The Geological Society

Double Lecture Evening

Date: 26th September 2018

Venue: Room LECT 011, Ground Floor Lecture Centre, Brunel University, Kingston Lane, Uxbridge UB8 3PH

First lecture starts at 18.30

Expected finish time 20.30

Refreshments at Lecture Centre Lobby

This event is free of charge but please register by emailing

homecountiesnorthregionalgroup@gmail.com

Brunel University London

With a special thanks to Brunel University for hosting the event!

See attached maps for access to campus and meeting room. Follow signs for Main Reception as you enter the campus. Accessible parking available at various locations around the campus. Parking available for disabled blue badge holders. Please collect a permit on arrival from Main Reception, Eastern Gateway

Deglaciation in Patagonia: Reconstructing Past Glacier Dynamics, Environments and Climate

Presented By

***Julian Martin** MSci FGS*

(Quaternary Science PhD Student at Royal Holloway University of London)

Julian Martin is a Quaternary Science PhD student studying at Royal Holloway University of London. He gained his undergraduate MSci Geology degree at Imperial College London in 2014 before starting his PhD the following year. His research focuses on using remote sensing and field based geomorphology, sedimentology, cosmogenic nuclide surface exposure landform dating and glacier computer modelling to reconstruct past glacial environments, processes and dynamics to gain an insight into past climate conditions and drivers of glacier change. Julian works in Chilean Patagonia, with specific focus on the Monte San Lorenzo ice cap.

Deglaciation of the region to the east of the Northern Patagonian icefield from the Last Glacial Maximum has left a fascinating record in the landscape of glacier fluctuations and environment change. From this record, Late Pleistocene and Holocene fluctuations of outlet glaciers of the now isolated Monte San Lorenzo ice cap, on the eastern side of the North Patagonian Icefield, could yield insights into past climate. However to gain this insight we must first unravel the dynamic glacial history of the region to fully understand the glacial dynamics, processes and land systems that once operated. We do this using a combination of remote sensing and field based geomorphology, sedimentology and cosmogenic nuclide surface exposure landform dating. We can then use a glacier model (PISM), tested and constrained by this new understanding, to determine the main drivers of late Pleistocene and Holocene glacier dynamics at

Monte San Lorenzo, and provide an envelope of past climatic conditions during this period. In this talk I will explain the theory behind extracting a climate signal from past glacier change, the methods and approach used in my PhD research, and preliminary results from two field studies undertaken in Patagonia by myself and supervisors Dr Bethan Davies and Dr Varyl Thorndycraft in 2016 and 2017.

The dynamics of the central sector of the last British-Irish Ice Sheet

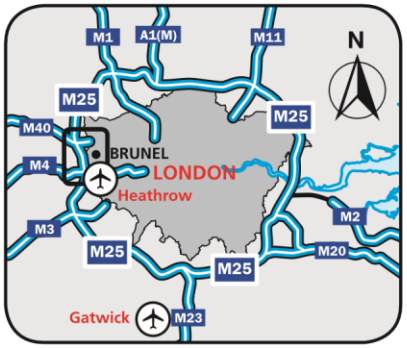
Presented By

***Bethan Davies** BA MSc PhD*

(Senior Lecturer in Physical Geography, Centre for Quaternary Research at Royal Holloway University of London)

Bethan Davies is Senior Lecturer in Quaternary Science, Royal Holloway University of London (RHUL). She specialises in ice-mass responses to environmental change using geomorphic mapping, cosmogenic nuclide dating, remote sensing and numerical modelling methods, particularly in Antarctica, Patagonia and the UK. She has been awarded the Lewis Penny Medal from the Quaternary Research Association and the Halstead Prize from the Geologists' Association in recognition of her work on the glaciation of the British Isles.

During the Last Glacial Maximum, ice streams controlled the discharge of ice and sediment from the centre of the ice sheet to its margins. During deglaciation, changes in ice-divide location and internal ice-sheet dynamics resulted in flow switches and dynamic changes in ice-sheet configuration. In this study, we develop a robust chronology for the recession of the Stainmore ice stream and changes in ice flow direction in the Vale of Eden. We present new geomorphological mapping and cosmogenic nuclide exposure ages from the Stainmore Gap and Eden Valley, constraining regional dynamic ice-stream retreat following the LGM in northern England. These data allow us to provide temporal constraints on glaciodynamic ice-flow phasing, by linking ages to flow-sets and stillstands derived from detailed glacial geomorphological mapping, and enable a new reconstruction of a previously rather generalised sector of the last British-Irish Ice Sheet.



