



**Politecnico
di Torino**

Dipartimento
di Ingegneria Meccanica
e Aerospaziale



DIMEAS SEMINAR

ASSISTIVE DEVICES FOR HUMAN NEEDS: FUNDAMENTALS AND APPLICATIONS



SPEAKER



Prof. Eiichiro Tanaka

Waseda University,
Japan

LECTURE 1



Feb. 26th 2026
from 09:00 to 13:00



**Sala Ferrari, II floor,
DIMEAS – Politecnico di Torino**

LECTURE 2



Feb. 27th 2026
from 14:00 to 18:00



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

LECTURE 1 – Basic knowledge for developing assist devices

This lecture will explain the basic knowledge necessary to develop devices that assist human movement, particularly the background, ergonomics and human evaluation methods, and how to generate dynamic equations.

LECTURE 2 – Introduction of assist devices developed in prof. Tanaka's lab

This lecture introduces development examples of various assistive devices that appropriately assist walking, upper limb movements, standing, lifting, and other movements for patients, frail individuals, and able-bodied individuals

BIO

From 1997 to 2003, he was a researcher at Hitachi's Mechanical Engineering Research Laboratory.

He then worked at the National Institute of Technology, Hiroshima University, Shibaura Institute of Technology, and Saitama University, before assuming his current position in 2016.

He specializes in mechanics, machine element science, mechanical design, and welfare engineering.

He has developed a wide range of assistive devices, from patient rehabilitation to promoting movement in the frail and work assistance for able-bodied individuals. His most notable products include a walking assistance robot for hemiplegic patients and a lifting assistance suit for workers, which have won numerous awards.

He is a fellow of JSME, chairman of JSRMR, vice chairman of Jc-IFTOMM, and a member of IEEE, IFTOMM, RSJ, SICE, SOBIM, JSDE, and JSWE. He completed his doctoral studies at the Tokyo Institute of Technology and received his doctorate (Dr. Eng.).