

**Dear Colleagues,**

We are pleased to announce that the Twenty-Fifth International Vacuum Electronics Conference (IVEC) will be held jointly with the Fifteenth International Vacuum Electron Sources Conference (IVESC) in Monterey, CA, on April 22-25, 2024. The conference will be an in-person event under the sponsorship of the IEEE Electron Devices Society (EDS). The meeting will be held at the Marriott Conference Center, and attendees from around the world will once again come to Monterey to interact with colleagues while immersing themselves in the natural beauty of the California coast and enjoying the local attractions.

The conference website is [www.ieeeivec.org](http://www.ieeeivec.org).

Plenary talks will provide insights into the history, the broad spectrum of fundamental physics, the scientific issues, and the technological applications driving the current directions in vacuum electronics research. Presentations will range from the fundamental physics of electron emission and modulated electron beams to the design and operation of devices at UHF to THz frequencies, theory and computational tool development, active and passive components, systems, and supporting technologies.

System developers will find that IVEC provides a unique snapshot of the current state of the art in vacuum electron devices. These devices continue to provide unmatched power and performance for advanced electromagnetic systems, particularly in the challenging frequency regimes of millimeter-wave and terahertz.

We invite you to submit papers on your work and experiences in vacuum electronics and electron sources. The meeting will efficiently disseminate useful information to device users, manufacturers, academics, and students. We encourage submission of papers from all groups and countries.

We will also have a one-day mini-course on April 22, 2024, to kick off the conference. Lectures and tutorials on different disciplines of vacuum electronics will be offered by international experts.

The John R. Pierce Award for Excellence in Vacuum Electronics, the Vacuum Electronics Young Scientist, and a Student Paper Award will be presented at the conference. As in past conferences, the meeting and social events will provide unique opportunities to renew or establish new friendships with colleagues, interact with customers and end-users, and meet students and academic researchers.

We hope to see you all at IVEC + IVESC 2024.

Sincerely

*The IVEC 2024 Organizing Committee*

**Technical Subject Categories**

*1. Vacuum Electron Devices*

Traveling-wave tubes (all types)  
Crossed-field devices (oscillators and amplifiers)  
Klystrons  
Spatially distributed electron beam devices  
Inductive output tubes  
Fast-wave devices (gyrotrons, gyro-amplifiers)  
Free-electron lasers and masers  
Millimeter-wave and THz amplifiers and oscillators  
Pulse compression devices  
Plasma-filled amplifiers and oscillators  
High-power microwave devices/RF directed energy  
Triodes, tetrodes, and pentodes  
Power switches  
Vacuum nanoelectronics

*2. Vacuum Electron Sources and Technologies*

Thermionic emitters  
Non-thermionic emitters (e.g. photocathodes, secondary emitters)  
Field emitters/arrays  
Materials and technology  
Cathode design, fabrication, and characterization  
Accelerator emission physics (breakdown, halo, emittance, etc.)

*3. Systems and Subsystems*

Transmitters  
Microwave and millimeter-wave power modules  
Electronic power conditioners, modulators, and supplies  
Linearizers  
Amplifier-antenna coupling  
Device and system integration  
Reliability

*4. Technologies*

Component parts (e.g. guns, circuits, windows, collectors)  
Analysis and computer modeling  
Novel materials (e.g. dielectrics, coatings, magnetic materials)  
Metamaterials  
RF breakdown and multipactor phenomena  
Linearity, intermodulation, and noise  
Novel measurement techniques and diagnostics  
Miniaturization  
Thermal power management and control  
Sensors and detectors  
Advanced manufacturing

*5. Applications of Vacuum Electron Devices*

Defense  
Space  
Radar  
Telecommunications  
Medicine  
Particle accelerators  
RF interference  
Instruments and lithography  
Materials processing  
Electric propulsion  
Energy

**Additional Information**

Please visit [www.ieeeivec.org](http://www.ieeeivec.org) for current information about the conference.

## Preparation of Abstracts

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

## The abstract submission deadline is December 22, 2023

Abstracts must be submitted as instructed at [www.ieeeivec.org](http://www.ieeeivec.org) (Click on Initial Abstract Submission under Author Info).

Authors will be notified by January 26, 2024, and accepted abstracts presented at the conference will be published by the IEEE. Abstracts and a conference schedule will be available via mobile app.

Authors of accepted papers will be required to resubmit their material, in IEEE compliant format, by February 23, 2024. The instructions for resubmittal will be included in author notification letters.

