

# First announcement

## The 31st International Vacuum Nanoelectronics Conference



Kyoto, Japan

<http://www.vacuumnanoelectronics.org>



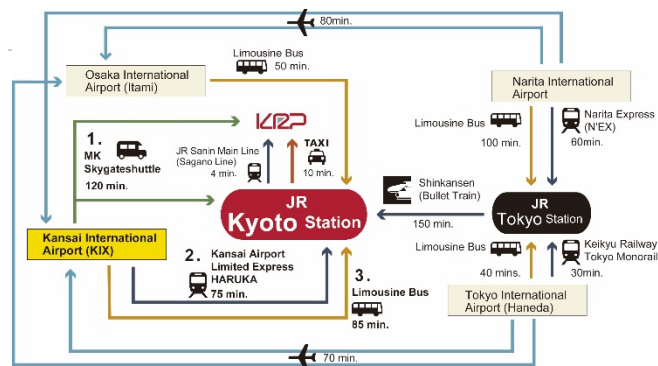
Date: July 9-13, 2018

Venue: Kyoto Research Park  
Kyoto, Japan

Organized by the 158th Committee,  
Vacuum Nanoelectronics,  
Japan Society for the Promotion of Science

## Access to Kyoto

Kyoto can be easily accessed from major airports in Japan, especially from Itami or Kansai Int'l Airports.



## Contact Information

### Conference Chairman

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### Conference Secretariat

c/o Convention Div., Kyoto Research Park  
E-mail: [ivnc2018@krp.co.jp](mailto:ivnc2018@krp.co.jp)

## KRP – Conference Venue

Kyoto Research Park (KRP) was born as the first private operated Research Park in Japan. KRP locates close to Tambaguchi Station, San-in (Sagano) Line, West Japan Railway (4-min walk from station). From Kyoto station, you can reach Tambaguchi for only 3-min ride on train (first stop from Kyoto station).



KRP

<http://www.krp.co.jp/english/>

## Accommodations

IVNC2018 will block a limited amount of rooms at a luxury hotel close to KRP with a specially reduced rate. The hotel is convenient to visit central Kyoto, where the festival floats of Gion Matsuri will be exhibited. Around Kyoto station, you will find many other hotels which are convenient to attend the conference.

## Conference Outline

IVNC2018 will be organized by the 158th Committee of Japan Society for the Promotion of Science, and will be a four-day conference. The conference gathers all area of the vacuum electron and ion devices including fabrication, evaluation, and application of these devices. Some keynote lectures will be given to discuss future prospects of the research & development in this field. The scientific program will include oral sessions with several invited talks, together with poster sessions. Exhibitions from manufacturers are welcome.

Authors are invited to submit a short abstract. After the acceptance notification, submit a 2-page extended abstract which will be included in the on-site proceedings. Details of the publication of post-conference proceedings in a scientific journal will be disclosed later. The conference will commend several young researchers who present an excellent paper at the conference.

### Key dates

Abstract submission deadline:	<b>Feb. 26, 2018</b>
Acceptance notification:	<b>April 9, 2018</b>
Extended abstract deadline:	<b>May 24, 2018</b>
Early registration deadline:	<b>June 1, 2018</b>



## Scopes

### Emission Fundamentals and Modeling

- Theory of field-, thermionic-, and photo-induced electron and ion emission
- Field ionization, evaporation and liquid-metal ion source
- Physics and phenomena of vacuum breakdown and space charge

### Novel Materials for Electron Emission and Vacuum Tunneling

- Carbon nanotube/graphene/diamond
- Wide bandgap semiconductors
- Negative electron affinity
- Two-dimensional materials

### Technology of Vacuum Nanoelectronics

- Novel cathode devices and fabrication
- Novel evaluation technique
- Photo-stimulated cathodes
- High speed devices
- Thermionic energy harvester

### Applications of Vacuum Nanoelectronics

- Displays, sensors, actuators, and light sources
- X-ray sources and imaging devices
- Electron devices in harsh environments
- Microscope and surface analysis
- Medical, biological, energy, high-power and space applications
- Application to communication and energy transmission

## Kyoto – History and Culture

Kyoto is placed at the center of the main island of Japan, and was established as a capital of Japan in AD794. Since then Kyoto had been a capital until mid 19th for more than a thousand years. Kyoto was chosen as a capital because of its geological circumstances met the requirements in Feng shui: with a river for the east, mountains for the north, a large pond for the south, and a wide road for the west. Kyoto has retained Japanese traditional culture. A lot of old temples and shrines are kept as it has been. Kyoto and adjacent cities possess 17 World Heritages recognized by UNESCO.

In mid-July, the city is colored with Gion Matsuri, one of the three major festivals in Kyoto. On 17th July, many festival floats decorated with traditional materials parade the main streets. Before the festival, they are exhibited for several days and you can enjoy seeing them. It will be a good chance to visit Gion Matsuri after IVNC2018.

Kyoto is also famous for bamboo forests. Thomas Edison succeeded in the development of a long-life light bulb using a carbonized bamboo filament, which was yielded in Yawata city next to Kyoto. Around Kyoto, there are many cities to visit; Nara – ancient capital, Otsu – lake and mountains, Osaka – unique foods and shopping.