Getting to Brunel University London

BY BUS

From Heathrow Central: A10 "Heathrow Fast", every 15 minutes, journey time approx 25 minutes (alight Hillingdon Rd at 'The Greenway' and use footpath to campus).

From Stockley Park: A10 "Heathrow Fast" as above, journey time approx 10 minutes.

From West Drayton railway station:
U3 (alight Cleveland Road)
U1 (alight Kingston Lane)
222 (alight Cowley Road and use path via Zone A, see campus map).

From Uxbridge (underground) station:
U3 (alight Cleveland Road)
U1 (to West Drayton) **U4** and **U7** (alight Kingston Lane)
222 and **U5** (alight Cowley Road and use path via Zone A, see campus map).

BY UNDERGROUND

(Transport for London) For Uxbridge Station take the Metropolitan Line from central London (and Piccadilly Line during peak hours). Then take a taxi, or bus U1, U3, U4 or U7. (Alternatively use the 1-mile walking route shown on the right.)

BY RAIL

West Drayton (First Great Western Link) is the nearest main-line station (approx 1.5 miles from the campus). Services from London Paddington or the West (Bristol). From West Drayton station take a bus towards Uxbridge: 222 (alight Cowley Road), U5 (alight Station Road), U3 (alight Cleveland Road) or U1 (alight Kingston Lane).

West Ruislip Station (Chiltern Railways) is the main-line service from London Marylebone and the North (Aylesbury, Banbury and Birmingham) and is approximately 4 miles from the campus. From West Ruislip Station take the U1 bus towards West Drayton, alight Kingston Lane.

BY ROAD

Entry by car is via Kingston Lane only.

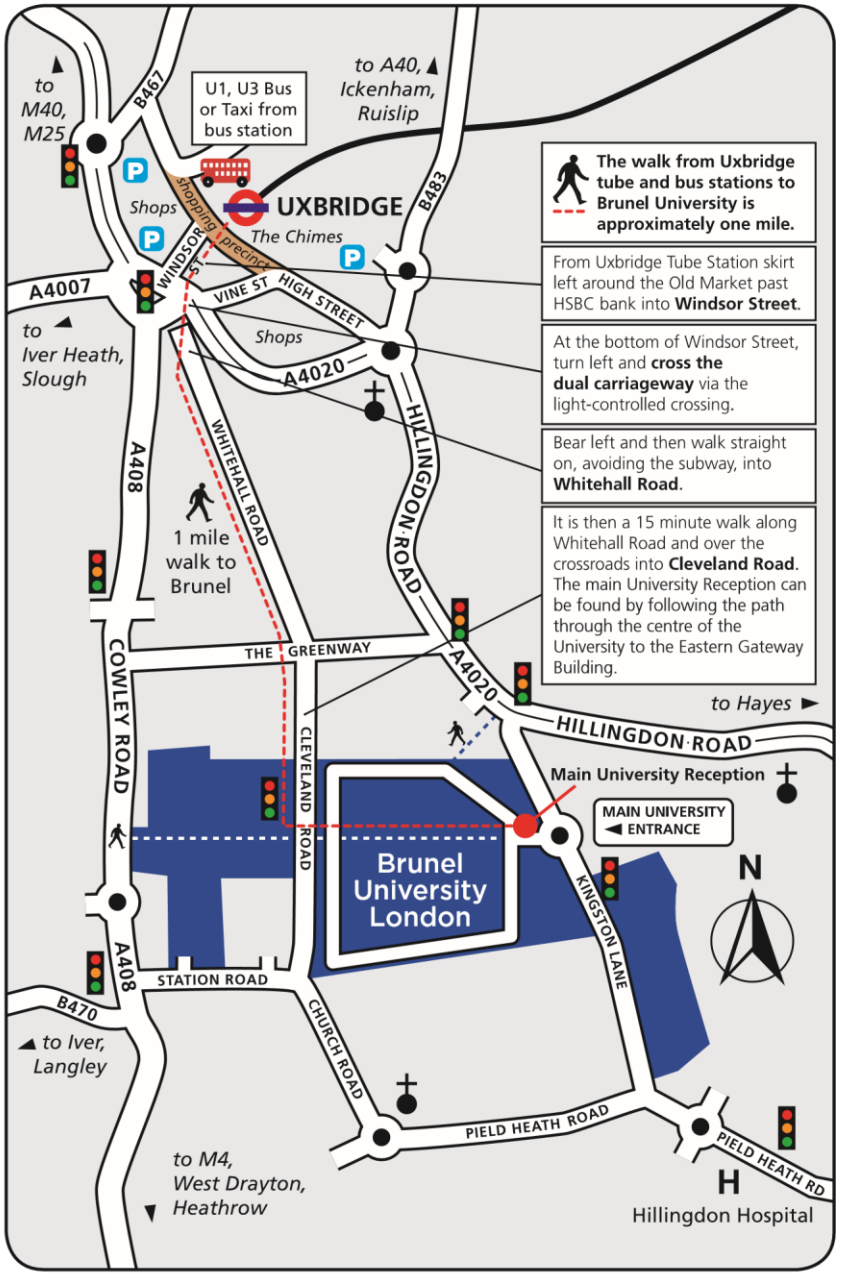
Sat Nav users: Please enter the road address (Kingston Lane) and the postcode (UB8 3PN). You will be directed to Kingston Lane, which is very close to our main entrance. From there, please follow the signs.