Questions on abstract submission should be directed to:

**Bill Klein, Palisades Convention Management**  
**Phone: +1 212-460-8090**  
[wklein@pcm411.com](mailto:wklein@pcm411.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 for remote attendees to view.

## Awards

Nominations are solicited for the 2024 John R. Pierce Award for Excellence in Vacuum Electronics. **The Pierce Award nomination deadline is January 26, 2024.**

Nominations are also solicited for the 2024 Vacuum Electronics Young Scientist. **The Young Scientist nomination deadline is December 11, 2023.**

Any member of the vacuum electronics community may submit a nomination for either award as described at the Electron Devices Society Vacuum Electronics website: [vacuumelectronics.org](http://vacuumelectronics.org).

A prize for the best student paper 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 as a student paper when the abstract is submitted.

## Schedule

Submission of Abstract	Dec. 2023
Notification of Acceptance	Jan. 2024
Revised IEEE-Compliant Abstract Due	Feb. 2024

## Conference Organizing Committees

### IVEC

*General Chair:* Max Mankin, Modern Hydrogen  
*Technical Program Chair:* Richard Kowalczyk, Elve  
David Abe, Defense Advanced Research Projects Agency  
Rasheda Begum, Communications and Power Industries  
Nader Behdad, University of Wisconsin  
Monica Blank, Communications and Power Industries  
Daniel Busbahr, 3M/Ceradyne  
Filippo Capolino, University of California, Irvine  
James Dayton  
Yehuda Goren, Teledyne Technologies  
Tim Horn, North Carolina State University

Jennifer Hwu, Innosys  
Lawrence Ives, Calabazas Creek Research  
Ryan Jacobs, University of Wisconsin  
Sudheer Jawla, Massachusetts Institute of Technology  
Chunguang Jing, Euclid TechLabs  
Rehan Kapadia, University of Southern California  
Baruch Levush, Naval Research Laboratory  
William Menninger, Stellant  
Mirhamed Mirmozafari, Maxwave  
Eric Nelson, Los Alamos National Laboratory  
Dev Palmer, Defense Advanced Research Projects Agency  
John Petillo, Leidos  
Wyatt Rufener, Stellant  
Jack Tucek, Northrop Grumman  
Peng Zhang, Michigan State University

## IVESC

### America

*Coordinator:* Kevin L. Jensen, Naval Research Laboratory  
Bernard Vancil, e beam, inc.  
Wayne Ohlinger, Westinghouse Electric Co.  
Joan Yater, Naval Research Laboratory  
Charles Hunt, University of California, Davis  
William Mackie, Linfield College  
Mike Green, Varian Medical Systems

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Toshiaki Kusunoki, Hitachi, Ltd.  
Ji Li, China Elec. Tech. Group Corp. (CETC)  
Guangyi Liu, Institute of Electronics, CAS –  
Gun-Sik Park, Seoul National University  
R.S. Raju, Central Electronics Research Institute (CEERI)  
Yiman Wang, Beijing University of Technology  
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### Europe

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Raouf Bakhtizin, Bashkir State University  
Rolf Behling, Philips Healthcare  
Nicolay Egorov, St. Petersburg State University  
Daniel den Engelsen, Brunel University (UK)  
Ian Milsom, Teledyne e2v  
Evgenii P. Sheshin, Moscow Inst. of Physics & Tech  
Nikolai Simitsyn, Saratov Dept of Inst. of Radio

## EDS Vacuum Electronics Technical Committee

*Chair:* Monica Blank, Comm. and Power Industries  
David Abe, Defense Advanced Research Projects Agency  
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EunMi Choi, UNIST  
Subrata Kumar Datta, Microwave Tube Research & Development Center  
Chao-Hai Du, Peking University  
Jinjun Feng, Beijing Vacuum Electronics Res. Inst.  
Diana Gamzina, SLAC National Accelerator Laboratory  
Gerd Gantenbein, Research Center Karlsruhe  
Dan Goebel, Jet Propulsion Laboratory, NASA  
Yubin Gong, Univ. of Electronics Sci, and Tech. of China  
Jin-Won Han, NASA, Ames Center  
John Jelonnek, Karlsruhe Institute of Technology  
Colin Joye, Naval Research Laboratory  
Baruch Levush, Naval Research Laboratory  
Jirun Luo, Chinese Academy of Sciences  
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Kartikeyan Machavaram, Indian Inst. of Tech. Roorkee  
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Claudio Paoloni, Lancaster University, UK  
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Jagadishwar Sirigiri, Bridge12 Technologies  
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Richard True, L-3 Communications, Electron Devices Division