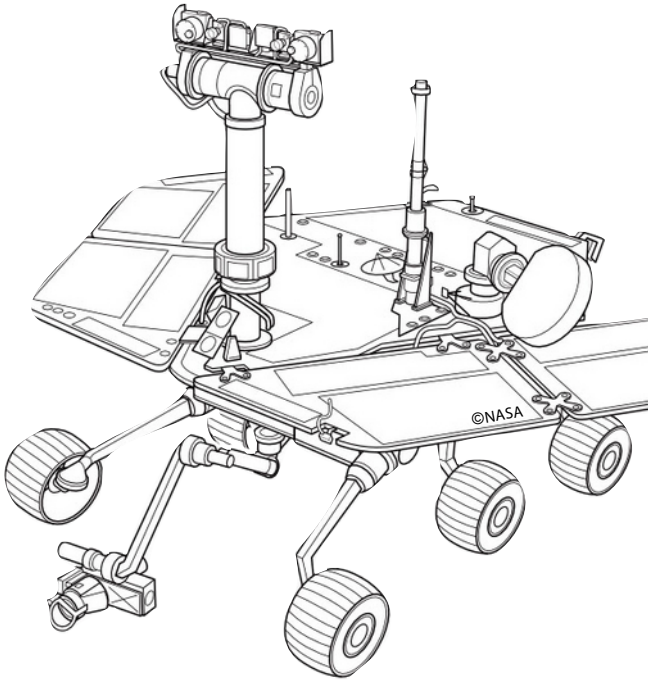
FREE ADMISSION

Planetary Rover Symposium

20-21th April 2009,

Department of Automation and Systems Technology,
Helsinki University of Technology, TUAS-building
Otaniementie 17, Espoo. Room 1171-72

http://autsys.tkk.fi/en/SpaceMaster/Symposia



TOPICS:

- Introduction to space robotics, NASA/JPL history, space robotics history.
- Computer vision, manipulation and enabling techniques for space robotics.
- Robotics and automation in space, Exomars-program and robotics research at ESA.
- Future Worksite on Moon.
- Robotics development at University of Oulu & experiences from ESA Lunar Rover Challenge.
- Soviet and Russian planetary & mobile robots 1963-2007.
- JPL rover missions to Mars; past, present and future.
- New technologies for planetary exploration.

Supported by Erasmus Mundus SpaceMaster-Program

PRELIMINARY PROGRAM:

Monday, April 20th

09:15-10:15	Volpe: Introduction to space robotics, NASA/JPL history, space robotics history.
10:15-10:30	Break
10:30-11:30	Volpe: Computer vision, manipulation and enabling techniques for space robotics.
11:30-12:30	Lunch
12:30-13:30	Visentin: Robotics and automation in space, Exomars-program and robotics research at ESA.
13:30-14:15	Jari Saarinen: Future Worksite - enabling technology for Lunar construction.
14:15-14:30	Break
14:30-15:30	Juha Röning: Robotics development at University of Oulu & experiences from ESA Lunar Rover Challenge

Tuesday, April 21st

09:15-11:15	Volpe: JPL rover missions to Mars; past, present and future.
11:15-12:15	Lunch
12:15-14:15	Bogatchev: Soviet and Russian planetary & mobile robots 1963-2007
14:15-14:30	Break
14:30-15:30	Volpe: New technologies for planetary exploration.
15:30-16:15	Seppo Heikkilä: SpacePartner; Robotic assistant for astronauts.

GUEST SPEAKERS:

Dr. Richard Volpe is Manager of the Mobility and Robotic Systems Section of the Autonomous Systems Division in Jet Propulsion Laboratory (JPL). In addition to guiding technology development for future robotic exploration of Mars and the Moon, he has been actively involved in 2003 & 2009 rover mission development, and 2007 lander mission operations. Richard's research interests include: natural terrain mobile robots, real-time sensor-based control, manipulation, robot design, software architectures, and path planning.

Mr. Gianfranco Visentin is the head of Automation and Robotics (A&R) section working in support of ESA robotics projects. He has participated to the development of the European Robot Arm (ERA), the Columbus Microgravity Facilities, the EUROBOT system and the ExoMars project. In the field of Planetary robotics, Mr. Visentin has been responsible for the development of micro and mini rovers, aerobots and robotic moles.

Mr. Alexei Bogatchev is the Chief Engineer and Chief Technical Officer of Rover Company Ltd. Rover Co. ltd. was founded as a subsidiary of VNIITRANSMASH to work in the area of mobile and space robotics. The company specialization is the development and prototyping of the high-mobility robotics for space and ground applications. Alexei has been involved in developing several robotic platforms like Phobos hopper, Russian small Mars rover, ARGUS pointing and stabilizing platform for Mars 94/96 mission, Prototype of a small manipulator for Mars rover, and ExoMars rover candidate for European Space Agency.

Dr. Juha Röning is a Docent and Professor of Embedded Systems at the University of Oulu. His field of research is in next generation of intelligent systems, which are autonomous, adaptive, and able to correct their own mistakes. The area of research cover robotics, artificial intelligence, machine vision, pattern recognition, neural computing, and fuzzy logic.