Automated Construction Engineering

Led by Dr Johnson Shen, the Autonomy and Intelligence in Construction laboratory (AICON) has research interests in Autonomous Systems, Construction automation and robotics, Artificial Intelligence, Digital Twins, Smart Sensing, Internet of Things, Mixed Reality, and their applications in the preparation, construction, operation, and maintenance of civil infrastructure and the built environment.

Competitive advantage

Long history of working successfully with industry partners

Impact

We can support SME and large corporate businesses to develop innovative technologies

Successful applications

AICON research projects have included:

- Real-Time 3D Light Detection and Ranging (LiDAR) Mapping with Unmanned Aerial Vehicles (UAV) or Drones
- AI-enabled Automated As-built Building Information Modelling (BIM)
- Field Emissions and Fuel Consumption Modelling of Construction Equipment
- Automated Machine Control and Guidance in Construction
- Tunnel Boring Machine Tunnelling Methods and Trenchless Techniques for Urban Underground Infrastructure Construction

Capabilities and facilities

Dr Shen represents Australia on the Board of Directors of the prestigious International Association for Automation and Robotics in Construction (IAARC).

Our partners

- Linke & Linke Surveys
- Projectvision
- Smart Welding Solutions t/a Cortex Business

More Information

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