

**Syracuse University-Tohoku University (SU-TU) Joint Forum on Energy and Environment  
PROGRAM**

**Monday, April 11, 2016**

**Morning:** Discussion of collaborations SU-TU, **220 Link Hall**

Attendees:

**Syracuse:** Teresa Dahlberg (Dean), Edward Bogucz (SyracuseCoE Executive Director), Can Isik (Senior Associate Dean), Mark Glauser (Associate Dean for Research), Young Moon (MAE Chair), Radhakrishna Sureshkumar (BMCE Chair), Jeongmin Ahn (Associate Professor of MAE)

**Tohoku:** Shigeru Obayashi (Director of IFS), Seiji Samukawa (Director of IER), Toshiyuki Takagi (Deputy Director of IFS), Kaoru Maruta (Professor of IFS), Jun Ishimoto (Professor of IFS), Takashi Tokumasu (Associate Professor of IFS)

**9:10 a.m. – 10:15 a.m. Overview and introduction to SU-TU, SyracuseCoE-IER**

1. Introductions (5 min)
2. Welcome and introduction to SU-TU liaison office, Prof. Mark Glauser, Associate Dean for Research of College of Engineering and Computer Science, SU (15 min)
3. Introduction to TU and Institute of Fluid Science (IFS), Prof. Shigeru Obayashi, Director of IFS, TU (15 min)
4. Welcome and introduction to SyracuseCoE, Prof. Edward Bogucz, Executive Director of SyracuseCoE, SU (15 min)
5. Introduction to Innovative Energy Research Center (IER), Prof. Seiji Samukawa, Director of IER, TU (15 min)

**10:15 a.m. – 10:30 a.m. Coffee Break**

**Dean Dahlberg will join in after coffee break**

**10:30 a.m. – 12:15 p.m. Discussion of SU-TU collaborations via liaison office**

1. Welcome and introduction to SU and College of Engineering and Computer Science, Prof. Teresa Dahlberg, Dean of College of Engineering and Computer Science, SU (15 min)
2. Signing ceremony (15 min)
3. Introduction to the international exchange activities of IFS, Prof. Toshiyuki Takagi, Deputy Director of IFS, TU (15 min)
4. Introduction to study abroad and student exchange program at SU, Prof. Can Isik, Senior Associate Dean of College of Engineering and Computer Science, SU (15 min)
5. Discussion (45 min)
  - Collaborative research projects
  - Joint education programs
  - Faculty and student exchanges

**12:30 p.m. – 1:45 p.m. Lunch, 508 SyracuseCoE (speakers & guests only)**

**Afternoon: SU-TU Joint Forum on Energy and Environment, 203 SyracuseCoE**

**Chair:** Prof. Jeongmin Ahn, Department of Mechanical and Aerospace Engineering, SU

**1:45 p.m. – 2:00 p.m. High efficiency nano-energy devices fabricated by bio-template ultimate top-down processes**

By Prof. Seiji Samukawa, Director of IER, TU

**2:00 p.m. – 2:15 p.m. Micro environmental control systems**

By Prof. Ezzat Khalifa, Department of Mechanical and Aerospace Engineering, SU

**2:15 p.m. – 2:30 p.m. Microcombustion and its novel applications**

By Prof. Kaoru Maruta, Institute of Fluid Science, TU

**2:30 p.m. – 2:45 p.m. Advancing combustion modeling through characterization of chemical time scales**

By Prof. Benjamin Akih-kumgeh, Department of Mechanical and Aerospace Engineering, SU

**2:45 p.m. – 3:00 p.m. Development of cleaner technologies for carbon capture and co-generation purposes**

By Mr. Ryan Falkenstein-Smith, Department of Mechanical and Aerospace Engineering, SU

**3:00 p.m. – 3:15 p.m. Transport phenomena of reaction materials in next generation fuel cells**

By Prof. Takashi Tokumasu, Institute of Fluid Science, TU

**3:15 p.m. – 3:30 p.m. Coffee Break**

**Chair:** Prof. Kaoru Maruta, Institute of Fluid Science, TU

**3:30 p.m. – 3:45 p.m. Nondestructive evaluation of metal structures and composite materials**

By Prof. Toshiyuki Takagi, Deputy Director of IFS, TU

**3:45 p.m. – 4:00 p.m. Enhanced solar energy capture by cloaking the metallic contacts of silicon solar cells**

By Prof. Ian Hosein, Department of Biomedical and Chemical Engineering, SU

**4:00 p.m. – 4:15 p.m. Identification and tracking of fluids coherent structures for improved propulsion and efficiency**

By Prof. Melissa Green, Department of Mechanical and Aerospace Engineering, SU

**4:15 p.m. – 4:30 p.m. Multiphase FSI supercomputing of high-density hydrogen transport and safety problems**

By Prof. Jun Ishimoto, Institute of Fluid Science, TU

**4:30 p.m. – 4:45 p.m. Catalytic technologies for the production of bio-based fuels and chemicals**

By Prof. Jesse Bond, Department of Biomedical and Chemical Engineering, SU

**4:45 p.m. – 5:00 p.m. Experimental and molecular insights of microlayer for boiling enhancement and thin film evaporation**

By Prof. Shalabh Maroo, Department of Mechanical and Aerospace Engineering, SU

**5:00 p.m. – 5:15 p.m. IAQ design and control approach for low energy buildings**

By Prof. Jensen Zhang, Department of Mechanical and Aerospace Engineering, SU

**6:00 p.m. Dinner (by invitation), 2<sup>nd</sup> Floor Dinosaur BBQ**

**The goal of the forum is to encourage and facilitate academic exchange among faculty members and students with interests in area of energy and environment, and to explore opportunities for collaboration among different disciplines.**

**Tuesday, April 12, 2016**

**Morning:** Tour

- 9:30 a.m. – 10:30 a.m.**      Tour College of Engineering and Computer Science (Kathleen Joyce)
- 10:30 a.m. – 12:00 p.m.**      Tour Green Data Center and Skytop Wind Tunnel (Kevin Noble, Prof. Mark Glauser)
- 12:00 p.m. – 1:00 p.m.**      Meeting with Prof. Edward Bogucz and tour SyracuseCoE

**1:00 p.m. – 2:30 p.m. Lunch, 508 SyracuseCoE (speakers & guests only)**

**Afternoon:** Personal meetings

**6:00 p.m. Dinner (by invitation), Delmonicos**