



INSTITUTE OF
SMART STRUCTURES
AND SYSTEMS

SUKSHMA WEBINAR SERIES

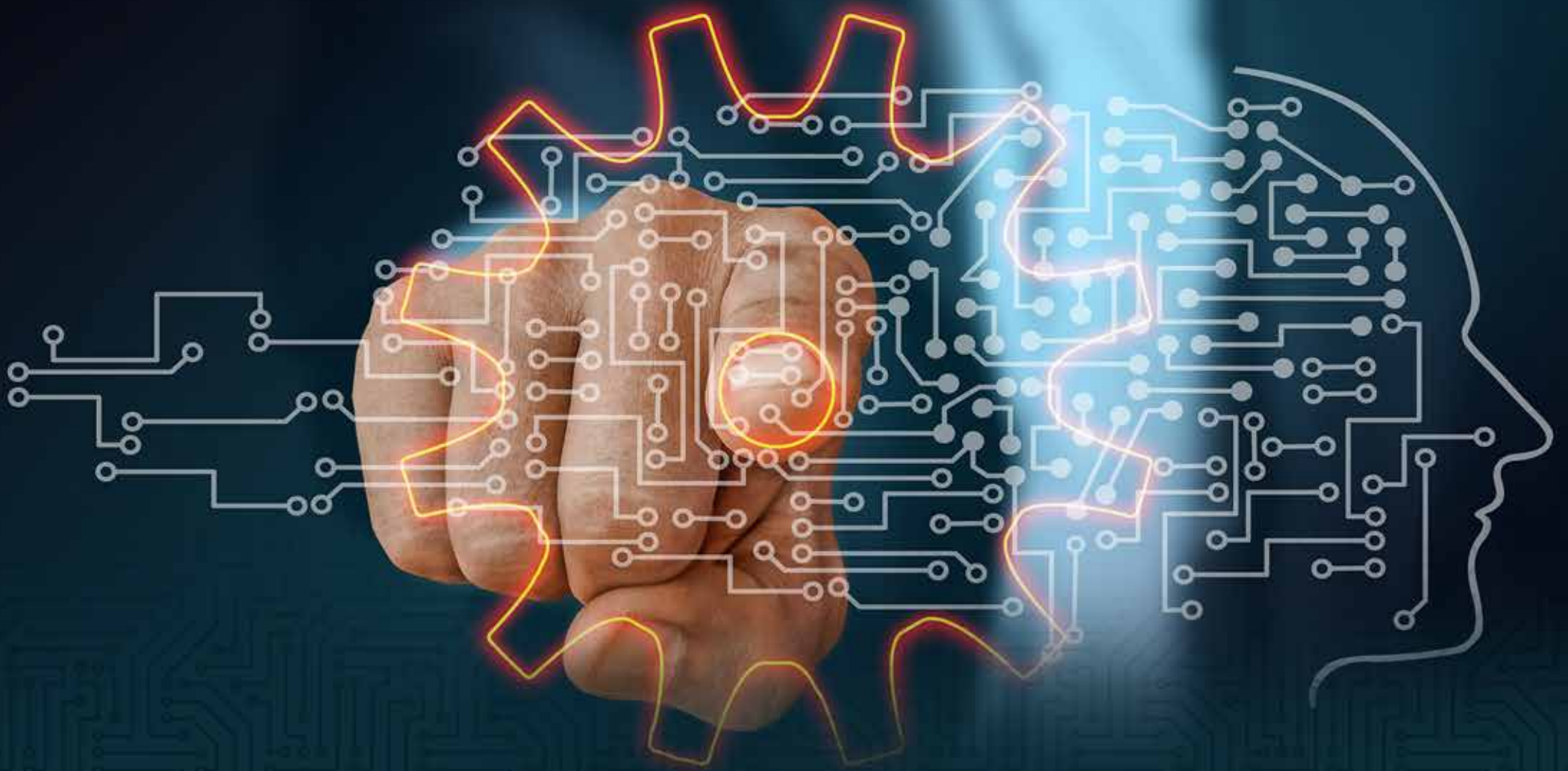
23rd October 2021

Saturday

11:30 AM – 12:30 PM

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MEMS Research in S. Tanaka Lab, Tohoku University

MEMS (Micro Electro Mechanical Systems) technology, which is widely used for inertial sensors, pressure sensors, ink jet printers, frequency control devices etc.

Recently, MEMS are getting more important for wireless communication, automated control, healthcare, medical diagnosis, energy saving etc. To answer such requirements, we are developing advanced gyroscopes, CMOS-integrated tactile sensors, new acoustic wave filters, microactuators etc. in conjunction with wafer-level packaging technology, piezoelectric thin films and original process tools. Our recent research topics include

advanced inertial sensors for automated vehicles and robots, tactile sensor system for robots, frequency control devices for advanced wireless communication (SAW and BAW devices), piezoelectric thin films and devices, acoustic and ultrasonic sensors, microactuators, heterointegration technology and wafer-level packaging technology, Key technologies for sensors and microactuators, MEMS process tools (ALD tool and wafer bonder) etc. In this seminar, I will talk about giving an overview of MEMS research in my lab at Tohoku University.

ABOUT THE SPEAKER



Prof. Shuji Tanaka

Department of Robotics,
Graduate School of Engineering,
Tohoku University

Prof. Shuji Tanaka is currently a Professor in the Department of Robotics at the Graduate School of Engineering, Tohoku University. He completed his Engineering Degree from the Department of Mechano-Informatics, The University of Tokyo in 1994 and his Doctorate in Engineering from the Department of Engineering Synthesis, Graduate School of Engineering, The University of Tokyo in 1999. Prof. Tanaka has published over 220 peer-reviewed journal papers, 330 international conference papers, 150 review papers, and given 150 invited talks in the area of microelectromechanical systems, acoustic wave devices, piezoelectric thin films and devices, physical sensors, wafer-level integration and packaging technology, microfabrication technology, etc. His group has 40 registered patents. For his active research in MEMS, he has been given the Young Scientists Prize from Ministry of Education, Culture, Sports, Science and Technology, Japan, in 2009, and German Innovation Award- Gottfried Wagener Prize in 2012. He is IEEE and JSME fellow. He has been General, TPC Chair, and member of many prestigious conference committees such as, IEEE NEMS 2016, Inertial 2020, IEEE MEMS conference 2022, Transducers 2023, and others. Recently, he received “69th Radio Wave Day” recognition from Tohoku Bureau of Telecommunications Director Award, 2019, and Research Achievement Award from Micro-Nano Science and Technology Division, JSME, 2019.