Patrick Mc Garry

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Dr Patrick McGarry's research focuses primarily on computational and experimental mechanics. He has published over 70 journal papers and over 100 conference abstracts/proceedings in the areas of plasticity, composite structures, fracture mechanics, cell mechanics, tissue mechanics, and medical device design. He joined the College of Engineering and Informatics the National University of Ireland Galway (NUIG) as faculty in 2006. He holds a Visiting Professor appointment at the Technical University of Graz, Austria, and he is a J. Tinsley Oden Faculty Fellow at the Institute for Computational Engineering Science at the University of Texas at Austin. His research group has produced 12 PhD graduates and has been awarded five major international research prizes and eight national research prizes. In 2015 Dr McGarry was awarded the NUIG President's Award for Research Excellence. He has been awarded four major research grants by Science Foundation Ireland. He is the Programme Director for the BE Degree in Biomedical Engineering at NUIG. Dr McGarry previously worked as a post-doctoral researcher at the University of California Santa Barbara, and at the National Centre for Biomedical Engineering Science (NUIG).

Research Interests: Computational and experimental biomechanics; Active mechanical behaviour of biological cells; Mechanics of soft tissue; Bone biomechanics; Fracture mechanics; Plasticity; Composite materials; Medical device design; Tidal turbine design; Finite element methods.

Active modelling of in-vitro behaviour of cell biomechanics; computational modelling of stent deployment, fatigue and coating delamination; wear of automotive surface coatings; mechanical modelling of spinal motion and vertebral stresses

Teaching: Biomechanics (BME400); Advanced Computational Biomechanics (BME5100); Engineering Computing (CT1110).