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Baruch Levush, Naval Research Laboratory

Max Mankin, Modern Electron

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Manfred Thumm, Karlsruhe Institute of Technology, Germany

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**Dear Colleagues,**

We are pleased to announce that the Twenty-First International Vacuum Electronics Conference (IVEC) will be held in **Monterey, California,** on **April 20-23, 2020**. The conference website is [www.ieeeivec.org](file:///C:\Users\JennyDonelan\AppData\Local\Microsoft\Windows\INetCache\Content.Outlook\2DVWI09F\www.ieeeivec.org). The meeting will be held at the Marriott Conference Center under the sponsorship of the IEEE Electron Devices Society (EDS). Visitors from around the world come to Monterey to experience its natural coastal beauty, to visit the renowned Monterey Bay Aquarium, and to experience its rich historic past memorialized in the novels of John Steinbeck.

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.

We also have a one-day minicourse on April 20, 2020, 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 2020.

Sincerely,

The IVEC 2020 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

mm-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

*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)

*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

Linearity, intermodulation, and noise

Novel measurement techniques and diagnostics

Miniaturization

Thermal power management and control

Sensors and detectors

*5. Applications of Vacuum Electron Devices*

Defense

Space

Radar

Telecommunications

Medicine

Particle accelerators

RF interference

Instruments and lithography

Materials processing

Electric propulsion

**Additional Information**

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

[**Preparation of Abstracts**](http://ivec-ivesc2012.org/abstract.html)

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 **deadline** to submit abstracts for Program Committee review is **December 23, 2019**.

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 24, 2020, and accepted abstracts presented at the conference will be published by the IEEE. A USB memory stick containing the published abstracts will be distributed at the meeting.

Authors of accepted papers will be required to resubmit their material, in IEEE compliant format, by February 21, 2020. The instructions for resubmittal will be included in author notification letters.

Questions on abstract submission should be directed to:

**Ms. Samantha Tola**

**Palisades Convention Management**

**411 Lafayette Street, Suite 201**

**New York, NY 10003**

**Phone: +1 212-460-8090, ext. 203**

**Fax: +1 212 460 5460**

**stola@pcm411.com**

**Oral 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. To maintain the session schedule, authors are asked to ensure that their presentations conform to these time constraints.

[**Awards**](http://ivec-ivesc2012.org/awards.html)

Nominations are solicited for the 2020 John R. Pierce Award for Excellence in Vacuum Electronics. Any member of the vacuum electronics community may submit a nomination as described at the Electron Devices Society Vacuum Electronics website: [vacuumelectronics.org](http://vacuumelectronics.org) (click on the John R. Pierce Award link). The deadline is January 30, 2020.

Nominations are also solicited for the 2020 Vacuum Electronics Young Scientist. Any member of the vacuum electronics community may submit a nomination as described at the Electron Devices Society Vacuum Electronics website: [vacuumelectronics.org](http://vacuumelectronics.org) (click on the Vacuum Electronics Young Scientist link). The deadline is December 1, 2019.

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**](http://ivec-ivesc2012.org/dates.html)

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| Submission of abstract | December 23, 2019 |
| Notification of acceptance | January 24, 2020 |
| Revised IEEE-compliant abstract due | February 21, 2020 |