

'Home & Work' Digital Health Research

Led By:

- Prof Manzur Murshed

School of Science, Engineering and Information Technology

Who we are:

We are one of Australia's leading research groups in **information and communication technology** (ICT), investigating underlying theoretical problems, developing cutting-edge techniques and technologies, providing high-quality research training, engaging with the industries and government agencies on translational research, partnering with overseas research centres, contributing to the national science & innovation agenda, and ultimately, contributing to developing a better Australia.

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How we are organised:

A critical mass of ICT researchers from two nationally acclaimed research centres:

MCCAIR

Centre for Multimedia Computing, Communications, and Artificial Intelligence Research

ERA 2015 Rating

**** (0801 – Artificial Intelligence & Image Processing)

CIAO

Centre for Informatics and Applied Optimisation

ERA 2015 Rating

*** (0101 – Pure Mathematics)

*** (0102 – Applied Mathematics)

**** (0801 – Artificial Intelligence & Image Processing)

Ongoing research themes

1. Audiovisual information analytics for healthcare
2. Health informatics and decision support systems with Big Data analytics
3. Security and privacy in health data networks
4. Wearable sensor networks for healthcare



Alignment of our skill-set/motivations with digitally informed healthcare:

- Video analytics
 - Intelligent video surveillance
 - Deep learning
 - Big Data
 - Outlier detection
 - Reinforcement learning
 - Decision support systems
 - Bioinformatics
 - Sensor networks
 - Internet of Things
 - Wearable computing
 - Data security & privacy
 - Cyber security
 - Cloud computing
 - Information forensics
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Our Researchers:

We are a group of 13 academics (and 20+ PhD students), representing the disciplines of *multimedia signal processing, machine learning, and distributed computing.*

Prof Manzur Murshed ♦ Prof Guojun Lu ♦
Prof Joarder Kamruzzaman ♦ Prof Kai
Ming Ting ♦ Prof Iqbal Gondal ♦ A/Prof
Shyh Wei Teng ♦ A/Prof Peter Vamplew ♦
A/Prof Madhu Chetty ♦ Dr Gour Karmakar
♦ Dr Alireza Jolfaei ♦ Dr Adrian Shatte ♦
Dr Jiangang Ma ♦ Dr Muhammad Usman

Key Industry Partnerships*:



*(list not exhaustive)



Significant Relevant Projects

1. Video coding and analysis – ARC DP19, DP13, DP10
2. Image & audio processing and analysis – ARC DECRA12, DP13, LIEF18
3. Remote GP training with privacy preserving video conferencing – AGPT EIP11
4. Decision support system for mental health care – ARC LP11
5. Mass-based anomaly detection – US Air Force (2012 – 2018)

Research grant funding (2013 – 2014)

Category 1: \$2.5m

Categories 2–4: \$5.6m

Contact us

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