

## Mobile intelligent autonomous systems

### Distinguished scientist from India to share knowledge with CSIR

An esteemed scientist from India, Dr Jitendra Raol, will spend the next 14 months at the CSIR, specifically in the mobile intelligence autonomous systems (MIAS) emerging research area, to share his expertise and give guidance to this relatively newly-formed group. He specialises in parameter estimation, multi-sensor data fusion and neural networks, which form an integral part of robotics. He first visited the CSIR in September 2007, when he gave numerous presentations.



Dr Jithendra Raol

Raol worked for India's CSIR for 20 years and has presented talks worldwide. He explains that these autonomous systems are not only 'robots' as most would assume. He says this technology can be applied in various areas such as in mining where such a system could be used to reach areas that are hazardous to humans. He envisages more utilisation of this specialised technology in the next few years and says people should not be concerned that robots would take over their jobs - he says these systems are meant to help humans and not replace them.

The CSIR plans to address the challenges associated with intelligent mobile autonomous mapping of dynamic and unstructured environments through focused scientific research in the domains of intelligent autonomous localisation and dynamic scene understanding for path planning and navigation. Applications of robotics include autonomous search and rescue; earth observation and exploration; improved road safety and traffic management through autonomous/semi-autonomous public and private vehicle systems; and precision surgery.