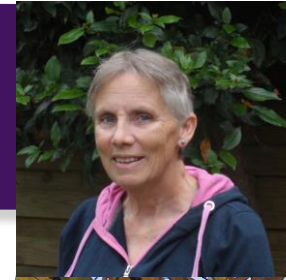


Julia M Yeomans (The Rudolf Peierls Centre for
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School of
PHYSICS

‘Active Matter: Evading the Decay to Equilibrium’

Monday 22nd May, 3pm, Berry Lecture Theatre

Active materials such as bacteria, molecular motors and self-propelled colloids are Nature’s engines. They extract energy from their surroundings at a single particle level and use this to do work. Active matter is becoming an increasingly popular area of research because it provides a testing ground for the ideas of non-equilibrium statistical physics, because of its relevance to the collective behaviour of living creatures, from cells to starlings, and because of its potential in designing nanomachines. Dense active matter shows mesoscale turbulence, the emergence of chaotic flow structures characterised by high vorticity and self-propelled topological defects. I will discuss the physics of defects in active materials and describe examples where the concepts of active matter are being used to describe cell motility and morphogenesis.

The Colloquium will be followed by tea and coffee in the staff common room. For further details please contact phys-exec-office@bristol.ac.uk

Physics Colloquium
Spring/ Summer Term 2023