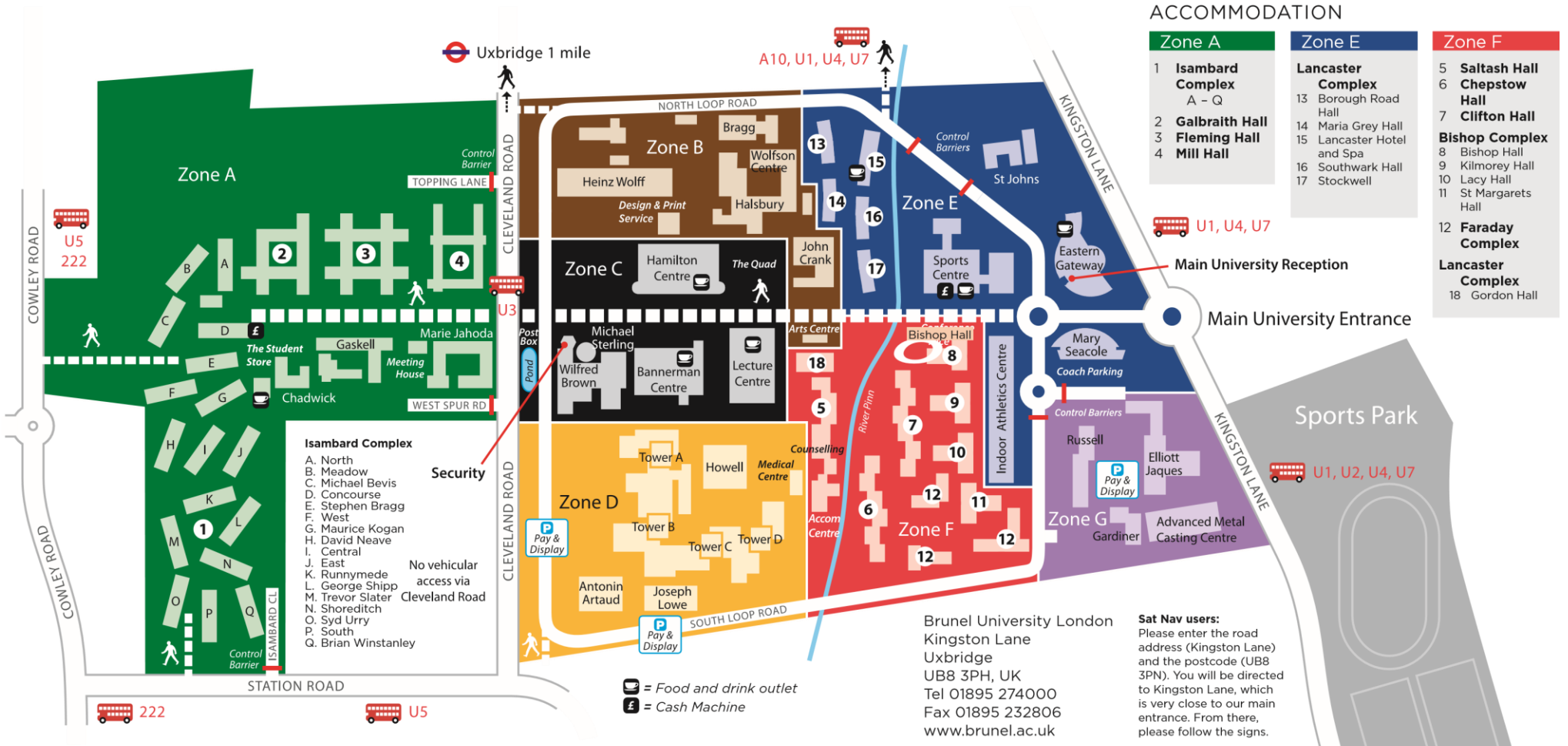
Parking on the Uxbridge Campus and in the local area is very restricted. Barriers control access to the site and all vehicles must display a valid permit. On arrival, pay-and-display parking is available. In addition, parking may also be pre-booked (restrictions apply).

