Institute for Intelligent Systems Research and Innovation (IISRI)

Deakin University, Australia

Institute for Intelligent Systems Research and Innovation (IISRI), Deakin University is one of the top Australian research institutes in the areas of robotics, haptics, and human machine interfaces, as well as complex process modelling, simulation, visualisation, and optimisation. Formerly known as the Centre for Intelligent Systems Research (CISR), IISRI is home to over 60 researchers at the postdoctoral and postgraduate levels. Contributing to intelligent systems technologies through research and development (R&D) of advanced and smart hardware and software solutions, we pride ourselves on solving real-world complex problems involving uncertainty, variability and change, and delivering tangible benefits to our partners from industries, government agencies, and communities.

Using a systems engineering-based approach, IISRI provides R&D solutions that supports decision makers and operators through systems mapping, increased autonomy of intelligent data analytics, system modelling, analysis, control, and human machine interfaces. In addition, 3D visualisation is widely employed for knowledge elicitation, stakeholder engagement and effective communication of our solutions.

Our major industry and government research partners include Boeing, ABB, GM, Ford, AutoCRC, CAST CRC, Vestas, YTek, Air Radiators, BHP Billiton Mitsubishi Alliance, Australian Department of Defence, Department of Transport, Defence Science and Technology Group, and Victorian Police. With funding from the Australian Research Council, Australian Department of Defence, and numerous industry partners, IISRI has five research laboratories with state-of-the-art equipment, including a universal motion simulator, haptics devices, mobile and industrial robots, thermal and optical imaging systems, rapid prototyping machines, super computers and suites of process modelling and simulation software. For further information, please visit http://www.deakin.edu.au/research/iisri

The Universal Motion Simulator (UMS) with haptically-enabled technologies of IISRI