JAIST
JAPAN ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY 1990

14th (Wed.), December 2022

2022 JAIST International Symposium of Nanomaterials and Devices Research Area

Quantum Devices and Metrologies

In April 2022, Japan Advanced Institute of Science and Technology (JAIST) renewed the research areas of the graduate school of Advanced Science and Technology into 10 areas. **The "Nanomaterials and Devices Research Area"** has launched to work on the synthesis/growth of " emerging nanomaterials" and their characterization using "cutting-edge methods" as well as their application in "devices and sensing".

We hold a symposium sponsored by JAIST inviting two keynote lecturers and one invited speaker focusing on "**Quantum Devices and Metrologies**": receiving a lot of attention for future quantum technologies. This symposium will provide a platform for scientific exchange in all research areas and our students both breadth and depth in their educational and research experiences at JAIST.

The symposium will be held in a hybrid way, including onsite **(KS Lecture Hall (2nd floor, KS Lecture Building, JAIST)** and on **WEBEX online** platform. Participants are required to be registered before 5th December 2022 so that the details, such as WEBEX link, can be sent. Please click the register link below.

Registration link: https://forms.gle/tyk9v775xJdFLFzh8

Chair: Toshu An, toshuan@jaist.ac.jp
Associate Professor, Nanomaterials and Devices Research Area, Advanced Science and Technology, Japan Advanced Institute of Science and Technology

Keynote lecturers:

Dr. Eisuke Abe (RIKEN Center for Quantum Computing)

https://quantum.riken.jp/english.html

Prof. Carlos A. Meriles (CUNY-City College of New York)

https://cmeriles.ccny.cuny.edu/

Invited talk:

Prof. Takeshi Fukuma (Nano Life Science Institute (WPI-Nano LSI), Kanazawa Univ.)

https://nanolsi.kanazawa-u.ac.jp/en/post-5232/

Program: KS Lecture Hall

9:30 Opening Masahiko Tomitori（JAIST）

9:40-10:40 (Keynote lecture) Superconducting route to quantum computing
Eisuke Abe (RIKEN Center for Quantum Computing)

10:40-10:50 Break

10:50-11:40 Atomic scale operand metrology via TEM
Yoshifumi Oshima (JAIST)

11:40-12:05 Introduction of Advanced Research Infrastructure for Materials and Nanotechnology (ARIM) in JAIST
Yukiko Yamada-Takamura (JAIST)

12:05-13:35 Lunch

13:35-14:35 (Keynote lecture) Controlling the charge state of color centers at the nanoscale: Challenges and opportunities.
Carlos A. Meriles (CUNY-City College of New York)

14:35-14:45 Break

14:45-15:35 Development of scanning diamond NV center probes for quantum sensing and imaging
Toshu An (JAIST)

15:35-16:25 (Invited) Visualizing inside of 3D self-organizing systems by 3D atomic force microscopy
Takeshi Fukuma (Nano Life Science Institute (WPI-Nano LSI), Kanazawa Univ.)

MS Lecture Room 1, 2

16:30 -18:30 Poster session

Info.

60 min. Keynote: 50 min. talk and 10 min. question and answer

50 min. Invited talk and talk by JAIST faculty: 40 min. talk and 10 min. question and answer

25 min. talk by JAIST faculty: 20 min. talk and 5 min. question and answer

talk remaining time 5 min. 1 ring

talk end time 2 ring

Any format of poster (< A0 size) can be put on the board.

Student poster award will be selected.