**Lecture Information**

**Lecturer:**
Alexandra Carvalho is a Senior Research Fellow at the National University of Singapore, where her work covers the theoretical modeling of 2D materials, their defects and heterostructures using density functional theory.
She carried out her PhD studies at the University of Exeter, United Kingdom, followed by a Post-doctoral position at the Ecole Polytechnique Federale de Lausanne, Switzerland. She was Marie Curie Fellow in 2011.

**Topic:**
Elastic response of solids

**Contents:**
- Examples of applications of elasticity theory in 3 dimensions
- Concepts of strain and stress
- Stiffness and compliance tensors
- Symmetry properties of 4th rank tensors