



Mercredi 10 juin 2009 à 10h30
INSTITUT DE MECANIQUE DES FLUIDES - Amphi Nougaro
allée du Professeur Camille Soula, Toulouse

Spatially Localized Structures

Edgar Knobloch
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Résumé :

Spatially localized structures occur widely across the physical sciences.

Classic examples include localized buckling of slender structures, localized oscillations in vertically vibrated granular media (oscillons) and localized convection in fluid dynamics (convectons). In this talk I will describe the basic mathematics -- and the physics -- behind the formation of these often unexpected structures, with a view to providing a unified picture of their origin and properties.



brève biographie :

Edgar Knobloch was born in Prague in 1953, and received an undergraduate degree in mathematics from the University of Cambridge and a PhD in astronomy from Harvard University. He has been a professor of physics at the University of California at Berkeley since 1978.

He was a J. P. Kennedy Scholar at Harvard (1974-77), a Junior Fellow of the Harvard Society of Fellows (1978-80) and an Alfred P Sloan Research Fellow (1981-84). He received an ScD degree from Cambridge University in 1994, and is a Fellow of the American Physical Society.

His interests include dynamical systems and bifurcation theory, pattern formation, fluid mechanics, as well as astrophysics.