



# MIRAI short course for PhD – Sustainability

Topics: **"Membranes for a sustainable water cycle"**  
Date: 14 – 18.October 2018  
Location: Hiroshima/Kyoto/Tokyo, Japan

## Preliminary program:

### 14 October (Sunday), Hiroshima

15:00 Hotel (Saijyo) check-in  
18:00 Dinner (for Swedish participants)

### 15 October (Monday), Hiroshima

08:30 Pick-up at the hotel  
09:00-9:15 Registration  
09:15- 9:30 Introduction (Prof. Tsuru)  
09:30-10:50 Water system (Prof. Sugiura, Sophia Univ.)  
10:50-11:05 Coffee break  
11:05-12:25 Membrane Technology, General introduction (Prof. Tsuru, Hiroshima Univ.)  
12:25-13:15 Lunch  
13:15-14:35 Drinking water (Prof. Fujioka, Nagasaki Univ.)  
14:35-15:55 Membrane fouling (Prof. Lipnizki, Lund University)  
15:55-16:15 Coffee break  
16:15-17:15 Student presentation of their own research activities  
18:00-20:00 Welcome party

### 16 October (Tuesday), Hiroshima

09:00 Hotel check-out  
09:10 Pick-up at the hotel  
09:30-10:50 Membrane bio-reactor (Prof. Kindaichi & Prof. Ozaki, Hiroshima Univ.)

10:50-12:30 Introduction and lab-tour of Water plant in Environmental Research and Management Center, Hiroshima Univ. (Prof. Nishijima or Umehara)  
12:30-13:10 Lunch  
13:10-15:30 Lab. tour in Department of Chemical Engineering, Department of Civil and Environmental Engineering  
Higashi-Hiroshima Wastewater treatment plant (nearby Hiroshima Univ.)  
16:12 Leave Higashi-Hiroshima for Kyoto (arrive at 18:17)  
18:30 Check-in hotel (Kyoto)

### **17 October (Wednesday), Kyoto**

08:00 Transfer Kyoto to Shiga  
10:00-12:00 Toray Industries, Inc.  
12:00-13:00 Lunch ( in Toray)  
afternoon Transfer Shiga to Kyoto, then Tokyo, check-in hotel (Tokyo)

### **18 October (Thursday), Tokyo**

09:00-9:10 Introduction (Prof. Takeo Yamaguchi, Tokyo Institute of Tech.)  
09:10-10:00 Membrane technologies for energy, bio and water applications (Prof. Takeo Yamaguchi, Tokyo Institute of Tech.)  
10:00-11:00 Membrane separation technologies for food industries (Dr. Hiroshi Nabetani, National Agriculture and Food Research Organization)  
11:00-12:00 Membrane modification and anti-fouling membranes (Prof. Kazuki Akamatsu, Kogakuin Univ.)  
12:00-13:30 Lunch  
13:30-15:30 Group discussion concerning membrane technologies  
15:30-16:30 Presentation by each group  
17:00-19:00 Graduation ceremony and Farewell party

### **19 October (Friday), Tokyo**

Morning Check out hotel

#### **Costs**

The course registration fee (approximately 90,000 yen) covers the following expenses:  
-accommodations,  
-Shinkansen (bullet train)

The following costs are covered by the budget from MIRAI Japanese universities  
-lecture materials,  
-domestic transportation except for Shinkansen,  
-reception party,  
-other

Some meals (other than the followings) will be covered by the budget from MIRAI Japanese universities.

Please note that the following cost should be covered by yourself:

-dinner on October 16<sup>th</sup> and 17<sup>th</sup>, lunch on October 19<sup>th</sup>

**For Question and Participation please contact:**

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Prof. Lipnizki, Lund University, [frank.lipnizki@chemeng.lth.se](mailto:frank.lipnizki@chemeng.lth.se)