

La Universidad de Exeter del Reino Unido ha sido premiada con un centro de doctorado específico en Metamateriales. Van a incorporar 18 estudiantes con financiación completa por año, incluyendo plazas específicas para estudiantes no ingleses.

Podéis ver las áreas de investigación y las direcciones de contacto :

The University of Exeter invites applications for 4-year fully-funded PhD studentships as part of its EPSRC Centre for Doctoral Training in Metamaterials. This new centre-of-excellence ,“XM2”, will act as a hub of international and industrial collaborations, training scientists and engineers with the relevant skills, knowledge and professional attributes to transform the exploitation of metamaterials across industry and academia.

We invite applications from independently-minded undergraduates that have demonstrated excellence at the undergraduate level in a relevant subject. Applicants should have an interest in electromagnetics, acoustics, nanotechnology and/or materials science, and are expected to demonstrate creativity and be open-minded to collaborative work and innovation.

Full scholarships (up to 18 per year), including a stipend to cover living expenses and fees, are available to UK students at standard EPSRC rates. A small number of these may also be available to EU and International students. Industry-orientated studentships may also include a top-up to the stipend.

Further information can be obtained by e-mail to metamaterials@exeter.ac.uk or by visiting our website, www.exeter.ac.uk/metamaterials

Metamaterials have properties beyond those found in nature, and have found application across the electromagnetic and acoustic domains. We will run projects ranging from fundamental explorations of physics through to device design. Our students will research a wide range of metastructures spanning 10 orders of scale, from quantum considerations on the atomic scale through to plasmonics and biomimetics and the manufacture of novel composites at the nano-scale. From the control of electron spin (spintronics) and magnonics, to the centimetre and millimetre scale in both acoustics and the RF and microwave regimes.

XM2 is interdisciplinary in nature, with projects taking place across Physics and Engineering.

Our core themes are

Plasmonics and graphene photonics including localisation of light at the nanoscale, graphene-based detectors and sources and energy harvesting.

Natural photonics including the exploration of metastructures and the biomimetics of natural structures.

THz and Microwave metamaterials including tuneable structures, imaging, surface waves, absorbers, energy harvesters and antennas

Magnonics and magnetic metamaterials including spintronics and magnetodynamics

Acoustic metamaterials including airborne and SONAR, metasurfaces, composite materials and absorbers.

Spatial transformations including the application of theory to electromagnetic and acoustic problems.

Nanomaterials and nanocomposites including carbon-based structures and nanocellulose.

The first year of the studentship includes a mini-project, and a substantial programme of training. Students will choose from a wide range of taught modules, and participate in academic and personal development skills-based workshops, together with creativity events and conference-style meetings. Students will also be expected to disseminate their results to the international community via high-impact publications and international conferences. They will spend time working with our partners at international universities, research institutes, and industry.

The University of Exeter is a top 10 UK university, and a member of the elite Russell Group of institutions. The University has committed itself to a substantial expansion in its science base and within Physics and Engineering, £10m has been spent on infrastructure since 2008 and the fields of electromagnetic materials, nanomaterials and graphene have seen 20 new academic staff appointed