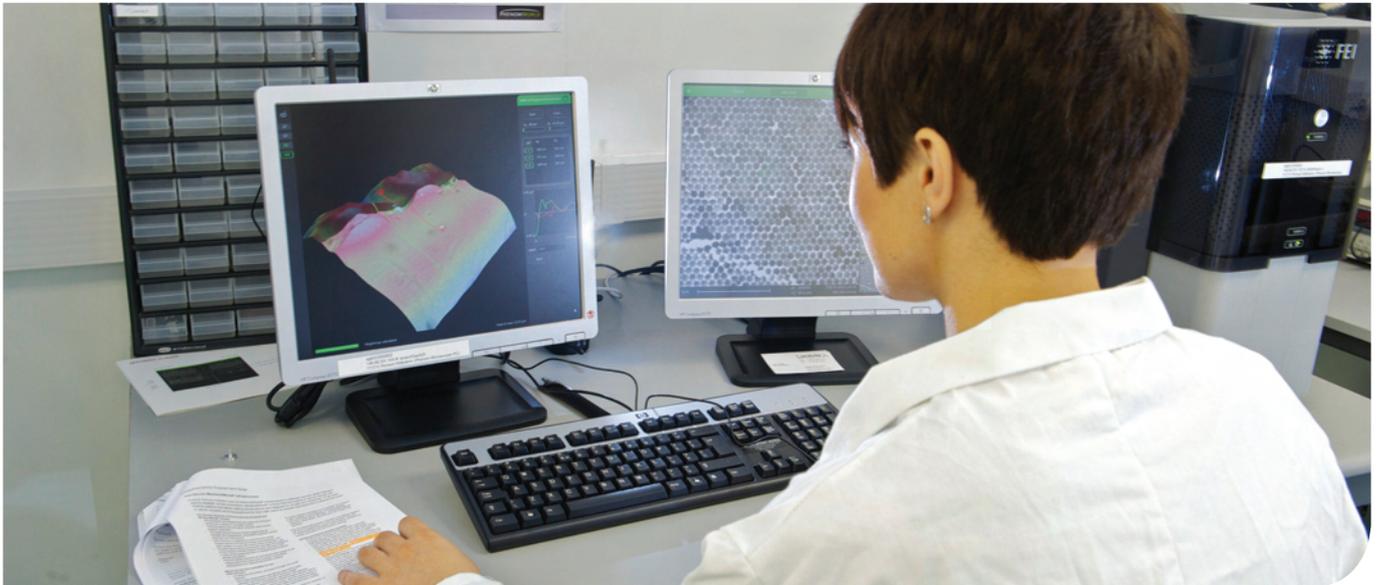




# Advanced Manufacturing



*We work across a wide variety of sectors to realise the benefits that can come from understanding and implementing advanced manufacturing techniques. We have a grounded experience over the past eleven years in actively engaging with companies of all sizes, helping to inspire technological innovation and functional product development.*

## Access Expertise

- High power microwave engineering
- Micro and nano systems
- Nuclear and renewable energy
- Radiometrics and special instruments
- Rapid prototyping and rapid manufacturing
- Structures, design and manufacturing

## Forming Partnerships

Organisations can access our expertise through five types of collaborative partnership:

- Collaborative research
- Commercialisation of intellectual property
- Professional training
- Student engagement
- Facilities for research and development

## Benefits of Collaboration

- Access unique knowledge and technologies
- Access computer-aided engineering and analysis software, used from concept product development through to full manufacturing lifecycle management
- Access our additive manufacturing facility, accessible as a technology demonstrator, learning resource and operational prototyping and manufacturing facility
- Access a range of options for engaging student resource
- Tap into our global network

"If not for the university the project's progress could have been delayed for a number of months. Once introduced, the potential benefits of both products will be significant because of the patent protection and patient increased safety; there is nothing similar on the market. It will help increase turnover and win us new business."

James Lyon, Managing Director,  
AmDel Medical Limited.



Chris Lambert, Project Manager

### Working in Partnership

Our collaborators range from Northwest small and medium enterprises and global organisations such as QinetiQ, National Nuclear Laboratory, The Linde Group (formerly BOC Plc), Sellafield Nuclear Power Station, Bloodhound Supersonic Car Programme, BAE Systems, Yorkshire Water, United Utilities and the Department for Transport.

We have successfully secured and delivered several multi-million pound projects, the latest being Support for Design and Rapid Manufacturing, a £2m business support programme for Northwest-based small and medium enterprises, part-financed by the European Regional Development Fund. Between 2009-2013 we provided bespoke design and additive manufacturing technology expertise for 156 companies, creating over 45 new jobs and safeguarding over 100 new jobs.

We work as part of a wider multidisciplinary team across Science and Technology at Lancaster. Our colleagues have expertise in chemistry, the demand and supply of energy, environmental sciences, health and human development, information and communication technologies, mathematics and statistics, quantum technology, and security and protection sciences.

### Partnership Examples

- Microfluidic/biofluidic devices, electronics design for test, reliability and health monitoring
- Voice recognition for speech therapy
- Nuclear medicine-radiation detection
- Rapid prototyping and rapid manufacturing for a wide range of industrial applications, e.g. aerospace and automotive components, packaging, medical devices, surgical guides, personal protective equipment, and consumer products

### Developing New Medical Devices

Two MEng project teams provided advanced manufacturing expertise for AmDel Medical Limited to optimise an optical speculum (a device to aid injections in the eye) and an arterial connector ready for full manufacturing. 30 optical speculum rapid prototypes were produced for final clinical assessment, and the arterial connector was granted its European Patent and is under construction ready for launch.

### Route to Access

"We have an experienced advanced manufacturing team that provides the interface between our researchers and industry. We have a broad knowledge base and many routes to collaboration, helping each business find the specific solutions they need.

"We are keen to understand how your needs may be met by our resources available. These include not only physical resources of our extensive facilities but the use of our expertise through collaborative research, student engagement and the commercialisation of intellectual property, to address problems and exploit opportunities.

"As part of a wide multidisciplinary team, we can also draw on additional support from across Lancaster University and beyond. Please contact me for more information."

**Chris Lambert**  
Project Manager

### For further information contact:

Chris Lambert, Project Manager  
Engineering Building, Lancaster University, Lancaster, LA1 4YR  
Tel: +44 (0)1524 594298 Email: c.g.lambert@lancaster.ac.uk

Science and Technology  
[www.lancs.ac.uk/sci-tech/enterprise](http://www.lancs.ac.uk/sci-tech/enterprise)