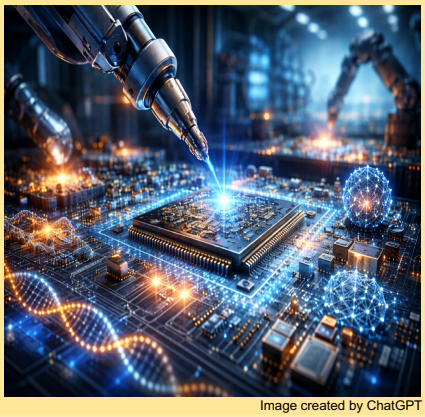
11th IEEE INTERNATIONAL NANOELECTRONICS CONFERENCE (INEC 2027)

5 – 8, July 2027, Olive Tree Hotel, Penang, Malaysia

CALL FOR PAPERS

CONFERENCE THEME: "Nanoelectronics for Industrial Applications"



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The IEEE International Nanoelectronics Conference 2027 (INEC 2027) represents the 11th edition of a distinguished and highly successful conference series initiated by the Nanotechnology Council of the IEEE Singapore Section. The conference serves as a premier international forum for researchers, academicians, and industry practitioners to present, publish, and discuss the latest advancements in nanoelectronics, nanomaterials, nanodevices, nanosystems, and the Internet of Things (IoT). This year's theme underscores the critical role of nanoelectronics in driving innovation across key industrial sectors, including semiconductor manufacturing, power electronics, smart systems, and advanced sensing technologies. The conference aims to bridge fundamental research with real-world industrial deployment, fostering collaboration between academia and industry. Building upon the remarkable success of IEEE INEC 2025, held in Taiwan, one of the world's prominent semiconductor hubs, from 3–6 January 2025, we are pleased to announce that IEEE INEC 2027 will be hosted in Penang, Malaysia. The conference will be conducted over three days in this historic UNESCO World Heritage city, renowned for its vibrant culture and growing significance in the global semiconductor and electronics industry. The IEEE INEC 2027 conference will feature a comprehensive three-day technical program comprising of short courses, oral and poster presentations, as well as plenary, keynote, and invited speeches.

The conference is technically sponsored by the IEEE Nanotechnology Council, Singapore Section and co-sponsored by IEEE Sensors and Nanotechnology Council Malaysia Joint Chapter. The INEC 2027 Organizing Committee cordially invites researchers, academicians, and industry practitioners to actively participate by submitting original research contributions addressing one or more of the following areas:

CONFERENCE SCOPE

- Nanoelectronics for Neuromorphics / Edge AI Applications
- Nanoelectronic Devices – Growth and Fabrication
- Nanoelectronic Devices – Physical / Electrical Characterization
- Nanoelectronic Devices – Reliability and Failure Analysis
- Nanoelectronic Devices – Modeling and Simulation
- Nanoelectronic Devices – Novel Applications and Use Cases
- Nanoelectronic Devices – Sensing and Actuation
- AI-Enabled Design & Optimization of Elect. Materials & Devices
- Accelerated synthesis of nano-materials and functional materials
- Nanorobotics and Nanomanufacturing
- Nano-Optics, Nanophotonics, and Nano-Optoelectronics
- Spintronics & Quantum Computing
- Nanoscale Communications and Nanonetworks
- Nano-biomedicine, Nano-fluidics and Integrated Bio-Chips
- Nanopore Fabrication and Bio-Applications
- Nanodiamond and Nanocarbon structures: Materials and Devices
- Nanometrology and Characterization
- Nanopackaging & Nanomagnetics
- Additive Manufacturing for Nanoelectronics
- Nanoenergy, Environment and Safety
- Nano-Acoustic Devices, Processes & Materials
- Emerging Plasma Nanotechnologies
- Emerging material and device challenges in futuristic systems
- Novel Applications of Nanotubes, Nanowires and Quantum Dots

SUBMISSION GUIDELINE

- **Extended Abstract Submission: 15th Jan 2027**
- **Notification of Acceptance: 28th Feb 2027**
- **Full Manuscript Submission: 30th May 2027**
- **Publication in IEEE Xplore: 01st Aug 2027**

- Extended abstract (min. 2 pages, incl. text and figures) of original research work to be submitted before 15th Jan 2027.
- Authors of accepted abstracts can submit a full manuscript (min 4 pages) by 30th May 2027 and all accepted abstracts, which adhere to the full manuscript guidelines of IEEE will be indexed in IEEE Xplore for publication by 1st Aug 2027.
- Details on abstract / manuscript submission, templates and other information will be made available very soon on our webpage: **https://ieeeinec.org**
- **Expended Full Manuscript** can be submitted and considered for Special Issues of indexed journals:
  - Authors of selected high-quality papers will be invited to submit an extended version of their work for a Special Issue in **Materials Science in Semiconductor Processing** (Elsevier) (IF: 5.2) or **Microelectronics International** (Emerald) (IF: 1.0). Expected publication in Nov/Dec 2027.

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