

# Our team

The number of dedicated centre staff has grown to 36. In addition to the Centre Director Professor Tat-Hean Gan and the Head of the Centre Jamil Kanfoud, the staff comprise of three team leaders, 15 research fellows and assistants supported by PhD students, project technical assistants and business support staff.

Research staff is organized in three teams:

- Monitoring of Critical Assets (MCA)
- Smart nondestructive testing (Smart NDT)
- Power Ultrasonic (PUT)



**UltraMAT – Power ultrasound as a generic tool for micro/nanoscale processing of metals**

[www.ultrammat.co.uk](http://www.ultrammat.co.uk)



[www.brunel.ac.uk/bic](http://www.brunel.ac.uk/bic)

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**Innovate UK**

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# Who we are

Brunel Innovation Center (BIC) is part of the Institute of Materials and Manufacturing of Brunel University.

BIC was founded in 2009 in collaboration between Brunel University London and TWI, and is based in Granta Park, Cambridge.

The research carried out at BIC is predominantly in the field of NDT, CM, SHM, Power Ultrasonic and related areas, including:

- SHM / CM (Acoustic emission & ultrasonic guided waves)
- Ultrasonic Cleaning / De-icing / Material Processing
- Smart NDT (automation, wireless, IMUs)
- Sensors and transducers (aggressive environments; high temperature)
- Signal / Image Processing/Machine learning
- Systems (hardware-software) integration

## Our mission

To establish a world class research centre offering high quality research in an innovative environment, with the focus on non-destructive testing, condition and structural health monitoring, power ultrasonic and allied technologies covering a range of materials, sensors, electronics and software systems.

BIC Benefits of the access to the latest technologies at TWI's state-of-the-art facilities, close industrial collaborations with an academic dimension, research and development for advanced process and product development, achieving excellence in science, plus continuous professional development for staff and students.. BIC has built an outstanding portfolio of projects in line with its multinational interdisciplinary vision.

# Our technologies

- Power ultrasonic systems for inspection, cleaning and material processing
- Smart Non-Destructive Testing
- Condition and Structural Health Monitoring
- Advanced signal and image processing algorithms
- Numerical modelling and fluid structure interaction
- Novel and robust sensing for harsh environment (eg high temperature transducers up to 600°C)
- Machine learning and data analytics for process and asset monitoring
- IoT sensing
- Computer Vision
- Digital Twin technology

