

ESPCI

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Séminaire PMMH

Bureau d'Études, Bâtiment L, 2 ème étage Vendredi 20 octobre 2017, 11h00-12h00

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Complexity and decay - towards a science of self disassembly

Soft matter physics has been obsessed with 'self assembly' for some time - the ability of Brownian or, more recently, 'active matter' systems to generate (sometimes useful!) patterns 'on their own accord'. The original impulse for this was biological, the term 'self assembly' being first used in a famous 1962 paper on viral capsid construction by Caspar and Klug. Biological cells are clearly self assembled. However, they also have the amazing ability to 'self disassemble' - a high-evolved energy-expending process called apoptosis (or programmed cell death). Strangely, the physics of disassembly has never yet been thought about, either theoretically or experimentally. In this talk, I will seek to imagine what such a physics may look like, and explain why I think it is important to do so.