

**Cambridge Physics Centre presents:**

# **Physics of Emergence in Biological Sciences and Technology**

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University of Cambridge**

**A vertical pencil is unstable, it will fall over in a random direction, an example of symmetry breaking. Mechanical instabilities like these shape natural objects such as leaves, flowers, finger prints, guts or brains. Controlling these instabilities offers new ways to design innovative materials and simpler manufacturing processes.**

**These simple rules sometimes lead to complex and rich behaviours; this is emergence. It is illustrated in the collective movements of animals, such as flocks of birds, or schools of fish. These ideas have unexpected applications in understanding animal development and cancer.**

**6pm on Thursday 21st November 2019**

**Pippard Lecture Theatre, Cavendish Laboratory,**

**J J Thomson Avenue, Cambridge**

**Directions at**

**<http://outreach.phy.cam.ac.uk/programme/cpc/cpcdirections>**

**No need to book, just turn up**

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