

LULEÅ UNIVERSITY OF TECHNOLOGY



## Professor Kalevi Hyyppä

- × Inventor of **LAZERWAY** navigation system for mobile robots and AGV's with > 3000 units installed worldwide.



- × Current research focus on navigation systems for fully- or semi-autonomous wheelchairs (Interreg IIIA project MICA).



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Top-class Research and Education

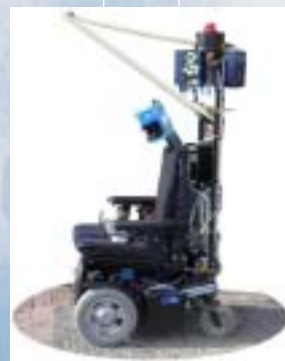


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## MIA – Mobile Intelligent Assistant

- × A wheelchair for people that are disabled or have special needs.
- × Fully- or semi-autonomous, adapted to user.
- × Sensor system which transfers 3-D data of the environment to users with impaired vision.
- × Health condition of user can be monitored by on-board sensors.
- × Human-like user interface.



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## Additional resources at LTU

- × CDH – Develops solutions for enabling people in need of healthcare, nursing and rehabilitation to remain at home to a greater and greater extent while ensuring that they keep a high quality of life.
- × Department of Health Sciences – Experts on user needs and evaluation of equipment for elderly people and users with special needs.
- × EISLAB – Experts on hardware and software for embedded systems, sensors and sensor networks.



## Possible partners (preliminary)

- × Prof. Juha Kostamovaara, Optical Sensors, Oulu University, Finland.
- × Prof. Klaus. Schilling, Mobile Robots, University of Würzburg, Germany.
- × Prof. Andrej Brodnik, Computer Science, University Primorska, Slovenia.
- × Permobil AB, Wheelchair manufacturer, Sweden.
- × Prof. Aarne Halme, Mobile Robots, Helsinki University of Technology, Finland.

