

Research group: Mobile Machine and Vision Laboratory
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Abstract:

The Mobile Machines and Vision Laboratory (MMVL) is a research group in the Materials and Engineering Research Institute (MERI) and include Computer Vision, Embedded Systems Engineering, Interaction design, Robotics and Swarm Robotics.

We employ a wide range of conventional sensors and sensing techniques and chemical sensors produced in-house. They are applied on robots and multi robot systems, ranging from medium sized mobile robots applied in ordinary environments and human machine interactions play an important role.

Detailed research information:

The Mobile Machines and Vision Laboratory (MMVL) group within the Materials and Engineering Research Institute (MERI) has a focus on AI, mathematical modelling, robotics and group robotics. The MMVL has been involved in many projects on micro and mini robotics and is a member of The European Robotics Network; it participated in a range of European robotics projects MiCRoN (EU FP5 from 2002 till 2005), I-Group (EU FP6-IST from 2004 till 2008), Replicator (EU-FP7 from 2008-2013) and is coordinating the GUARDIANS and VIEW-FINDER projects (EU FP6-IST from 2006-2009).



The Films and Sensors research group at MERI carries out the design and development of thin film based sensors. The Films and Sensor group has a well-established national and international reputation in the field of thin organic films, nanostructures, chemical and biosensors.

The MMVL group cooperates with the Cultural, Communication, and Computing Research Institute (C3RI) at Sheffield Hallam University. The work at the C3I involves the Art and Design Research Centre as well as the Communication and Computing Research. It is one of Britain's leading centres for research in the creative disciplines of Fine Art, Design and Media Production. The cooperation concerns direct human robot interaction.



Our research interests are in:

- swarm robotics technology applied on real robots;
- computer vision methods from various types of sensors for SLAM;
- chemical sensors and olfactory based navigation;
- direct (on the field) human robot interfaces in particular with groups of robots



- robot application in Search and Rescue

