



## 4<sup>th</sup> Deep Water Circulation Research Conference Edinburgh, Scotland, 8-10<sup>th</sup> September 2021

This is the fourth in a series of specialised deepwater research conferences. It is the primary meeting for all those interested in this fast-moving and interdisciplinary field – sedimentologists, physical oceanographers, paleoceanographers, economic geologists and the broad contourite community.

The main aim is to discuss, exchange and advance our understanding of deepwater circulation and its effects on the seafloor and sediments. There has been much work and significant progress since the 3DWC (Wuhan, China) and we are excited to share and showcase these advances.

We intend for this to be a working research conference with plenty of opportunity for collaboration between participants – joint planning, publications and proposals, focussed workshops and scientific discussion. There will be the normal variety of short oral and poster presentations as well as an exciting post-conference field excursion to examine and debate Oligo-Miocene contourites in the field in Cyprus.

Edinburgh is a beautiful and historic city and the local geology fundamental to the birth of our science. There will be ample scope to explore both.

### **PRINCIPAL TOPICS**

- Contourites – modern and ancient, shallow-water and hybrid systems, carbonates and clastics, ichnofacies, microfacies and fabric
- Bottom currents – complexities and controls, eddies and benthic storms, internal waves and internal tides, and seafloor measurements
- Process interaction – downslope and alongslope processes, hybrid deposits
- Gateways and controls – sediment budgets, contourite cyclicity, deepwater organic carbon
- Geophysics and petrophysics – seismic stratigraphy and well logs
- Significance – paleoceanography and climate, slope stability and tsunamigenesis, reservoirs and source rocks, bio-diversity and socio-economic impact

### **VENUES**

- Day 1-2: **Royal Society of Edinburgh** (talks and poster presentations)
- Day 3: **Heriot-Watt University** and **the Lyell Centre** (workshops, scientific discussion, proposals)



### IMPORTANT DATES

July 2020: First Circular  
September 2020: 2nd Circular  
September 2020: Abstract submission open  
November 2020: Registration open  
March 2021: Abstract submission deadline  
April 2021: Notice of acceptance  
June 2021: Early bird registration closes  
July 2021: 3rd Circular, conference programme  
August 2021: Regular registration closes

### CONFERENCE PROGRAMME (provisional)

**Main conference: 8-10 September 2021**  
Wed-Thurs 8-9th Oral and poster presentations  
Fri 10th Workshops, discussion groups, proposals

**Edinburgh visit programme: Sat-Sun 11-12th**

**Field excursions: 11-17th September 2021**

Sat 11th Local geology: Hutton's Unconformity  
Mon-Fri 13-17th International field excursion  
Oligo-Miocene contourites, Cyprus

### ORGANISING COMMITTEE

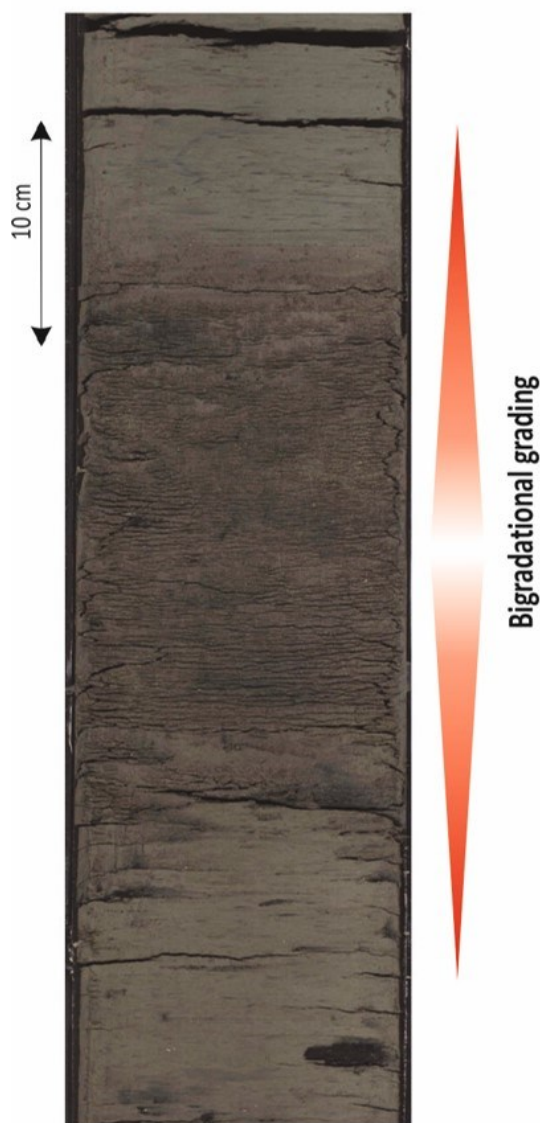
Dorrik Stow, Zeinab Smillie, Uisdean Nicholson (HWU)  
Tom Dodd, Heather Stewart (British Geological Survey)

