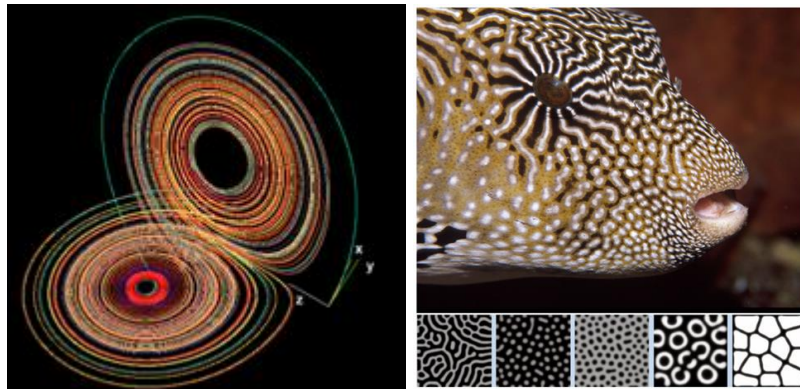


SoSe 2018 | VORLESUNGSANKÜNDIGUNG

COMPUTATIONAL METHODS I: Introduction to Continuum Modelling



ZEIT	Lecture: Wednesday 2. DS (9.20 - 10.50) and Friday 3. DS (11:10 – 12:40) Praktikum: PC-Pool HAL 117, Hallwachsstr. 3, t.b.a.
START	11.04.2018
ORT	HAL115, Seminar room, Hallwachsstr. 3
VORLESENDER	PD Dr. Rafael Gutierrez
ZIELGRUPPE	Students from Materials Science, Ph.D. students, Physics students
SPRACHE	German or English
INHALT	<p>The lecture provides an introduction into continuum models with a focus on analytical methods (stability analysis) to investigate nonlinear ordinary and partial differential equations. The following topics will be treated:</p> <ul style="list-style-type: none"> - Basics of linear stability analysis - Landau's theory of phase transitions - Reaction-Diffusion systems: Turing instabilities and pattern formation - Phase separation: Cahn-Hilliard equation <p>The computer lab will introduce into basic numerical methods to solve RD-systems and the Cahn-Hilliard equation</p>

