Australian Composites Manufacturing CRC

PROJECT FACTSHEET

PROJECT HPN001

Scientific and technical barriers for robotics and automation in composite manufacturing

Project Overview

When it comes to process automation in composite manufacturing, limitations of current processes and technologies are preventing the development of industrial systems.

This project is undertaking a review to identify the highest value opportunities for such process automation, with the aim of creating research programs to identify and implement the best, 'state of the art' automation initiatives.

The team, together with The Australian Centre for Field Robotics (ACFR), will initially seek to determine manufacturing pain points that are universal or common, irrespective of industry application or market segment.

Identifying the production variables that are of most concern from a cost and value perspective will enable them to provide a comprehensive evaluation of the process and best practice, and provide costed research and develop roadmaps for each.

The process will involve technology mapping of commercially available solutions, market analysis of automation in composite productions, and a thorough scientific literature review – in a global context – to better understand the limitations of current technologies.

Analysis will include estimates on current costs of operational issues to production – something not currently well documented.

Comparison of identified opportunities with global composite manufacturing processes will then be made to determine the value of any novel technical solutions to international markets.

This project is supported by the Australian Government Department of Industry, Science and Resources through the Cooperative Research Centres Program.

> Addressing these high value, common interest problems will lower the barrier to entry for smaller partners to invest, while simultaneously enabling them to develop a considerable competitive advantage with their international peers.
>
> **Dr Steve Gower**
> **CEO, ACM CRC**

ACM CRC Research Programs:

- RP2: Manufacturing Processes
- RP3: Simulation and Performance Prediction
- RP4: Design and Integration

Project Partners:

- The University of Sydney
- HERA
- ACS-A
- LaserBond
- Rux Energy

Project Leader:

- Professor Ian Machester, The University of Sydney

Year commenced:

- 2024

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Cooperative Research Centres Program