



Autonomous Field Vehicles

Persistent autonomous operation of commercial-grade field vehicles such as agricultural tractors, bulldozers and other mining vehicles, military vehicles and civil construction vehicles.

Competitive advantage

- Patented autonomous vehicle systems technology, which allows vehicles to operate without drivers, increasing productivity and reducing operational costs
- The technology is fully tested and commercial ready
- The machines are highly intelligent and backed by sophisticated multi-sensor data fusion, advanced image processing, and complex non-linear vehicle guidance algorithms

Impact

- Lower cost transport, agricultural and mining operations
- Vehicle operations in high risk environments. e.g IED countermeasures

Successful applications

- Developed and built high precision autonomously-guided construction machinery for Makinex
- Converted Komatsu D65-EX bulldozer to a full autonomous bulldozer in partnership with Komatsu
- Completely developed and patented a sophisticated high-precision broad acre planter for Grains Research and Development Corporation (GRDC)

Capabilities and facilities

- Multi-sensor ground-based and airborne precision 3D terrain mapping systems
- Advanced image processing algorithms for image enhancement
- Advanced and robust vehicle guidance algorithms for all types of drive and steer systems
- Sophisticated data compression

More Information

Associate Professor Jay Katupitiya

School of Mechanical and
Manufacturing Engineering

T: +61 (0) 2 9385 4096
E: j.katupitiya@unsw.edu.au

UNSW Knowledge Exchange

knowledge.exchange@unsw.edu.au

www.capabilities.unsw.edu.au

+61 (2) 9385 5008