



UNSW
SYDNEY



Safety-Critical Electric Drives

Expertise in design and control of novel, power-dense multi-phase electric drives for safety-critical applications, including rail transportation, electric vehicles, marine propulsion drives and aerospace.

Competitive advantage

- Novel five-phase generator technology, using fractional-slot, concentrated-wound electric machines, provides best-in-class power density for permanent magnet machines
- Drives that also incorporate novel multi-phase designs that enhance torque production, smooth ripple-free torque, and provide tolerance to faults

Impact

- More efficient, safer transport solutions

Successful applications

- Open winding multi-phase drive system for fault tolerance

Capabilities and facilities

- Four-quadrant dynamometer
- Bidirectional grid simulators
- High-speed load machines
- Medium-voltage testing

More Information

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