



Robotic Games Society (Singapore)

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SRG 2002 Public Lecture

22 May 2002, Singapore EXPO Conference Hall K

Super Mechano-System: New Snake, Walking and Group Robots

by

Dr Shigeo Hirose

Professor, Tokyo Institute of Technology, Japan

Abstract:

This lecturer discusses the general concept of the Super Mechano-System or SMS project of Tokyo Institute of Technology. The SMS is a new type of robot system, which can transform its shape and also its internal control system in accordance with the given tasks. Snake robots, running and walking robot with manipulation function, group robots, and unified and reconfigurable robots are the three main examples of the SMS. Demining task, rescue operations, and planetary exploration are the expected applications of the projects. Design and new features of constructed robot systems, such as 3D snake-like robots, demining quadruped walking robots, and group type robots named as Super Mechano-Colony will be explained and demonstrated by VCR.

About the Speaker:

Shigeo Hirose was born in Tokyo in 1947. He received the M. E. and Dr. E. degrees in Control Engineering from the Tokyo Institute of Technology in 1973 and 1976, respectively. From 1976 to 1979 he was a Research Associate, from 1979 to 1992 an Associate Professor and since 1992 he has been a Professor in the Department of Mechanical and Aerospace Engineering at the Tokyo Institute of Technology. His research interest is in design of novel robotic mechanisms and its control. He awarded nearly 30 academic prizes, including Pioneer in Robotics and Automation Award in 1999 and Best Conference Paper Award in 1995 both from IEEE Robotics & Automation Society.

SRG is held in cooperation with IEEE Robotics and Automation Society Singapore Chapter and is jointly organised by:

Institute of Technical Education, Nanyang Polytechnic, Nanyang Technological University, National University of Singapore,
Ngee Ann Polytechnic, Robotic Games Society (Singapore), Singapore Polytechnic, Singapore Science Centre and Temasek Polytechnic.