

The 126th GIST Seminar

***A discussion on how to accelerate commercial deployment of fusion;
technology, public private partnership***

Speakers:

Mr. Rick Needham(MS)



**Chief Commercial Officer,
Commonwealth Fusion**

Dr. Takuya Goto



**Co-Founder,
Board Member,
Helical Fusion**

Dr. Satoshi Konishi



**Co-Founder, CEO and
Chief Fusion Engineer, Kyoto
Engineering**

- ◆ **Date:** 17:30-19:30, February 20, 2024 (Doors open at 17:00)
- ◆ **Venue:** Soukaiko-Hall, GRIPS
7-22-1 Roppongi, Minato-ku, Tokyo
<http://www.grips.ac.jp/en/about/access/>
- ◆ **Organizer:** GRIPS Innovation, Science and Technology Policy Program (GIST)
- ◆ **Language:** Japanese/ English (Simultaneous interpretation provided)
- ◆ **Outline :**

Fusion energy has made significant scientific advances over the past several years such as net-energy breakthrough in December of 2022. At the same time, a number of private fusion companies in U.S.A. argue that they are on a faster path to turning these scientific advances into commercial energy production at scale, many planning to deliver first electrons to the grid in the early 2030s.

US government announced U.S. Fusion Energy International Partnership Strategy which will

support the timely development, demonstration, and deployment of commercial fusion energy in strategic areas like research and development and harmonization of regulatory frameworks.

Commonwealth Fusion Systems is the leading company to have fusion into commercialization with demonstration facility SPARC which is under construction and will be commissioned next year 2025.

Helical Fusion and Kyoto Fusion Engineering are leading Japanese private fusion companies with competitive technologies to accelerate fusion commercialization.

They also have important role of supply chain development for Fusion technologies.

At this seminar, Mr. Rick Needham, Dr. Takuya Goto and Dr. Satoshi Konishi will give their views and some suggestions to us.

After three presentations, Prof. Hiroshi Yamada of Univ. of Tokyo, Mr. Daisuke Baba of the Cabinet Office at GOJ will give their insight as discussants about technical challenges and public private partnership including international cooperation.

Prof. Hisanori Nei of GRIPS will moderate the panel discussion and Q&A sessions.

◆ **Speaker's Short bio :**

Mr. Rick Needham(MS) is the energy and climate expert with 30 years of experience as an operator and investor. Experience ranges from early days as a submarine officer in the US Navy and business development executive at a leading R&D organization, to an energy and sustainability leader at Google and private equity investor at the largest impact fund in the world. He is currently serving as Chief Commercial Officer of CFS focused on the fastest path to commercial fusion power.

Dr. Takuya Goto is one of the co-founders and board members of Helical Fusion Co., Ltd. and is responsible for the research & development of the company. Before working at Helical Fusion, he was engaged in fusion engineering research at the National Institute for Fusion Science for 15 years. He was in charge of reactor system design research including cost analysis and core plasma physics design, which he continued after moving to Helical Fusion. He is a member of the Joint Special Design Team which aims to develop a tokamak DEMO reactor and has experience in laser inertial fusion reactor design. He holds a Ph.D. in fusion science from the University of Tokyo.

Dr. Satoshi Konishi co-founded Kyoto Fusion Engineering in 2019. With a Ph.D. in Engineering from the University of Tokyo, Satoshi brings four decades of expertise in R&D, specializing in fusion technology, advanced nuclear system design, and tritium engineering, including significant contributions to the ITER project. He holds dual roles as Chief Fusion Engineer, overseeing technology development, strategic planning, and execution, and as CEO, a position he has held since 2023.

◆ **Discussants :**

Prof. Hiroshi Yamada

Prof. Hiroshi Yamada is the leading scientist about fusion science & technologies in Japan.

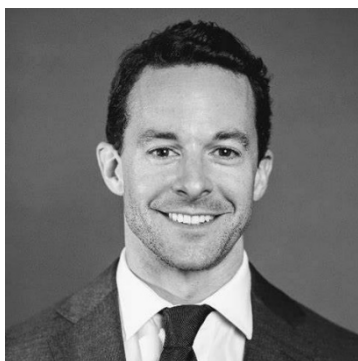
He is conducting research on plasma physics and controlled thermonuclear fusion based on plasma magnetic field confinement experiments. He is working on the construction of a physical model to predict the behavior of plasma full of nonlinearities and the control of system dynamics such as fuel cycles.



David Livingston

Mr. David Livingston is the Senior Advisor & Managing Director for Energy, U.S. Special Presidential Envoy for Climate, John Kerry. He works to build new initiatives to shape the future of climate, energy, prosperity, and security. Prior to joining government, Mr. Livingston previously worked at the Eurasia Group, a consultancy, focusing on energy, climate, trade and technology issues, and as a non-resident senior fellow of the Atlantic Council.

He holds master's degree in science at the University of Oxford.



Mr. Daisuke Baba

Mr. Daisuke Baba is the Director for Integrated Strategy at the Secretariat of Science, Technology and Innovation Policy in the Cabinet Office and the Director of the International Nuclear and Fusion Energy Affairs Division at Ministry of Education, Culture, Sports, Science and Technology (MEXT). He has full responsibility to develop the Fusion Energy Strategy.

Mr. Baba joined MEXT as an administrative officer in 2004. Before his appointment as the Director in September in 2023, Mr. Baba had various positions in the Japanese Government, such as the Director of the Office for University Research Capability Enhancement, the Director of the Office for Basic Research Projects, and First Secretary at the Japanese Embassy in the U.S.

He holds master's degrees in physics and public policy. He also completed the Science, Technology, and Public Policy (STPP) program at the University of Michigan, the Executive Management Program (EMP) at the University of Tokyo and the Diplomatic Academy program at the National Graduate Institute for Policy Studies (GRIPS).



◆ **Program :**

17:30-17:35	Introduction by Prof. Hisanori Nei(Moderator)
17:35-17:55	Presentation by Mr. Rick Needham
17:55-18:15	Presentation by Dr. Takuya Goto
18:15-18:35	Presentation by Dr. Satoshi Konishi
18:35-18:50	Comment by Prof. Hiroshi Yamada
18:50-19:00	Comment by Mr. David Livingston(Video)
19:00-19:15	Comment by Mr. Daisuke Baba
19:15-19:30	Open discussion and close

◆ **Moderator :**

Hisanori Nei, Professor at GRIPS

◆ **Warnings :**

This is an in person seminar.

◆ **Registration :**

Please register at this registration form by 12:00, Feb.15.

<https://forms.gle/h3f6jDfK3fxGMut98>

**If you cannot open the form, please send email to GIST Secretariat, gist-ml@grips.ac.jp.
Registration email must include: 1) your name, 2) institution, 3) position, and 4) e-mail address.**