

Dear Colleagues,

The 28th International Vacuum Electronics Conference (IVEC-2027) is being organized by the Vacuum Electronic Devices and Applications Society (VEDAS), Bengaluru, India, with technical co-sponsorship from the IEEE Electron Devices Society (EDS). The conference will be held during 15 – 18 March 2027 at the Hilton Garden Inn, Manyata Business Park, Outer Ring Road, Nagavara, Bengaluru, India.

Since its inception in 2000, IVEC has grown into a premier global forum for the vacuum electronics community. Additional information about IVEC can be found on the website of the IEEE Vacuum Electronics Technical Committee (VETC) of the Electron Devices Society.

IVEC-2027 aims to bring together a diverse international community, including researchers, engineers, scientists, designers, manufacturers, system operators, industry professionals, policymakers, academicians, and students. The conference will provide a dynamic platform for sharing knowledge, discussing emerging trends, and fostering collaboration in the field of vacuum electronics.

We warmly invite submissions presenting original research, recent advancements, and practical experiences in vacuum electronics. Contributions from all sectors: academia, industries, R&D institutions and governmental agencies are highly encouraged. IVEC-2027 will serve as a valuable networking platform for exchanging scientific and technical insights and strengthening global cooperation in this rapidly evolving field.

As is tradition, the conference will feature prestigious recognitions, including the [John R. Pierce Award for Excellence in Vacuum Electronics](#), the [Vacuum Electronics Young Scientist Award](#) and the [Best Student Paper Award](#).

In addition to the technical program, participants can look forward to a rich social program designed to encourage networking and collaboration. Further details will be shared on the conference website in the coming months. These events will provide excellent opportunities to reconnect with colleagues, engage with industry partners, and interact with emerging talents.

We invite you to submit extended abstracts showcasing your original work, and to join us in Bengaluru, India's vibrant "Garden City," for this exciting gathering of the global vacuum electronics community.

We look forward to welcoming you to IVEC-2027.

Sincerely,

Kartikeyan Machavaram
Subrata Kumar Datta
General Chairs, IVEC-2027

Topical Tracks for IVEC-2027

The IVEC-2027 welcomes submission of abstracts in the following tracks/ areas:

- 1. Traveling-Wave Tube Amplifiers: Advances from Space Applications to Terahertz Frequencies**
 - Traveling-wave tubes (all types)
 - Millimeter-wave and THz amplifiers
 - Spatially distributed electron beam devices
 - Pulse compression devices
- 2. Fast-Wave Devices for Fusion Energy and High-Power Microwave Systems**
 - Gyrotrons, gyro-amplifiers, and fast-wave oscillators
 - Free-electron lasers and masers
 - Plasma-filled amplifiers and oscillators
- 3. High-Efficiency Klystrons and Inductive Output Tubes**
 - Klystrons (including multi-beam, compact, and high-efficiency designs)
 - Inductive output tubes (IOTs)
 - Triodes, tetrodes, and pentodes
- 4. Electron Sources: Thermionic, Field, and Photoemission Technologies**
 - Thermionic emitters (including Scandates and advanced cathodes)
 - Non-thermionic emitters (photocathodes, secondary emitters)
 - Field emitters and arrays (CNTs, graphene, nanostructures)
 - Cathode design, fabrication, and characterization
 - Accelerator emission physics (breakdown, halo, emittance, etc.)
- 5. Modeling and Simulation for Design, Verification, and Optimization of Vacuum Electron Devices**
 - Analysis and computer modeling (large-signal, particle-in-cell, electromagnetic solvers)
 - Adjoint methods for optimization
 - Verification and validation strategies
- 6. Microfabrication and Terahertz Devices**
 - Backward-wave oscillators, clinotrons, and Smith-Purcell devices
 - Metamaterials and photonic structures at THz frequencies
 - Miniaturization of vacuum devices
 - Novel measurement techniques and diagnostics
- 7. Advanced Manufacturing, Materials, and Quality Assurance for Vacuum Electron Devices**
 - Additive and subtractive manufacturing methods
 - Novel materials (dielectrics, coatings, magnetic materials)
 - Surface processing, electropolishing, brazing, and joining
 - In-situ diagnostics and quality assurance
 - Thermal management and advanced magnet technologies
 - Reliability engineering

8. High-Power Microwaves

- High-power microwave devices and relativistic sources
- RF directed energy devices and systems
- Amplifier-antenna coupling and integration
- System survivability and hardening
- RF interference and electromagnetic effects
- Magnetrons and crossed-field devices (oscillators and amplifiers)

9. Supporting Subsystems: Power Supplies, and System Integration

- Transmitters and power modules
- Electronic power conditioners, modulators, and supplies
- Linearizers and control systems
- RF windows, collectors, and key components
- Subsystem integration
- Reliability and qualification methods

10. AIML for VEDs: Design, Modeling and Optimization

- Sources
- Passive Components
- Transmission Lines

Preparation of Abstracts

Prospective authors are invited to submit 2-page abstracts of the work including as many details as possible. The inclusion of figures, tables, and especially numerical data is strongly recommended.

