# OIST-Keio
Showcase Talk Series 8

# Science Meets Society: Twist, Flow, and Instability

12:45~ at Forum
WELCOME COFFEE

13:00~ at Forum
Welcome remarks by Dr. Toshiharu Saiki
Opening remarks by Prof. Yutaka Kazoe

13:10~ at Forum

TALK SESSION 1
"Analysis and Design of Structures and Fluid Flows"

Dr. Eliot Fried
Dr. Koji Fukagata

TALK SESSION 2
"Multiphase Fluid Dynamics"

Dr. Dan Daniel
Dr. Satoko Fujioka

TALK SESSION 3
"Geophysical Fluid Dynamics"

Dr. Amin Chabchoub
Dr. Norihiko Sugimoto

16:45~ at YIL
POSTER SESSION
Closing remarks by Dr. Kenji Yasuoka

17:30~ at YIL
RECEPTION

2025 Dec 13 sat.

13:00 START

Forum, 7th Floor, Building 14 / YIL,
Keio University Yagami Campus

Registration ▶▶▶▶
Deadline: December 5 / Limited seating

◀ Emerging Research Center of Fluid Mechanics
Official website

Forum, 7th Floor, Building 14

12:45~ WELCOME COFFEE+REGISTRATION

13:00~ Welcome remarks by Dr. Toshiharu Saiki / Vice President for Research, Keio University
13:05~ Opening remarks by Prof. Yutaka Kazoe / Faculty of Science and Technology, Keio University

## TALK SESSION 1 "Analysis and Design of Structures and Fluid Flows" Chair: Dr. Sugimoto

13:10~ "Applications of CNN autoencoders to fluid mechanics problems"
Dr. Koji Fukagata / Professor, Keio

13:35~ "From underconstrained linkages to Möbius bands: Isometric, isoenergetic pathways of eversion"
Dr. Eliot Fried / Professor, OIST

14:00~ Discussion
14:15~ Short Break

## TALK SESSION 2 "Multiphase Fluid Dynamics" Chair: Dr. Fukagata

14:20~ "A novel design for multiphase flow reactors enabling continuous chemical processes"
Dr. Satoko Fujioka / Associate Professor, Keio

14:45~ "An Electrifying Farewell: How Evaporating Drops Charge and Explode"
Dr. Dan Daniel / Assistant Professor, OIST

15:10~ Discussion
15:25~ Short Break

## TALK SESSION 3 "Geophysical Fluid Dynamics" Chair: Dr. Fujioka

15:30~ "Spontaneous gravity wave radiation in geophysical fluid"
Dr. Norihiko Sugimoto / Professor, Keio

15:55~ "The Hydrodynamics of Extreme Wave Events"
Dr. Amin Chabchoub / Associate Professor, OIST

16:20~ Discussion
16:35~ Transition from Building 14 to YIL

Speaker Abstracts ▶▶▶▶

Yagami Innovation Laboratory

16:45~ POSTER SESSION

"PIV-based validation of friction drag reduction by streamwise traveling wave-like wall deformation in turbulent channel flow"
Mr. Soratsugu Sakazume / Keio

"The effects of wall flexibility in turbulent channel flow over a deformable wall"
Ms. Morie Koseki / OIST

"A pressure drop-based method for rheological characterization of food fluids: From methodology to device development"
Mr. Nobuaki Ikeda / Keio

"Exploring multi-stability in three-dimensional viscoelastic flow around a free stagnation point"
Dr. Simon Haward / OIST

"Femtoliter-sample injection by highly-integrated nanofluidic valves and its application to nanochannel chromatography"
Dr. Masafumi Watanabe / Keio

"Towards new conceptual understanding of the decay of landfalling typhoons"
Mr. Hanley Andrean / OIST

"Deep ocean inertia-gravity waves simulated in a global coupled atmosphere–ocean general circulation model"
Dr. Nobumasa Komori / Keio

17:30~ Closing remarks by Dr. Kenji Yasuoka / Dean of Graduate School of Science and Technology, Keio Uiversity
17:35~ Netwoking Reception