

## **ASEAN Online Summer Seminar on Applied and Engineering Physics**

**Date:** July 13th (Mon.)-17th (Fri.)

**Time:** 9:00-11:00 (11:30 on 13th and 17th) in Indonesia and Vietnam

10:00-12:00 (11:30 on 13th and 17th) in Malaysia

11:00-13:00 (11:30 on 13th and 17th) in Japan

### **Abstract:**

ASEAN Online Summer Seminar will deliver a series of introductory lectures to cutting edge scientific and technological achievements in the field of Applied and Engineering Physics including nanotechnology, chemical engineering, and bio-engineering for 4th year and 3rd year undergraduate students in scientific engineering fields. Lectures are delivered from Osaka University through internet to students of Institute Technology Bandung (ITB), University of Science, Vietnam National University (US-VNU), Tunku Abdul Rahman University College (TARUC), University Kebangsaan Malaysia (UKM), University Sains Malaysia (USM), and University Putra Malaysia (UPM). In each lecture, students are requested to write a report. Based on the students' reports, motivated students are selected and they are invited to Osaka University from Dec. 13th to 22<sup>nd</sup>, 2020 for the SAKURA Science Plan.\*

### **Registration:**

Send the following electronic data to [qedc-staff@dyn.ap.eng.osaka-u.ac.jp](mailto:qedc-staff@dyn.ap.eng.osaka-u.ac.jp) by June 30th, 2020.

- 1) Application Form <ASEAN Online Summer Seminar & SAKURA Science Plan>
- 2) Latest academic transcript (English)

### **Organization & Committee**

**Quantum Engineering Design Course (QEDC) & Applied and Engineering Physics,  
Graduate School of Engineering, Osaka University**

Yoshitada Morikawa, Tamio Oguchi, Wilson Agerico Dino, and Kazunori Sato

#### **Institute Technology Bandung**

Suprijadi, Hermawan Dipojono, Brian Yulianto, Nugraha, Triati Dewi Kencana Wungu  
and Fahdzi Muttaqien

#### **University of Science, Vietnam National University**

Bach Thanh Cong and Huy Duy Nguyen

#### **Tunku Abdul Rahman University College**

Tan Siew San

#### **Japan Science and Technology Agency (JST)**

\* Note: The SAKURA Science plan may be canceled or postponed depending on the infection status of COVID-19.

## Schedule of “ASEAN Online Summer Seminar on Applied and Engineering Physics”

### July 13th (Mon.)

9:00- 9:30 **Orientation**

9:30-10:30 **Assoc. Prof. Akira Saito**

Developments of Optical Devices based on Nano-Randomness Learning from Butterflies.

10:30-11:30 **Prof. Hiroshi Uyama**

Bio-based Polymers

### July 14th (Tue.)

9:00-10:00 **Prof. Yoshitada Morikawa**

First-principles Simulations on Chemical Reactions at Surfaces and Interfaces

10:00-11:00 **Assoc. Prof. Kazunori Sato**

Computational Materials Design for Semiconductor Spintronics

### July 15th (Wed.)

9:00-10:00 **Assoc. Prof. Wilson Agerico Dino Tan**

Surface as a Playground for Physicists: Exploring Foundations of Physical Phenomena and Realizing Designer Materials, Materials and Process Design

10:00-11:00 **Prof. Tamio Oguchi**

Interpretable Modeling of Chemical Bonding

### July 16th (Thu.)

9:00-10:00 **Prof. Kazyuki Sakamoto**

Surface is different!

10:00-11:00 **Prof. Hidehiro Yasuda and Assoc. Prof. Jun Yamasaki**

Introduction to Transmission Electron Microscopy

### July 17th (Fri.)

9:00-10:00 **Prof. Katsumasa Fujita**

Advanced Optical Microscopy for Bioimaging

10:00-11:00 **Assoc. Prof. Kenta Arima**

Science of Solution/Semiconductor Interfaces for Nanoelectronics

11:00-11:20 **Closing Remark**



**SAKURA Science Plan**  
 Quantum Engineering Design Course (QEDC) &  
 Applied and Engineering Physics  
 Graduate School of Engineering, Osaka University JAPAN



## Condition & Schedule

### ◆The aim of the plan

The program aims to provide an actual research experience for excellent students who have the passion for research and would like to further develop their academic and research competitiveness. Students can obtain basic knowledge of advanced researches like computational materials design for environment-friendly technology applications through laboratory work in Graduate School of Engineering, Osaka University.

### ◆Eligibility

- 4<sup>th</sup> or 3<sup>rd</sup> year undergraduate student in scientific engineering field
- First long visit to Japan (Past short-trip experience is acceptable)

### ◆Period

9Nights 10Days (From 13December to 22December 2020 in Osaka Japan)

### ◆Go-Return Flight Ticket

Go-Return flight ticket will be booked and provided by the program.  
 Flight destination is Kansai-International Airport (KIX).  
 Domestic flight & transportation fee in your country are not included.

### ◆Domestic Travel insurance in Japan

We prepare travel insurance during program which covers Hospital fee, Breakage of goods (accidentally only). The condition is based on the insurance offered by JST.

### ◆Program Expense

The program provides the following expense.

- Flight ticket & Travel insurance
- Accommodation (9nights stay at dormitory, room shared accommodation or hotel)
- Long distance transportation fee in Japan (KIX - accommodation)
  - \*Please prepare some Japanese Yen at airport.
  - \*The transportation fee from KIX and to KIX is refundable @OU arrival.
- Meal fee & Daily expense included short-distance transportation fee, approx. 1,700 yen/day (fixed).
- KYOTO bus tour fee (lunch incl.)
- Lunch party fee

### ◆Program Activities

DAY1	Arrival (pick-up at KIX, check-in accommodation, briefing)
DAY2	Program Orientation Guidance Campus Tour, Career Pass Talk with researchers & international graduate students Attendance in a lecture of scientific research, laboratory Tour
DAY3-6	Research Experience in a laboratory
DAY7	One-Day Bus Tour in KYOTO
DAY8	Preparation for visit (research) experience presentation
DAY9	Presentation using slide
DAY10	Leaving (check-out accommodation)