IEEE INERTIAL 2027

The 14th IEEE International Symposium on Inertial Sensors & Systems

Singapore || May 9-13, 2027

CALL FOR PAPERS

ORGANIZERS

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PAPER SUBMISSION IMPORTANT DATES

Abstract Submission Deadlines

A. Submit to INERTIAL 2027 proceedings: October 20, 2026

B. Submit to IEEE Sensors Letters: October 20, 2026

Acceptance (A & B) Notification
December 4, 2026

Late Breaking News Submission Open
December 11, 2026

Late Breaking News Submission Deadline
February 15, 2027

Late Breaking News Acceptance Notification
March 5, 2027

Full Paper Submission Deadline
March 19, 2027

Early Registration Deadline
March 19, 2027

All accepted and presented papers will be available at IEEE *Xplore®*.

The 2027 International Symposium on Inertial Sensors and Systems will be held in Singapore. The event continues our annual tradition of informal single-track international meetings discussing the latest developments in the areas of modern inertial sensors and emerging applications. INERTIAL 2027 will be a four-day event with one day of tutorials and three days of technical sessions.

TOPICS

Sensors Phenomena & Modeling
Theory, new physical principles, device-and-system-level modeling, multi-physics, deterministic/stochastic error models, predictive models

Sensor Systems & Electronics
Sensor arrays, multi-sensor units, inertial measurement units, sensor electronics, control of sensors, sensor fusion, software-defined sensors

Quantum Sensors – Photonic, Atomic & Solid-State
Theory, physical principles, device/system modeling, supporting technologies, error/predictive models, packaging, experimental methods/methodology

Manufacturing and Packaging for Improved Performance
Micro/nano fabrication techniques, new materials, vacuum/differential packaging, assembly techniques

Calibration, Compensation, and Error Modeling
Built-in diagnostics, low-cost test/evaluation, calibration of arrays, wafer-level test and evaluation, real-time compensation, AI/machine learning

Aiding Technology
Hybrid systems, sensor fusion, gravitational, magnetic, celestial, vision

Applications
AR/VR, consumer electronics, medical devices, sport and fitness, automotive, oil/gas exploration, defense, aeronautical and space sensor systems with emphasis on a novel use of inertial sensors and systems, autonomy

Fehlerkultur
Meaning "failure culture" in Germany tradition; this session is open for sharing stories of healthy handling of errors and mistakes in research and development, how the individual/team dealt with the issue (example of what to do, or even what not to do), and key learnings.

Industry
To increase and diversify industry participation, INERTIAL 2027 offers authors representing industry, the opportunity to present with only the submission of an abstract (abstracts will not be submitted to IEEE *Xplore®*). The submitted abstract must demonstrate technical merit – motivation, novelty, technical description, and results.

Publication of Papers
Presented papers will be included in the Proceedings of IEEE INERTIAL 2027 and in IEEE *Xplore®* pending author requirements being met. Alternatively, authors will have the option to submit a 4-page paper to a Special Issue of the IEEE Sensors Letters, and if accepted, present results at a Special Session of IEEE INERTIAL 2027. Authors may submit extended versions of their conference papers to the IEEE Sensors Journal.

Please visit: ieee-inertial.org/2027