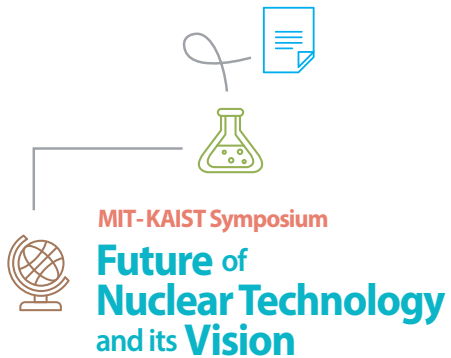


MIT-KAIST Symposium

# Future of Nuclear Technology and its Vision

March 30<sup>th</sup>, 2017 9:00 ~ 17:05

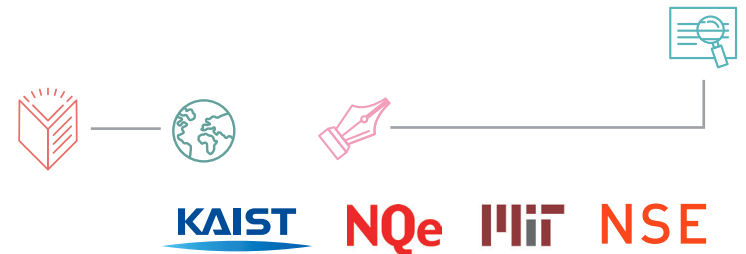
ME Auditorium (Room 1501)  
N7 Building, KAIST



MIT-KAIST Symposium

## Future of Nuclear Technology and its Vision

**KAIST** **NQe** **MIT** **NSE**



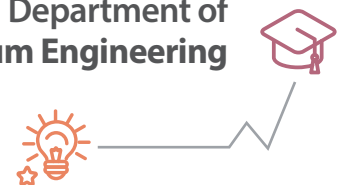
**KAIST**

**NQe**

**MIT**

**NSE**

Department of  
Nuclear and Quantum Engineering



## MIT- KAIST Symposium

# Future of Nuclear Technology and its Vision

Invitation letter to the MIT-KAIST Symposium on the Future of Nuclear Technology On March 30<sup>th</sup>, a joint symposium on the “Future of Nuclear Technology and its Vision” will be held at KAIST, together with MIT. The symposium consists of two parts: topics on innovative nuclear reactor designs and their technological challenges in the morning session, and talks on material technologies for future nuclear applications in the afternoon session. Professors Kord Smith, Ju Li, and Matteo Bucci from MIT and the KAIST research team will be able to share in-depth discussions on various nuclear technologies that will arise in the near future. We sincerely hope that many nuclear experts in academia, industry, and research institutes who are interested in future nuclear technologies will be able to join us and will be greatly honored by your presence.

Department of Nuclear and Quantum Engineering

**Sung – Min Choi**

Dean of the Department of Nuclear and Quantum Engineering at KAIST



9:00 - 9:15	Registration		
9:15 - 9:30	Opening Remark	Prof. Sung-Min Choi	KAIST
Innovative Nuclear Reactor Design and its Challenges			
9:30 - 9:55	Reactor Physics and High Performance Computing Challenges	Prof. Kord Smith	MIT
9:55 - 10:20	Conceptual Development of an Autonomous Small Modular Reactor	Prof. Yong Hee Kim	KAIST
10:20 - 10:35	Break		
10:35 - 11:00	New perspectives and challenges in thermal-hydraulics	Prof. Matteo Bucci	MIT
11:00 - 11:25	Enhancement of thermal margin for nuclear safety	Prof. Yong Hoon Jeong	KAIST
11:25 - 11:50	Micro Modular Reactor for Ship Propulsion	Prof. Jeong Ik Lee	KAIST
11:50 - 13:30	Lunch		
Materials for Advanced Nuclear Power			
13:30 - 13:55	Nuclear Materials: Connecting Nano to Macro	Prof. Ju Li	MIT
13:55 - 14:20	Accident-tolerant fuel cladding using nanoporous zirconium oxide layer	Prof. Sung Oh Cho	KAIST
14:20 - 14:45	High entropy alloy development for oxidation and irradiation resistant cladding and coatings	Prof. Hojin Ryu	KAIST
14:45 - 15:10	Accident Tolerant Fuels Performance Metrics	Mr. Malik Wagih	MIT
15:10 - 15:25	Break		
15:25 - 15:50	Materials and Instrumentation Irradiation Testing for Current and Next-Gen Reactors	Dr. David Carpenter	MIT
15:50 - 16:15	Development of nuclear structural materials resistant to long-term ageing and accident condition	Prof. Changheui Jang	KAIST
16:15 - 16:40	X-ray nondestructive testing and applications	Prof. Seungryong Cho	KAIST
16:40 - 17:05	Producing Tc-99m with photo-nuclear reaction	Prof. Yong Hee Kim	KAIST
Closing			