



**Politecnico
di Torino**

Dipartimento
di Ingegneria Meccanica
e Aerospaziale



DIMEAS SEMINAR

ABILITY MINING, OPERATOR'S MOTION, AND MECHANISM DESIGN



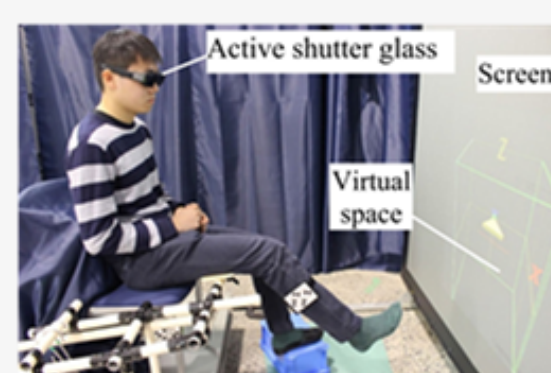
SPEAKER



Masaharu Komori
Kyoto University

Abstract

Humans possess various abilities, and there may be hidden capabilities we have yet to discover. Prof. Komori is conducting research on "Ability mining" to uncover these unknown human abilities. Specifically, prof. Komori studies manipulation using foot and leg and his laboratory is conducting research on unknown characteristics within human motions while operating a robot or mobility. It leads to intuitive control systems that are easy to operate. This presentation will introduce the research, including foot operation interface, effect of motion path on leg muscle load, device to support leg motion during robot operation, recognition accuracy of the vehicle posture and the operator's face posture. This presentation will also introduce research on mechanism design, including a mobile parallel manipulator consisting of two nonholonomic carts, effect of double-row active omni wheel on stability of single-track vehicle in roll direction, and uninterrupted transmission system using noncircular gear.



BIO

Masaharu Komori received the B.E. degree in precision engineering from Kyoto University in 1995, the M.E. degree in 1997, and the Ph.D. degree in 2002. In 2000, he became a research assistant with the graduate school of engineering in Kyoto University, an associate professor in 2004, and a professor in 2017. He is currently with the department of mechanical engineering and science in Kyoto University. His research interests include riding robotics, ability mining, vehicles, robots, human motion, and operation. He is a fellow of JSME. He has received awards, including The Young Scientists' Prize of The Commendation for Science and Technology by the Minister of Education, Culture, Sports, Science and Technology, the WT Award, the four JSME Medals for Outstanding Paper, the JSME Medal for New Technology, the Ichimura Prize in Science for Distinguished Achievement, the two FA Foundation Paper Awards.



**Friday Feb. 20th 2026
14–18 pm**



**Meeting room, ground floor,
DIMEAS – Politecnico di Torino**