Dipartimento di Ingegneria Informatica Automatica e Gestionale Antonio Ruberti



## Seminario di Robotica

## Martedì 16 Giugno 2015 ore 14:30, Aula A6, DIAG, Via Ariosto 25

## Kazuya Yoshida

Graduate School of Engineering, Tohoku University (Sendai, Japan) <u>http://www.astro.mech.tohoku.ac.jp/e</u>

## Space Robots and Micro Satellites in Tohoku University

**Abstract:** In this talk, past and recent activities on space robotics research and microsat development, conducted by Prof. Kazuya Yoshida in Tohoku University, Japan and his colleagues, are introduced. His research activities cover dynamics and control of space robotic systems ranging from orbital free-flying robots to planetary exploration rovers. The activities are extended to the development of university-based micro satellites and also the terrestrial applications of space technology, such as robotic remote exploration for search and rescue missions. His technical contribution is evidenced by many space flight and robotic missions, such as ETS-VII (orbital experiments of a free-flying space robot), HAYABUSA / HAYABUSA-2 (Japanese asteroid sample return probes), RISING / RISING-2 (50 kg microsatellites for science mission) and QUINCE (a mobile robot to aid in the Fukushima power plant incident.) The talk will highlight the university-based microsatellite development with its on-going results, and the topics around lunar/planetary exploration rovers including the challenge to Google Lunar X Prize.

**Biography:** Professor Kazuya Yoshida received B.E., M.S. and Dr.Eng, degrees in Mechanical Engineering Science from Tokyo Institute of Technology, Japan, in 1984, 1986, and 1990, respectively. He served as Research Associate of Tokyo Institute of Technology from 1986 to 1994, and Visiting Scientist of Massachusetts Institute of Technology, USA in 1994. From 1995 to 2003 he was appointed as Associate Professor, and since 2003 he is Full Professor in Department of Aerospace Engineering, Tohoku University, Japan. He also serves as Director of Center of Robotics for Extreme and Uncertain Environments in Tohoku University since 2011. In addition, he has been contributing to space robotics education for international students at International Space University in Strasbourg, France (for Master of Space Studies) and various locations in the world (for Summer Study Programs). Member of IEEE since 1990, and a committee cochair of the Robotics and Automation Society (RAS) Technical Committee (TC) on Space Robotics, since 2007.

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