

Università degli Studi Gabriele d'Annunzio Chieti-Pescara



## Doctoral Course in Earth Systems and Built Environments

The following course will be held at the University G.d'Annunzio Chieti-Pescara, Aula Consiglio, Department of Engineering and Geology ,Viale Pindaro 42, Pescara:

### *Handling Uncertainty in Complex Systems*

**Dott.ssa Serena Doria**

Department of Engineering and Geology,  
University G. d'Annunzio

The aim of the course is to introduce some new results to represent and handle uncertainty in complex systems.

#### **Program**

-Complex systems and complex decisions in the real world. Imprecise probability: a tool to represent partial knowledge.

(22 March 2018, 9.30-12.00)

- Iterated functions systems, attractors, fractal sets: mathematical models to represent complex systems.

(28 March 2018, 9.30-12.30)

-A measure of the complexity of a set: the Hausdorff dimension; Hausdorff dimensional outer measures.

(12 April 2018, 9.30-12.30)

- A new model of coherent upper conditional prevision based on Hausdorff outer measures.

(18 April 2018, 9.30-12.30)

- Coherent measures of risk defined by the Choquet integral with respect to Hausdorff outer measures: applications.

(3 May 2018, 9.30-12.30)

Il coordinatore del Dottorato  
Prof.ssa Isabella Raffi