Parking Charge Notices will be issued for illegally parked vehicles and vehicles not displaying a valid Brunel parking permit or Pay & Display ticket.

M4: Leave M4 at Junction 4 and follow signs to Uxbridge (A408). Straight across first set of traffic lights, continue on A408, crossing four roundabouts. Turn right at the next set of major traffic lights. Continue ahead to next set of lights and, almost immediately, take the right filter lane at second set of traffic lights into Station Road. Continue straight on into Church Road and take the first exit at a mini-roundabout into Pield Heath Road. Turn left into Kingston Lane and left into the University. Follow signs for main Reception as you enter the campus.

A40/M40: At Swakeleys Roundabout take B483 exit to Uxbridge. Follow signs across two mini-roundabouts. At major roundabout bear left onto A4020 (Brunel sign), straight ahead at the first lights, then almost immediately take second right filter turn onto Kingston Lane (signposted Brunel). The main entrance to Brunel is right at the next roundabout.





ACCOMMODATION

Zone A

1 **Isambard Complex** A – Q
2 **Galbraith Hall**
3 **Fleming Hall**
4 **Mill Hall**

Zone E

Lancaster Complex
13 Borough Road Hall
14 Maria Grey Hall
15 Lancaster Hotel and Spa
16 Southwark Hall
17 Stockwell

Zone F

5 **Saltash Hall**
6 **Chepstow Hall**
7 **Clifton Hall**

Bishop Complex
8 Bishop Hall
9 Kilmorey Hall
10 Lacy Hall
11 St Margarets Hall

12 **Faraday Complex**

Lancaster Complex
18 Gordon Hall

Brunel University London
Kingston Lane
Uxbridge
UB8 3PH, UK
Tel 01895 274000
Fax 01895 232806
www.brunel.ac.uk

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Brunel University London

Brunel University London Campus Map

Zone A
Chadwick
Gaskell
Marie Jahoda
Meeting House
The Student Store

Zone B
Arts Centre
Bragg
Design and Print Service
Halsbury
Heinz Wolff
John Crank
Wolfson Centre

Zone C
Bannerman Centre
Hamilton Centre
Lecture Centre
Michael Sterling
Wilfred Brown

Zone D
Antonin Artaud
Howell
Joseph Lowe
Medical Centre
Tower A
Tower B
Tower C and D

Zone E
Indoor Athletics Centre
Eastern Gateway
Lancaster Suite
Mary Seacole
Sports Centre
St Johns

Zone F
Accommodation Centre
Brunel Campus Rooms
Brunel Student Lettings
Conference Office
Counselling Service
Housing Office

Zone G
Advanced Metal Casting Centre
Brunel Science Park
Elliott Jaques
Gardiner
Russell

Sports Park
Sports Pavilion

Map last updated 06/09/17
To download the latest version visit www.brunel.ac.uk/about/campus/directions

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