Abstracts are to be submitted as instructed at the EDAS website (will be activated by July 31, 2026) and the relevant information will be available in the IVEC-2027 conference website (<https://ivec2027.org.in>), in the website of the IEEE-EDS-VETC (<https://vacuumelectronics.org>) and the website of the Vacuum Electronic Devices & Applications Society (<https://vedas.org.in>). Authors will be notified about the acceptance by December 28, 2026, and accepted abstracts presented at the conference will be published by the IEEE. Authors of accepted papers will be required to resubmit their material, in IEEE compliant format, by January 14, 2027. The instructions for resubmission will be included in the author notification letters.

VISA Note: In case you need a visa in order to attend IVEC-2027, please check the visa request box in the submission form. Technical Committee will expedite your paper notification for facilitating timely visa application.

Any queries on abstract submission may please be directed to:

Sushil Raina
P. Raja Ramana Rao
Technical Program Committee
Email: ivec2027@gmail.com

Presentations

Each paper selected for oral presentation will be allotted a total of 20 minutes, including 15 minutes for presentation and 5 minutes for questions and discussion. Regular poster presentations will be presented at the in-person event. Additionally, poster presenters will be asked to submit a 10-minute talk about their poster to be released on the virtual platform.

Awards

Nominations are solicited for the John R. Pierce Award for Excellence in Vacuum Electronics (2027) and the Vacuum Electronics Young Scientist Award (2027). Award nomination deadline is December 31, 2026.

Any member of the vacuum electronics community may submit a nomination for either award as described at the website of the Vacuum Electronics Technical Committee of the IEEE Electron Devices Society (<https://vacuumelectronics.org>).

A prize for the best student paper also will be awarded during the conference. To be eligible for the award, the first author of the paper must be a full-time student, and the paper must be identified/ marked as a student paper when the abstract is submitted.

Schedule

Submission of Abstract	November 10, 2026
Notification of Acceptance	December 28, 2026
IEEE-Compliant Abstract due	January 14, 2027
Early Bird Registration	January 31, 2027

Additional Information

Please visit the conference website (<https://ivec2027.org.in>) or the website of the IEEE-EDS-VETC or the website Vacuum Electronic Devices & Applications Society of the for any current information about the conference.

Delegate / Registration Fee

Mini-Course only (Non-Indian)	\$ 300.00
Mini-Course only (Indian)	INR 5000.00
Conference only (Non-Indian)	\$ 1050.00
Conference only (Indian)	INR 29500.00
Conference only for retirees (Non-Indian)	\$ 500.00
Conference only for retirees (Indian)	INR 10000.00
Conference only for students (Non-Indian)	\$ 250.00
Conference only for students (Indian)	INR 5000.00
Only One-Day Registration (Non-Indian)	\$ 425.00

Note: IEEE Members may avail 10% discount. All rates are inclusive of GST. Payment options will be provided in the website.

Sponsorship Opportunities in IVEC-2027

An exhibition will be arranged at the conference venue. Industry partners are also requested to utilize the event for highlighting their products and capabilities to the distinguished delegates.

Platinum Sponsor (INR 20,00,000/-)

The opportunity would include exhibition stall, free registration of 6 delegates, display of the sponsor's name and logo at the back-drop of the stage and acknowledgement in the inside back-cover of the conference proceedings / souvenir.

Diamond Sponsor (INR 15,00,000/-)

The opportunity would include exhibition stall, free registration of 5 delegates, display of the sponsor's name and logo at the back-drop of the stage and acknowledgement in the inside back-cover of the conference proceedings / souvenir.

Gold Sponsor (INR 10,00,000/-)

The opportunity would include exhibition stall, free registration of 4 delegates, display of the sponsor's name and logo at the back-drop of the stage and special full page multi-colour advertisement in the conference proceedings / souvenir.

Silver Sponsor (INR 5,00,000/-)

The opportunity would include exhibition stall, free registration of 3 delegates, display of the sponsor's name and logo at the back-drop of the stage and full page multi-colour advertisement in the conference proceedings / souvenir.

Bronze Sponsor (INR 3,00,000/-)

The opportunity would include exhibition stall, free registration of 2 delegates, display of the sponsor's name and logo at the back-drop of the stage and full page multi-colour advertisement in the conference proceedings / souvenir.

Souvenir Advertisements (INR 1,00,000/-)

The opportunity would include one invitation to the inaugural function of the conference and a full page multi-colour advertisement in the conference proceedings / souvenir.

Any queries on Sponsorship may please be directed to:

Khilawan Choudhary
Treasurer, VEDA Society
Email: veda.treasurer@gmail.com

Accounts Details:

A/C Name : Vacuum Electronic Devices & Applications Society (VEDAS)
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GSTIN : 29AABAV9979M1