The Department of Mechanical Engineering/College of Engineering and Applied Sciences
Stony Brook University

Mechanical Engineering Seminar

Dr. Makoto Kaneko
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Osaka, Japan

Lecture Title: High Speed Hyper Human Technology Opens a New World
Monday, March 3, 2008, 11:00 AM, Room 301 Engineering Building

Abstract

The recent vision technology is far beyond human eye capability in terms of speed. Also, the advancement of recent actuator technology enables us to achieve even quicker motions of than human. Those hyper human technologies allow us to design and develop a robot capable of exceeding human in a particular aspect. These fundamental technologies are also available for medical diagnosis, such as stiffness sensing of human eye, detecting tumors existing in internal organs in our body, and dynamic sensing of human skin. All topics will be explained with video demonstration.

Biography

1981 PhD from the University of Tokyo
1981-1990 Mechanical Engineering Laboratory (MITI)
1990-1993 Associate Professor of Kyushu Institute of Technology
1993-2006 Professor of Hiroshima University

Dr. Kaneko's research encompasses high speed hyper human technology which supports to develop a system capable of exceeding human capability. Especially, he is interested in dynamic active sensing by a utilizing a high speed camera and a high speed actuator, and their implementation into medical system for exploring a new direction of medical diagnosis He served as the Editor-in-Chief of Journal of Robotics and Mechatronics, an associate editor of the IEEE transaction on Robotics and Automation, and an editorial member of Robotics and Automation Magazine. Dr. Kaneko is currently serving as a part editor of an upcoming international handbook of robotics and also co-authored a chapter on robot hands. He was the Director of the Hyper Human Research Project Center and the Project Leader of the 21century COE on Hyper Human Technology toward the 21st Century Industrial Revolution". He was a Vice President of IEEE Robotics and Automation Society during 2004 through 2005. He published over 150 journal papers and 160 conference papers. He got 18 awards including Humboldt Research Award, IEEE Best Conference Paper Awards (ICIA, ICRA, ISATP) and IEEE RAS Best Transactions Paper Award.

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