Seeking a new paradigm for the North Atlantic

St. Chad's College, Durham University, U.K. 19<sup>th</sup> - 21<sup>st</sup> September, 2016

# VENUE

The workshop will be held at St. Chads College (<u>www.stchads.ac.uk</u>), one of the oldest colleges of Durham University. It is located adjacent to the Durham World Heritage Site including the Cathedral, Castle and museum.

Durham <sup>University</sup>

Please book your accomodation via email (<u>chads@durham.ac.uk</u>) or phone (+44 191 334 3358).

- Prices for B&B pppn: £45 single ensuite
  - £35 standard room (common bathrooms)
  - £75 double ensuite
  - £62 double standard (common bathrooms)

Parking: £5 for the entire stay at a parking spot ~10 min walk from St Chad's.

Please use the keyword "North Atlantic 2016" when you are booking. It is possible to book more nights, before or after the workshop.

# Address:

St. Chad's College 18 N Bailey DH1 3RH Durham County Durham UK

### TRAVEL ADVICE

There are direct flights to Newcastle Airport (NCL, <u>www.newcastleairport.com</u>) from London, Amsterdam, Paris, Copenhagen and Stavanger, among others. From Keflavik it is an option to fly to Glasgow, Edinburgh and Manchester. Travel from Edinburgh and Manchester airports to Durham takes about ~2-2.5 hours, from Glasgow ~3 hours.

Public transport from NCL to Durham takes about 1 hour in total by metro and train. Taxis from Newcastle Airport to Durham can be ordered for £30 (<u>www.airport365.com</u>). Taxis in Durham City cost around £4-5 for journeys about town, *e.g.*, from the railway station to St. Chad's College. It is also a pleasant 15-min walk through the medieval town centre from the railway station to the College.

It may be possible to collect people arriving at Newcastle Airport on Sunday afternoon by private car.



# ADDITIONAL INFORMATION

### <u>Breakfast:</u>

Breakfast is included in the B&B option at Chad's College.

### Lunch:

Lunch on Monday and Tuesday will be provided.

## <u>Dinner:</u>

Sunday night: We will reserve tables in a local restaurant for Sunday night (18/9), for those who are able to join us. These costs are not covered.

Monday night: Workshop dinner at Chad's covered for all participants.

*Tuesday night: Dinner to be organised by participants individually. Suggestions of restaurants in Durham are listed on the next page.* 

<u>Coffee and tea:</u> Served during each session and is covered by the organisers.

# **ATTRACTIONS IN DURHAM**

Information about sites and attractions in and around Durham can be found on the webpage of the local tourist information (<u>www.thisisdurham.com</u>).

# Durham World Heritage Site:

Durham Cathedral and Castle are part of the the Durham World Heritage Site (<u>www.durhamworldheritagesite.com</u>).

The visitor centre provides information about the UNESCO site and hosts small exhibitions and a shop. A visit of the cathedral is free of charge (<u>www.durhamcathedral.co.uk</u>), tours can be booked for the Castle (<u>www.dur.ac.uk/university.college/</u>).

Durham Catedral and Castle date back to the 11th century. The Castle hosts the University College.

<u>Durham University Oriental Museum:</u> Art and archaeology of the great cultures of North Africa and Asia. (<u>www.dur.ac.uk/oriental.museum/</u>)

<u>Durham University Palace Green Library:</u> A number of libraries, galleries and and exhibitions at Durham Cathedral. <u>(www.dur.ac.uk/palace.green/whatshere/galleries/</u>)



### RESTAURANTS

There is a variety of different restaurants in Durham city centre. Below are a few suggestions, based on personal experience, but there are many more, probably equally good restaurants in the area.

#### Court Inn

A city centre pub but with a restaurant area offering a large selection of pub food.

Court Lane, Durham, DH1 3AW http://www.courtinn.co.uk

Lebaneat A small and very good Lebanese restaurant, very close to Chad's College.

47 North Bailey Durham DH1 3ET Telefon:0191 384 6777 www.lebaneat.co.uk

#### Rajpooth

A nice Indian restaurant located on Claypath with a great selection of curries.

80 Claypath, Durham, DH1 1QT Tel: 0191 386 1496

#### Zen

A modern restaurant offering a variety of Thai and other Asian food opposite the court inn.

Court Lane, Durham, DH1 3JS Tel: 0191 384 9588 http://www.zendurham.co.uk

#### Alishaan

A good, spacious and modern Indian restaurant close to the train station.

50-51 North Rd Durham DH1 4SF 0191 370 9180 www.alishaandurham.com

#### **Central Thai**

A decent Thai restaurant located in The Gates, at the riverside with a lot of space, usually also for larger groups.

19 Millburngate Durham DH1 4SL Tel: 0191 597 8774 http://www.centralthairestaurant.co.uk

#### **Capriccio Ristorante Italiano**

A small independent Italian restaurant with good food and drinks located very close to Chads college.

32a Sadler Street Durham DH1 3NU Tel: 0191 370 9550 http://www.capriccioristoranteitaliano.co.uk

#### Fat Hippo

A very good small, local burger chain on Saddler Street (very close to Chad's).

