

Fully funded PhD studentship - Acoustic and Elastic Wave Modelling

Department of Mechanical Engineering
The University of Sheffield, United Kingdom



The
University
Of
Sheffield.

Title: Sensors for Wave scattering

A four year fully-funded PhD post is available to work on the physics and mathematics of waves (sound or light) in powders under the supervision of [Dr Art Gower](#) (<https://arturgower.github.io/>).

Background: Early Mesopotamian people discovered that a mixture of mud and straw creates strong durable buildings, what we call today a composite material. Today these materials have enabled amazing advances in areas including: aerospace, automobile, food science, communications technology, biotechnology.

This position focuses on mathematical models of waves (like sound, radio, light, and vibrations) interacting with complex materials like powders. The aim is to develop new ways to sense and measure powders. The candidate will work closely with the acoustics team in Johnson & Matthey, a British multinational who develops sustainable technologies and produce a wide range of powder products. During the PhD you will develop your skills in physics, mathematics, machine learning, and programming, while making a real impact.

Location: You will join [the Dynamics group](#) at the University of Sheffield, and have support from [the UK acoustic network](#) (acoustics.ac.uk). The [University of Sheffield](#) is part of the prestigious Russell Group universities, while the department of Mechanical Engineering ranks [among the top in the UK](#), and has the largest [research income](#) in the UK.

Nationality: The studentship is available for a student from the United Kingdom or from the European Union with 3 years residency in the UK.

Education: A good degree or Masters in Applied Mathematics, Physics, Mechanical, Aeronautical, Civil, or other engineering.

Desirable skills

- Mathematical modelling. Familiarity with wave propagation or scattering
- Numerical methods and Good programming skills in any language

Other skills: Self-motivated, a passion for the subject, and excellent communication skills

Deadline: as soon as possible or until position is filled

Start: 2021 with a flexible start date

Apply: please send a letter expressing your interest, and a copy of your CV with the contacts of two academic referees as a single pdf file to: Artur Gower <a.l.gower@sheffield.ac.uk>. Please feel free to also email Artur informally before applying.