



THE UNIVERSITY OF TOKYO

RESILIENCE ENGINEERING  
RESEARCH CENTER  
THE UNIVERSITY OF TOKYO

GSDM 84th Platform Seminar



**GSDM** Global Leader Program for  
Social Design and Management

## MIT-UTokyo Joint Seminar on Nuclear and Renewable Energy

*Thursday, January 19, 2017, 9:30am-11:15am*

*Engineering Building 8, Room 502 (工学部8号館502講義室)*

*Hongo Campus, The University of Tokyo*

*Hosted by Resilience Engineering Research Center (RERC), The University of Tokyo*

*(Prof. Yasumasa Fujii, University of Tokyo & Assoc. Prof. Ryoichi Komiyama, University of Tokyo)*

Addressing climate change requires a transition to low-carbon sources such as nuclear, wind, and solar energy. However, wind and solar are not dispatchable, and nuclear, wind and solar are capital-intensive and have low-operating costs, which suggests that those sources require high utilization for economic energy production. Since no affordable combination of their outputs matches energy demand, there is the need to develop systems to adapt those sources into a low carbon world in an economical manner. Researchers from the Massachusetts Institute of Technology (MIT) and the University of Tokyo make presentation about the studies of those technical options such as Fluoride-salt-cooled High-Temperature Reactor (FHR) with a Nuclear Air-Brayton Combined Cycle (NACC) and Firebrick Resistance Heated Energy Storage (FIRES).

### Program

09:30-09:35	Welcome & Introduction, Professor Yasumasa FUJII, The University of Tokyo
09:35-10:25	Variable Electricity From Base-Load High-Temperature Reactors Using Brayton Power Cycles and Heat Storage, Professor Charles FORSBERG, MIT
10:25-10:55	Optimal power portfolio in the viewpoint of CO <sub>2</sub> emissions constraint and market competition, Professor Yasumasa FUJII, The University of Tokyo
10:55-11:15	Open Discussion
11:15	Close