Hyatt Regency Monterey.

*To be eligible for a student rate registration, attendees must be enrolled in full-time course work at an accredited educational institution, and must send a current transcript showing full-time enrollment to registration@ion.org. Student conference badges will display the name of the university at which the student is enrolled.

Accommodations

Make your reservation online at ion.org/plans. Accommodations are offered at the Hyatt Regency Monterey, Monterey, California. A block of rooms has been set aside for conference attendees at the discounted rate of $229 per night for single/double occupancy; rooms will be available until March 24, 2023, or until the block fills up, whichever comes first. A limited number of government rate rooms for qualified federal agencies are also available. Reservations made after March 24 will be on a space-available basis and may not be at the special conference rate. We strongly encourage you to make your hotel reservations early.

Save $200 on your registration fees by staying at the conference hotel. All attendees who stay at the Hyatt Regency Monterey, and submit their hotel confirmation number at the time of conference registration, will receive a $200 discount when registering for the conference. Hotel discounts will not be applied retroactively.

Exhibits

Exhibit space is still available. Booths are sold in 10’ × 10’ increments and include one complimentary full-conference registration. For an exhibitor prospectus, or more information, go to ion.org/plans.

Call for Nominations: Kershner Award

The IEEE PLANS Kershner Award is presented to recognize the outstanding lifetime achievements of an individual who has made substantial contributions in the field of navigation. Additional details can be found on ion.org/awards.

Submit nominations to meetings@ion.org by January 20, 2023, and include all of the following information in the nomination e-mail:
1. the name and contact information of the nominee
2. your name and contact information
3. a paragraph explaining why the individual should be considered for this award
4. a proposed citation (25 words or less)
5. any other relevant information

Registration Type

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<th>By March 24</th>
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<tr>
<td>IEEE/ION Member</td>
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*Student rates are available to full-time college students.

Sign up for ION e-mail bulletins and alerts, or visit ion.org/plans for more information.
ABSTRACTS DUE OCTOBER 28, 2022

Chairs: Sensor calibration, modeling, and self-calibration techniques for achieving low-cost manufacturing, packaging, calibration and test of inertial sensors.

Over simulations.

Stabilization, pointing. Sensor calibration (including self-calibration) and performance. Applications include precision free inertial navigation, antenna high accuracy inertial sensors capable of providing navigation/strategic grade gravimeters, and magnetometers. Alternative sensor technologies and solution of prolonged self-contained navigation.

A track Chair: Dr. Michael Braasch, Ohio University

SESSION TOPICS

Chairs: Sensor calibration, modeling, and self-calibration techniques for achieving low-cost manufacturing, packaging, calibration and test of inertial sensors.

Atmospheric Effects

Chairs: Multi-sensor setups (e.g., INS). Multi-frequency, multi-constellation PPP/RTK.

Applications in robust positioning and secure time transfer. Threat modeling, and security of GNSS. Integrity, availability, and accuracy evaluation. Safety-critical applications that make use of ARAIM, GBAS, SBAS and other GNSS technologies. Architecture and requirement allocation for augmentation systems including PPP, RTK, NTRT. Nominal error modeling, overbounding, and fault detection. Single measurement and multi-measurement fault detection and exclusion. Instantaneous and sequential integrity risk based on mission requirements. Designing, implementing, testing and validation of fusion and integrity budget allocation for individual sensors. Integrity, continuity and availability of new multi-constellation systems, including using LEO-RTK. Integrity of PNT systems that augment and complement GNSS (LTE, 5G). Collaborative Navigation

Chairs: GPS Performance

Algorithm and requirement for integrity, continuity, availability, and accuracy evaluation. Safety-critical applications that make use of ARAIM, GBAS, SBAS and other GNSS technologies. Architecture and requirement allocation for augmentation systems including PPP, RTK, NTRT. Nominal error modeling, overbounding, and fault detection. Single measurement and multi-measurement fault detection and exclusion. Instantaneous and sequential integrity risk based on mission requirements. Designing, implementing, testing and validation of fusion and integrity budget allocation for individual sensors. Integrity, continuity and availability of new multi-constellation systems, including using LEO-RTK. Integrity of PNT systems that augment and complement GNSS (LTE, 5G).

Collaborative Navigation

Chairs: Dr. Jiwon Seo, Yonsei University and Tucker C. Haydon, Sandia National Laboratories

In terms of GNSS, we have made, and we see a footprint of the technology in an ever-growing number of applications, including consumer electronics market full of interactive products enabled by MEMS multi-constellation terrestrial radio systems, enable both outdoor and indoor coverage, yet service is often fragmented. The development of new broadband technology sonar elements. Collaborative and Networked Navigation

Chairs: Dr. Jiwon Seo, Yonsei University and Tucker C. Haydon, Sandia National Laboratories

New concepts, advances, and algorithms related to surface and underwater navigation. Space Navigation and Observation

Chairs: Dr. Mohammed Khider, Google

Validation and verification of ground vehicle GNC systems. Validation and verification of ground vehicle GNC systems. Algorithms and tools for global path planning and local obstacle avoidance.

Chairs: Dr. Hadi Wasync, Voxel US DOT and Curtis Hay, General Motors

Vehicle Navigation

Chairs: Dr. Mohammed Khider, Google

Mobile Navigation

Chairs: Dr. Mohammed Khider, Google

Marine Vehicle Navigation

Chairs: Dr. Mohammed Khider, Google

New concepts, advances, and algorithms related to surface and underwater navigation.

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