

**CENTRE D'ETUDES NUCLÉAIRES DE
BORDEAUX-GRADIGNAN**

Vendredi 20 Mai 2016

à

11H

Un café sera servi à partir de 10h45

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**A bet for ontological pluralism:
arguments from Physics**

Complex dynamical systems are providing a new way of understanding nature. Complexity needs the interplay of different levels in reality and a redefinition of the epistemic approaches in the transition from lower to upper levels. Traditionally, the concept of emergence has tried to bring together the philosophical explanations for the differentiation and crossover between levels. However, it is highly controversial whether emergence is merely epistemic or truly ontic.

In this seminar, I present the philosophical challenges posed by the emergence of complex dynamical systems regarding conventional epistemic reductionism. I make a strong case for ontic emergence focusing in three conundrums of current science which cannot be explained away: the second law of thermodynamics, the measurement paradox in quantum mechanics, and the symbol grounding problem in philosophy of information. I conclude that all of them are interwoven, turn out to be subtly related to human cognitive abilities, and point towards rejection of naturalistic monism.

Salle des Séminaires du CENBG

Le Haut Vigneau - BP 120 - F-33175 Gradignan Cedex