

Advanced Manufacturing Technology Centre



The Centre carries out internationally leading research in Advanced Manufacture, focusing on High Value Manufacturing and the associated knowledge-based technologies – laser processing, intelligent robotics, micro engineering, nanotechnology, non-conventional machining, etc.

It builds upon the School's long tradition of excellence in manufacturing engineering and:

the renewed recognition of high-value, high-technology manufacture as a critical national and international agenda;

- the University of Birmingham's strategic position as a key academic partner in the **Manufacturing Technology Centre (<http://www.the-mtc.org/>)** (MTC) in its role as a **Catapult Centre (<https://www.innovateuk.org/-/catapult-centres/>)**;
- the University's Strategic investment in Advanced Manufacturing to ensure critical mass of staff and revitalise the physical environment of the Centre.

In this context, we conduct industry-facing basic and applied research centred on the following main themes:

- **[Advanced Machining](/research/activity/mechanical-engineering/advanced-manufacturing/advanced-machining.aspx)** (</research/activity/mechanical-engineering/advanced-manufacturing/advanced-machining.aspx>)
- **[Automation and Intelligent Manufacturing](/research/activity/mechanical-engineering/advanced-manufacturing/automation-intelligent-manufacturing/index.aspx)** (</research/activity/mechanical-engineering/advanced-manufacturing/automation-intelligent-manufacturing/index.aspx>)
- **[Laser processing](/research/activity/mechanical-engineering/advanced-manufacturing/laser-processing.aspx)** (</research/activity/mechanical-engineering/advanced-manufacturing/laser-processing.aspx>)
- **[Micro Manufacturing](/research/activity/mechanical-engineering/advanced-manufacturing/micro-manufacturing.aspx)** (</research/activity/mechanical-engineering/advanced-manufacturing/micro-manufacturing.aspx>)
- **[Computer Aided Engineering](/research/activity/mechanical-engineering/advanced-manufacturing/computer-aided-engineering.aspx)** (</research/activity/mechanical-engineering/advanced-manufacturing/computer-aided-engineering.aspx>)

To carry out this research the Centre benefits from well-equipped laboratories particularly in material removal processes, laser micro processing, robotics and surface metrology that are complemented by the additive manufacturing and characterization equipment of **Metallurgy and Materials** (<http://www.birmingham.ac.uk/research/activity/irc-materials-processing/themes/AMPLab/AMPLab-Facilities.aspx>) and **Chemical Engineering** (http://www2.warwick.ac.uk/fac/cross_fac/sciencecity/programmes/advanced-materials/advanced_equipment_web.pdf) Schools and the new **MTC** (<http://www.the-mtc.org/about-us>) facilities.