### Scientific support

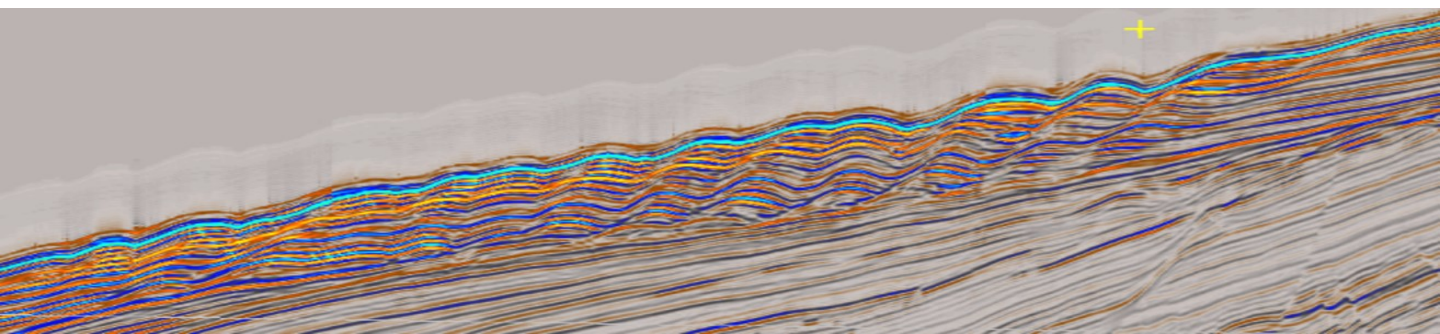
Rachel Brackenridge (Aberdeen University), Dirk Kroon (Edinburgh University), Javier Hernandez-Molina (Royal Holloway University, 1DWC), David Van Rooij (Ghent University, 2DWC), Xinong Xie (China University of Geoscience, Wuhan, 3DWC)

### CONTACT

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Contourite bi-gradational sequence, Gulf of Cadiz





# 4DWC International Field Excursion

## Contourites and reworked turbidites from the Eocene to Miocene, Lefkara and Pakhna Formations, Cyprus: distinguishing criteria and implications

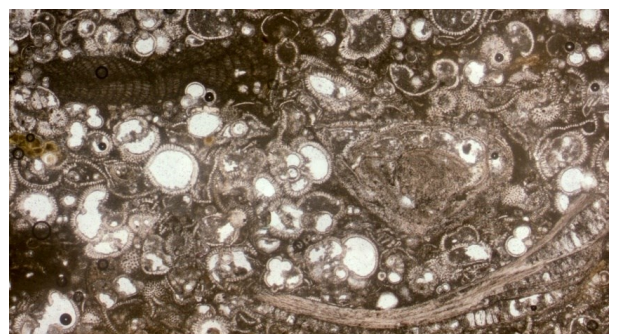
*13 – 17 September 2021 – Cyprus*

**Organised by:** Hernandez-Molina, F.J. (Royal Holloway University of London), Hüneke, H. (Universität Greifswald), Rodríguez-Tovar, F.J. (Universidad de Granada), Llave, E. (Instituto Geológico y Minero de España), Mena, A. (University of Vigo), Miguez-Salas, O. (Universidad de Granada)

During this field trip we will visit key field localities that showcase some of the best-known examples of ancient bottom current deposits in the Lefkara and Pakhna Formations (Cyprus).

Sedimentary facies, ichnological information, microfacies and sedimentary models will be discussed and associated with analogue deposits in modern/recent deep-water environments and compared to other deep-water deposits (as reworked turbidites, turbidites, mass transport and pelagic/hemipelagic deposits) in the same outcrops, and their conceptual significance will be discussed.

