



PHYSICS COLLOQUIUM: Self-propelled Topological Defects

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Date:

9/11/2020

Time:

10:30 AM-11:50 AM

Link:

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for Zoom link and passcode

About The Speaker:

Julia Yeomans is Professor of Physics at the University of Oxford and Pauline Chan Fellow at St Hilda's College. She applies techniques from theoretical and computational physics to problems in soft condensed matter and biophysics. Among her current research interests are active matter, mechanobiology and low Reynolds number hydrodynamics. Julia was elected Fellow of the Royal Society in 2013. She has 4 daughters and enjoys hiking and camping (especially in California).

Abstract:

Active materials such as bacteria, molecular motors and eukaryotic cells continuously transform chemical energy taken from their surroundings to mechanical work. Dense active matter shows mesoscale turbulence, the emergence of chaotic flow structures characterised by high vorticity and self-propelled topological defects. I shall describe the physics of active defects, discussing the formation of defect lattices and examples of topological defects in biological systems.