

2011 International Conference on Advanced Mechatronic Systems
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Special Session on

Mobile Robots

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Robotic vehicles are a type of mobile robots that have become increasingly important in operations performed in environments too dangerous for humans. Examples of such environments include underwater explorations, space, minesweeping, contaminated site inspection etc. On other hand, specialized mobile robots such as humanoids and pet robots are subject of increasing attention from the scientific community. These kinds of robots require development of highly sophisticated capabilities enabling human-robot interaction, emotional abilities and cognition. Many humanoids and pet robots are intended for rehabilitation, entertainment and social purposes.

The objective of this session is to cover the basics and advances of mobile robotic systems and related technologies. Both hardware (sensors, embedded electronics, locomotion, navigation, system integration, energy) and software (high-level control, localization, trajectory planning, real-time control, signal processing) aspects will be tackled.

Topics covered by this session include but are not limited to:

Robotic Architectures	Control
Mechanics and Locomotion	Localization
Autonomous Robotic Vehicles	Navigation
Land or Home Robots	Embedded Electronics
Aerial Robots	Sensors
Underwater Robots	Perception
Legged Robots	Applications
Path Planning	