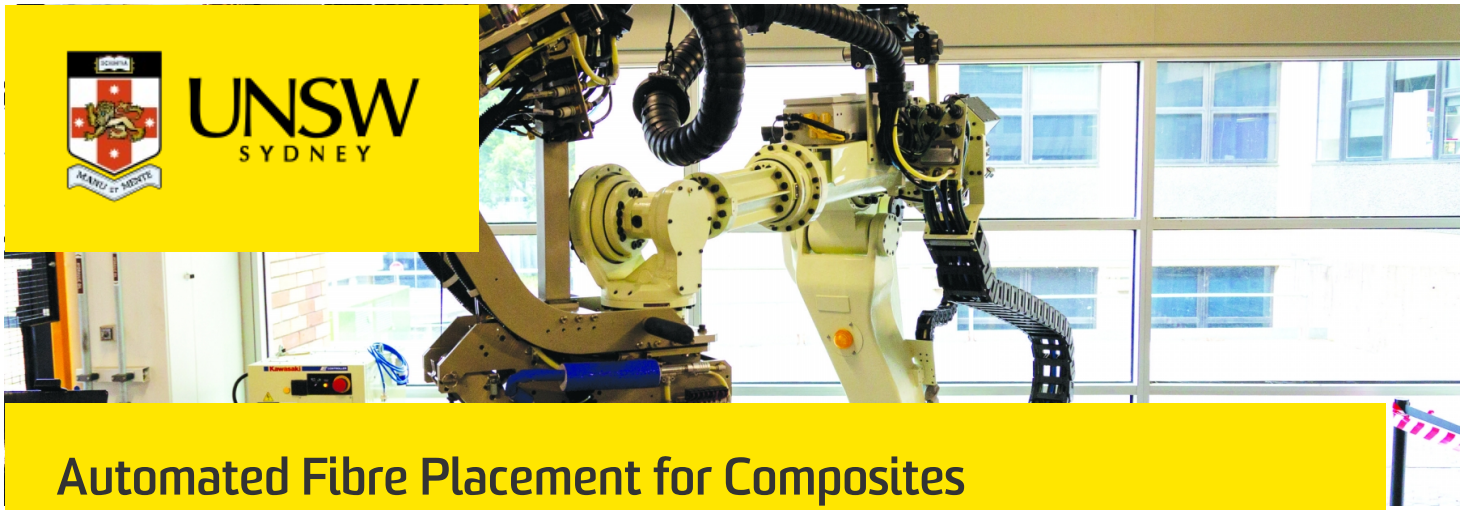

Automated Fibre Placement for Composites

Providing maximum control over fibre trajectories and part geometry; this facility includes a head for laying parallel thermoset prepreg composite tows as well as a specialist thermoplastic composite head for in-situ melding for one-shot part fabrication of bespoke high-performance composites.

Competitive advantage

- AMAC's state of the art manufacturing, testing and analytical facilities provides a comprehensive research and development capability
- The only Automated Fibre Placement facility in the Southern Hemisphere
- In-situ and ex-situ sensing expertise using distributed fibre-optics sensors, fibre Bragg gratings for temperature, strain and acoustic emission
- Testing capabilities from coupon level to large structures at various loading and temperature conditions

Impact

- Ability to undertake complex shape manufacture using AFP techniques
- Manufacturing of metal-composite hybrids
- Impact and damage assessments of composites using smart materials and sensors to inform and enhance future designs

Successful applications

- Shape-adaptive composite hydrofoil, Defence Science and Technology (DST)
- Retrofittable composite solutions for helicopter crashworthiness, DST
- Robust design of composite cylinders for space applications

Capabilities and facilities

- State-of-the-art impact testing
- Robotic fabrication facilities

More Information

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