# Complexity in the Oil Industry

## Applications to subsurface modelling

# COI 2007 First call for papers

## NATAL, BRAZIL 5th-9th August 2007

### *Introduction:*

An international meeting to promote collaboration between physical scientists and oil industry engineers working on the modelling of geological reservoirs as complex systems.
The subsurface can be studied with theories and techniques developed in complexity science: the presence of multiple length-scales, the need to preserve heterogeneity while compressing information and the high degree of uncertainty at all stages of modelling and decision making. Results from statistical physics are routinely applied in modelling geological systems, which often present scaling phenomena such as fractal geometry and complex dynamics.

### *Invited speakers:*

Brian Berkowitz, Weizmann Institute, Israel

Alex Hansen, NTNU, Norway

Felix Herrmann, UBC, Canada

Lincoln Paterson, CSIRO, Australia

Mohammad Sahimi, USC, USA

Carlos Tadeu da Costa Fraga , CENPES (Petrobras Research Center)

### *Suggested topics:*

- Percolation theory and fast methods for reservoir performance estimation
- Fractal/multifractal and anomalous transport
- Applications of wavelets to geological modelling and seismic interpretation
- Uncertainty and estimation of risk
- Inverse problems
- Geological process modelling

### *Call for papers and deadlines:*

You are invited to submit a

1 page abstract to
abstracts@coi2007.com

Deadline for abstract submission
23rd February 2007

Accepted papers will be notified by 30th March 2007. Authors of papers not accepted for oral presentation will be offered the opportunity to present a Poster.

Deadline for early registration
1st June 2007

For further information and to register interest in attending contact
vera.pancaldi@imperial.ac.uk or
info@coi2007.com

### *International organising committee:*

Liacir Lucena, UFRN, Brazil; Peter King, Vera Pancaldi, Imperial College London, UK

Venue: Hotel Rifoles http://www.rifoles.com.br/

### *Conference website*

**http://www.coi2007.com/**