

Heat and Fluid Flow Modelling Training School (Devon, May 2017)



A practical introduction to heat and fluid flow modelling – Applications in **Petroleum Systems Analysis**

Introduction to the heat and fluid flow modelling training school

Applications are open to attend the practical introduction to heat and fluid flow modelling training school in May 2017 in Devon, UK.

The main objectives of this training school are to provide the trainees with a good understanding of the fundamental principles used in heat and fluid flow modelling and a capacity to understand basin modelling options and methods. It includes many practical modelling classes and emphasises the use of modelling methods in Petroleum Systems Analysis.

This training school's approach is to create links between science in academic research and in the oil industry and includes lectures on cutting edge science in deepwater and frontier petroleum provinces in both the academia and the industry.

The training school includes four days of lectures, practical classes and workshops and a one-day structural geology field trip led by Prof. Ian Davison (Earthmoves Ltd).

Organisation and teaching

The training school is organised by Integrated Geochemical Interpretation Ltd (IGI Ltd) as part of the EU-FLOWS network (https://www.flows-cost.eu/). The EU-FLOWS project is dedicated to promoting scientific training and networking amongst academia and industry and involves institutions from over sixteen European Union countries.

The course is created and delivered by:

- **Dr Tiago Alves** from the University of Cardiff (UK); •
- Dr. Ewa Burwicz-Galerne from GEOMAR Helmholtz Centre for Ocean Research Kiel (Germany);
- Dr Tiago Cunha from IGI Ltd;
- Dr Marianne Nuzzo from IGI Ltd;
- Prof. Heiner Villinger from the University of Bremen (Germany). •

A major aim of the training school is to encourage scientific exchanges between academia and the oil industry. Lectures on cutting-edge science in the oil industry regarding frontier oil exploration and salt tectonics will be given by:

- **Dr Tiago Alves** (3-D seismic laboratory at the Cardiff University, UK); •
- **Prof. Ian Davison** from Earthmoves Ltd (UK) (<u>http://www.earthmoves.co.uk/</u>);
- Dr Helen Doran from Ophir Energy (UK) (https://www.ophir-energy.com/).

Who can attend and how to apply?







The training school is primarily designed for post-graduate geosciences students with an interest in petroleum geology (specifically PhD. students) but is opened to all geologists, especially early-carer geologists in petroleum geosciences (maximum of 18 trainees).

For further information and to apply, please contact Dr Marianne Nuzzo (<u>Marianne@igiltd.com</u>). The applications should include:

- A motivation letter;
- A short Curriculum Vitae;
- A letter of support (optional).

The applications should be received by the 15^{th} of February 2017 and all the applicants will be informed on the success of their application by the 1^{st} March 2017.

The venue and practical aspects

The training school will be hosted by IGI Ltd at Hallsannery (North Devon, UK) from the Tuesday 9th to the Saturday 13th of May 2017 (arrival on Monday 12th May afternoon and departure on Sunday 14th May). Accommodation and all meals are provided on site at Hallsannery.



The venue in Hallsannery House, Bideford, North Devon, UK

Transport expenses are refunded after the event by the EU-FLOWS project up to a maximum of 400 euros per person. Each participant will also, after the event, receive a stipend (on a fixed rate per day) to cover for the meals and accommodation expenses for the training school duration. Note that the daily rate is adapted to the accommodation cost (which is variable).

Program Summary

The training school entails four days of lectures and practical classes and a one-day field trip. The lectures are organised to:





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- 1) Provide the trainees with the fundamental background knowledge of the physical and mathematical concepts used to model the transport of heat and fluid in geological environments and a hands-on practical experience of 1D-modelling practice;
- 2) Review the essential aspects of Petroleum System Analysis methods, including basin geology and source rock maturation and kinetics, and introduce the main concepts of basin modelling in PSA;
- 3) Include many practical workshops based on real case studies, with a focus on deep-water and frontier Gulf of Mexico petroleum systems.

Practical workshops will be emphasized throughout the week and the trainees are highly encouraged to bring their own case studies (on which they are currently working) for the practical modelling classes.

High-profile lectures on deep-water and frontier petroleum provinces will be delivered by scientists in the oil industry and in academia as part of the training school, which aims at fostering scientific exchanges between research and industry.

The structural geology field trip led by Prof. Ian Davison to the spectacular faulted and folded Carboniferous cliffs of the North Devon and Cornwall coastlines will be the occasion to get a grasp on what is involved when restoring the structural deformation (palinspastic reconstitutions) in complex settings, a fundamental practice of basin modelling.



Hartland Quay cliff, North Devon, UK

