

AI Robots and Moon Shot Program

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Abstract

There are many ways to make research and development of intelligent robotic systems. I have been working on the Multi-scale robotics systems for many years. It consists of many elements how the system can be structured from the individual to the group/society levels in analogy with the biological system.

Focusing on the coevolution and self organization capabilities, I will show a new initiative on AI and Robot, one of the Moon Shot Programs started by Japanese Government, since 2020. Based on the Society 5.0, it is a new and challenging program aiming at the AI robotic system in 2050. I will introduce some of the projects in this program for realization of the Society 5.0 by back-casting technologies from the 2050 to the current ones. It is important to have international cooperation with many research institutions.

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CV: Toshio Fukuda received Dr. Eng. from the University of Tokyo, Tokyo, Japan, in 1977. Currently, He is Professor Emeritus Nagoya University, Professor Waseda University. His major is bio-robotics, especially Micro and Nano Robotics.

Dr. Fukuda is IEEE President and CEO (2020), the IEEE Director of Division X, Systems and Control (2017-2018), IEEE Region 10 Director (2013-2014) and served President of IEEE Robotics and Automation Society (1998-1999), Director of the IEEE Division X, Systems and Control (2001- 2002), Co-founding Editor-in-Chief of IEEE / ASME Transactions on Mechatronics (2000-2002) and Editor-in-Chief of ROBOMECH Journal, Springer (2013-). He was Founding President of IEEE Nanotechnology Council (2002-2003, 2005).He was elected as a member of Science Council of Japan (2008-2013). IEEE Robotics and Automation Pioneer Award (2004), IEEE

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