



The Institute of Electrical and Electronics Engineers (IEEE)



Galveston Bay Section

Joint Societies Chapters, LM-AG and Consulting=AG
WITH SUPPORT OF IMEKO TECHNICAL COMMITTEE ON ROBOTICS (TC17)

ONLINE Virtual Meeting

Friday, July 23d, 2021 8:00 AM- 9:00 AM US-Central (Houston-Chicago)

TOPIC: “Micro and Nano Robots”

Speaker: Dr Toshio Fukuda, Professor Beijing Institute of Technology, 2020 IEEE
President

PRESENTATION: This presentation is an overview of micro and nanorobotics, based on the Cellular Robotics System, which is the basic concept of the emergence of intelligence in a multi-scale way from Cell Level to Organizational Level, proposed more than 30 years ago. It consists of many elements of how the system can be structured from the individual to the group/society levels in analogy with the biological system. It covers a wide range of challenging topics: Then the presentation will focus on medical robots and bio cell manipulation and cell assembly and refer to applied areas for the future hybrid cyborg and bionic system to improve the quality of life of humans.

PRESENTER: [Toshio Fukuda](#) received the B.S. degree in mechanical engineering from the Waseda University, Tokyo, Japan, in 1971, and the M.S. and Ph.D. degrees in mechanical engineering from the University of Tokyo, Tokyo, in 1973 and 1977, respectively. From 1977 to 1982, he was in the National Mechanical Engineering Laboratory, Tsukuba, Japan. From 1982 to 1989, he was at the Science University of Tokyo, Tokyo. Starting in 1989, he was at Nagoya University, Nagoya, Japan, where he was a Professor in the Department of Micro System Engineering, and a Professor at Meijo University, Nagoya. He is currently a professor (1000 Foreign experts Plan) with the Beijing Advanced Innovation Center for Intelligent Robots and Systems, Beijing Institute of Technology, Beijing, China, where he is mainly engaged in the research fields of intelligent robotic systems, cellular robotic systems, mechatronics, and micro/nano robotics.

Toshio Fukuda was the President of IEEE Robotics and Automation Society (1998–1999), the Editor-in Chief of the IEEE/ASME TRANSACTIONS ON MECHATRONICS (2000–2002), the Director of Division X: Systems and Control (2001–2002), the IEEE Founding President of the Nanotechnology Council (2002–2003, 2005), the Director of Region 10 (2013–2014), and the Director of Division X: Systems and Control (2017–2018) and a foreign member of Chinese Academy of Sciences (2017). He is immediate past President of IEEE and a longtime member of the International Measurement Federation (IMEKO), Technical Committee on Robotic Measurement (TC-17).

**THIS EVENT IS ORGANIZED BY GALVESTON BAY SECTION JOINT SOCIETIES CHAPTERS, LM and
Consulting AFFINITY GROUPS**

The presentation is FREE and open to all Interested IEEE and non-IEEE members. LIMITED TO 100 ATTENDEES. Registration is required by THURSDAY JULY 22nd 2021 (Close of Business) 5:00 PM (US Central) to attend. The webinar is Co-Sponsored by IMEKO/TC-17.

FOR REGISTRATION GO TO <https://events.vtools.ieee.org/m/277468>

Log-in Information will be provided to all registrants on completing the registration