

# AEROSPACE MANUFACTURING CAPABILITIES STATEMENT

**EXPERTISE:** The Aerospace Manufacturing thematic group contains a diverse range of academics and researchers looking at advanced, composites & additive manufacturing, metrology and operations management and information systems.

Specific areas of expertise lie within and across the following themes:

Additive Manufacturing	Composites Manufacturing	Metrology	Advanced Manufacturing	Operations Management & Information Systems
Tool-free manufacturing techniques	Improved structural performance	Digital technology	Materials characterisation	Supply chain management
Single materials	Automation of manufacturing	Cost effective production	Smart solutions for wing assembly	Digitalisation
Multiple materials	Reduced cycle time	Robust quality control solutions	Robotic repair solutions	Traceability and compliance
3D printing	Liquid moulding technologies	AI and quantum technology integration	AI driven thermal barrier coatings	Quality management

**PEOPLE:** Over **200 academics and researchers** work within and across this diverse range of research themes to deliver novel, cross-disciplinary, integrated research projects to both industry and research funders.

Advanced Manufacturing Technology Research Group	Composites Manufacturing	Materials Characterisation and Process Modelling Manufacturing
Advanced Materials Research Group	Operations Management & Information Systems	Nottingham University Business School

**RESEARCH FACILITIES:** Across our research entities, we can provide access to:

Midlands Centre for Data Driven Metrology	Centre for Aerospace Manufacturing	Extensive range of Additive Manufacturing machines	Precision Manufacturing Centre
Machining & Condition Monitoring Research Group	Advanced machining technologies	Machine vision cameras for Photogrammetry system	Composite manufacturing lab & testing suite
Scanning Electron Microscope (SEM) for material characterisation	Spatially resolved acoustic spectroscopy	2KW multimode fibre laser & 1KW single mode fibre laser	In-house Fringe Projection systems

**TRACK RECORD:** Our specialist teams at UoN work in partnership with a range of major companies and SMEs. We have an extensive track record in securing key UK, EU and industry funding.



A CNC milling machine for precision manufacturing



An evolvable assembly system for digital manufacturing



University of  
Nottingham



Institute  
for Aerospace  
Technology