36 Saddler St Durham DH1 3NU Tel:0191 370 9699 http://www.fathippo.co.uk/page/durham

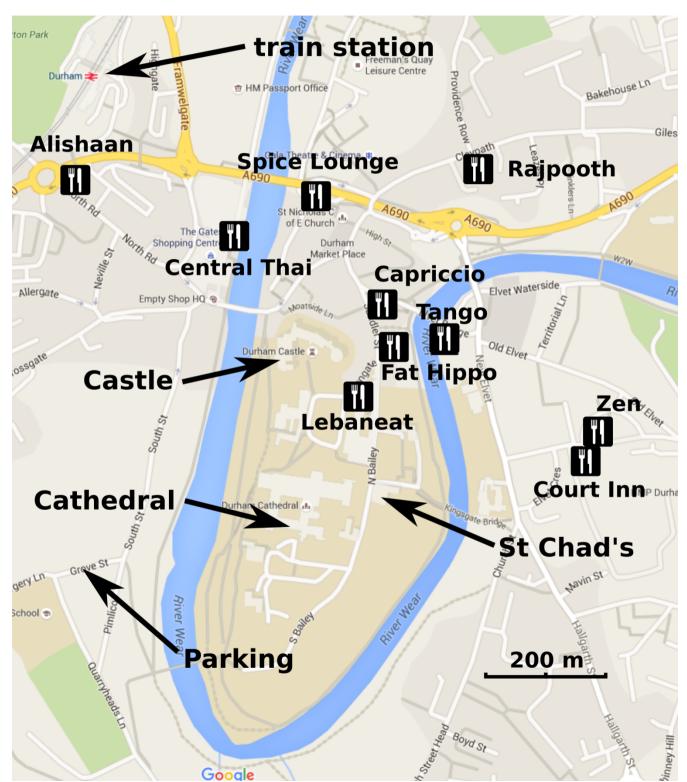
#### Tango Durham

A cosy restaurant/bar with a good variety of Burgers.

96 Elvet Bridge Durham DH1 3AG Tel: 0191 384 0096 www.tangodurham.co.uk



MAP





# AGENDA

This  $\sim$ 20-person workshop will comprise a series of ½-day chaired discussion sessions on 4 themes in the context of the North Atlantic:

- Rifting and rift propagation
- Vertical motions
- Crustal and lithospheric structure
- Deep structure & magmatism

In the Agenda below, attendees have been designated "main contributors" in particular sessions/ themes based on their specialties. Main contributors are requested to present brief, to-the-point illustrated explanations of their material showing up to ~10 Powerpoint slides. Presenters are encouraged to focus on the bottom line of what is known, what needs to be known, and how the current state of knowledge links with other disciplines. Standard "method-results-conclusions-end-of-story"-style conference presentations are not appropriate.

The sessions will not comprise AGU-style strings of talks, but continuous discussion and questioning with contributions from everyone. Anyone may show one or two slides at any time in any sesson to illustrate relevant points they wish to make. It is hoped that those who are not specialists in a particular theme will liberally question in order to bring about the maximum cross-disciplinary transfer of understanding. Each session will be completed by a longer, open discussion, focused on synthesis of the contributions. The "discussion mode" is free and can also be done in smaller groups.

# **Publication**

It is anticipated that ~ 4 papers will emerge on sub-topics, plus a single overall review paper synthesizing our holistic view of the structure and evolution of the North Atlantic. Ideally all attendees (and likely other colleagues) will jointly author that overview review paper

### <u>Outreach</u>

We will propose a thematic session to the *GSA Annual Meeting 2017* in Seattle or *AGU Fall Meeting 2017* in New Orleans related to the outcomes of this workshop. The choice will be made after discussion at this workshop.



# PRELIMINARY LIST OF ATTENDEES AND TITLES

Cornwell, David	University of Aberdeen	Lithospheric structure beneath the Faroe Islands
Doré, Tony	Statoil	North Atlantic breakup: extension rate, strike-slip and the Driving Force
Foulger, Gillian	Durham University	Overview and Introduction
Franke, Dieter	BGR, Hannover	Evidence for rift propagation towards hot-spots, including Tristan and Iceland
Gernigon, Laurent	NGU, Trondheim	Rifting, continental breakup and post-breakup evolution of the Norwegian margin
Geoffroy, Laurent	Université de Bretagne Occidentale	Is Iceland a volcanic passive margin C-Block?
Hole, Malcom	University of Aberdeen	Controls of mantle potential temperature and lithospheric thickness on magmatism in the North Atlantic Magmatic Province
Höskuldsson, Armann	University of Iceland	From Iceland to the Bight transform fault; a tale of tectonics, volcanism and plate boundary reformation
Julian, Bruce	US Geological Survey	
Kuznir, Nick	University of Liverpool	Mapping crustal thickness, OCT structure and crustal type using satellite gravity inversion: some answers but more questions
Macdonald, David	University of Aberdeen	An unusual Triassic rift on the Atlantic margin – the Stornoway basin
Meyer, Romain	GFZ, Potsdam	a) First geochemical petrological insights on the southern Jan Mayen ridge basement rocks b) Rift to drift magmatism during the opening or the Atlantic
Natland, James	University of Miami	The Place of Basalts from Iceland within the North Atlantic
Nielsen, Søren	Aarhus University	Neogene uplift: Facts and fiction
Peace, Alex	Durham University	The asymmetric margins of the Labrador Sea: Implications for rift development
Pedersen, Vivi	University of Bergen	Isostatic and dynamic support of high passive margin topography in southern Scandinavia
Petersen, Kenni	Aarhus University	Mantle plumes driven by plate tectonic processes
Schiffer, Christian	Durham University	Passive margin formation and orogenic inheritance
Stephenson, Randell	University of Aberdeen	The Ella $\emptyset$ – Flannan sub-crustal piercing point in North Atlantic reconstructions and implications
Stoker, Martyn	British Geological Survey	A rift-to-drift record of vertical crustal motions in the Faroe-Shetland region: implications for NE Atlantic evolution
Vogt, Peter	University of California, Santa Barbara	