See website for further information: [www.4dwc.hw.ac.uk](http://www.4dwc.hw.ac.uk)



## MARINE GEOLOGY SPECIAL ISSUE

### Bottom Currents & Contourites: Process, Product & Impact

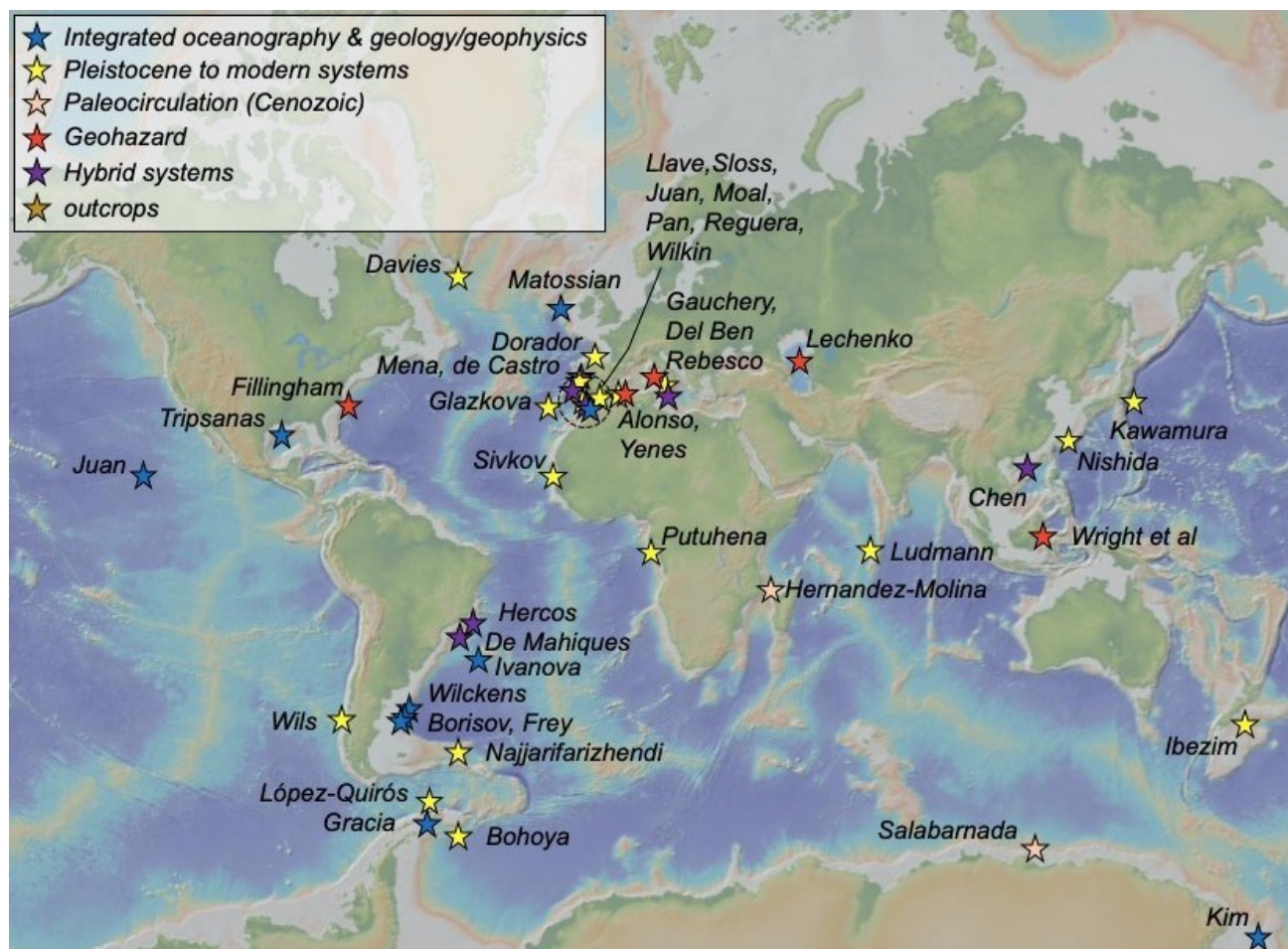
Guest Editors: *Dorrik Stow, Rachel Brackenridge, Uisdean Nicholson, Anna Wählin*

We are preparing a *Marine Geology* Special Issue to be published in conjunction with the 4<sup>th</sup> Deepwater Circulation research conference. The aim of this special issue is to capture recent advances in bottom-current processes, contourite sedimentology and hybrid systems, as well as to focus attention on their broader impact on geoscience and society as a whole.

The papers proposed have a very broad global range and cover the following principal topics:

- Pleistocene to Modern contourite systems
- Integrated physical oceanographic processes, sediments and seabed geomorphology
- Hybrid contourite systems (interaction with submarine gravity flows)
- Geohazards associated with bottom currents and contourites
- Paleooceanography and oceanic gateways

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Map of the papers submitted for the 4DWC special issue – Marine Geology 2021