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Interdisciplinary Seminar

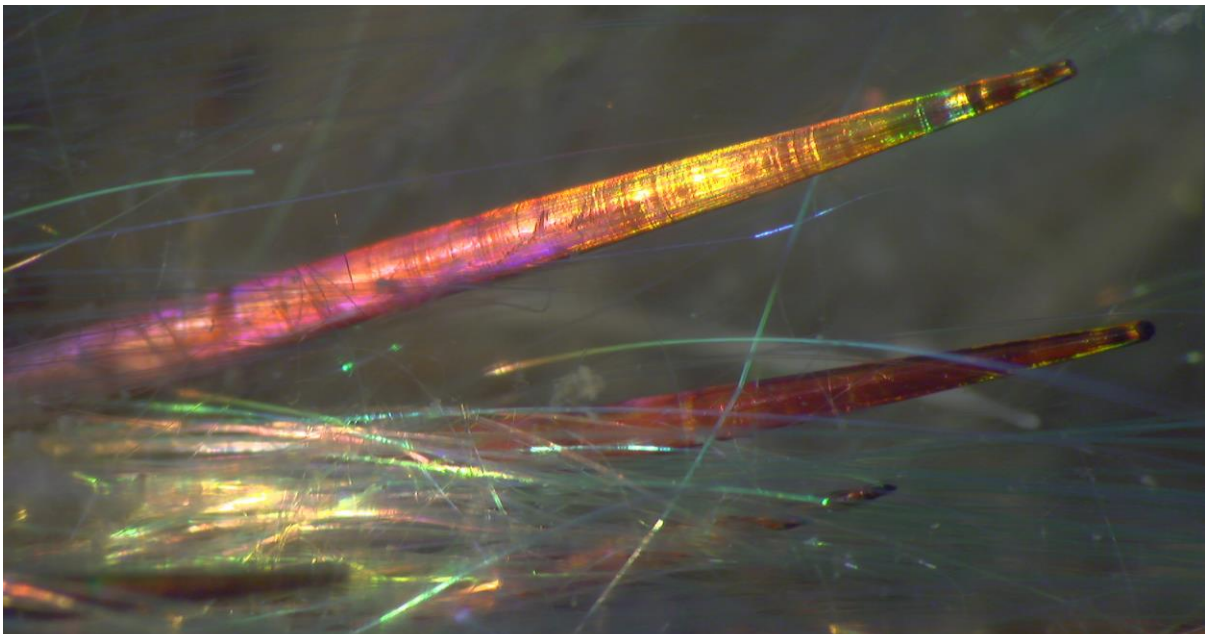
Thursday, 14th of November, 16:10

Prof. Ross McPhedran FAA, FAIP, FOSA

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Currently Marie Curie Senior Fellow at University of Liverpool

Ruling the Waves: from Photonic Crystals to Metamaterials



In this talk I will survey some of the highlights of research in two breakthrough areas of wave science: bandgap systems and metamaterials. Both have provided new ways of thinking about the control of waves, and have opened up many possibilities for wideranging applications. Photonic bandgaps have been exploited by Nature for hundreds of millions of years, as we now recognize: the above image of the photonic display from the Sea Mouse is one striking example of this.

One exciting aspect of metamaterials which has captured public attention is the possibility of cloaking: hiding objects from detection by electromagnetic waves (or indeed many other types of waves). In the context of Young's classical double slit experiment, results will be shown which hint at the possibility that cloaking may even impact on fundamental ideas in quantum mechanics.

***Location: Lecture Theatre 320, Physical Sciences Building,
Penglais Campus, Aberystwyth University
Followed by reception. All invited and encouraged to attend!***