



**International
Glaciological
Society**

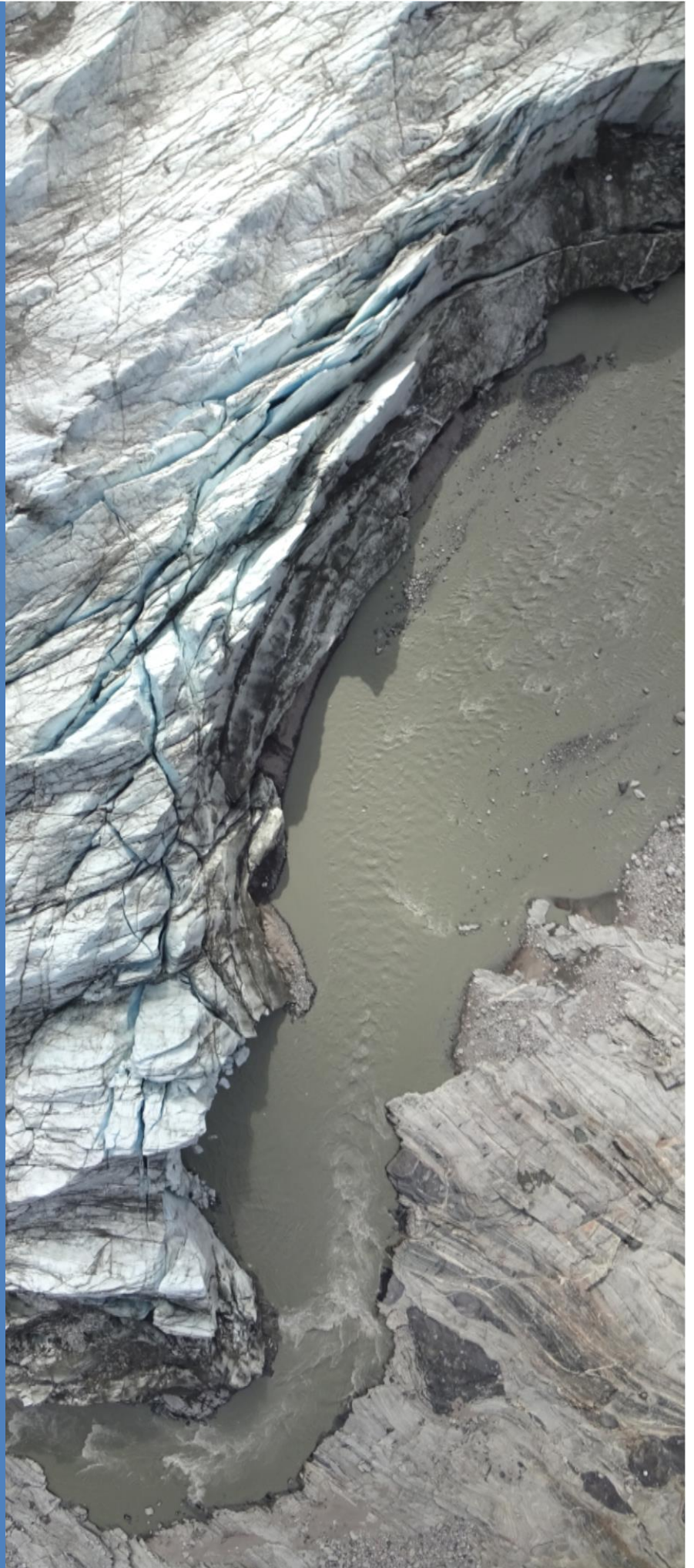
British Branch
Meeting 2018

Programme

4th & 5th September

Geography

University of Exeter



Welcome

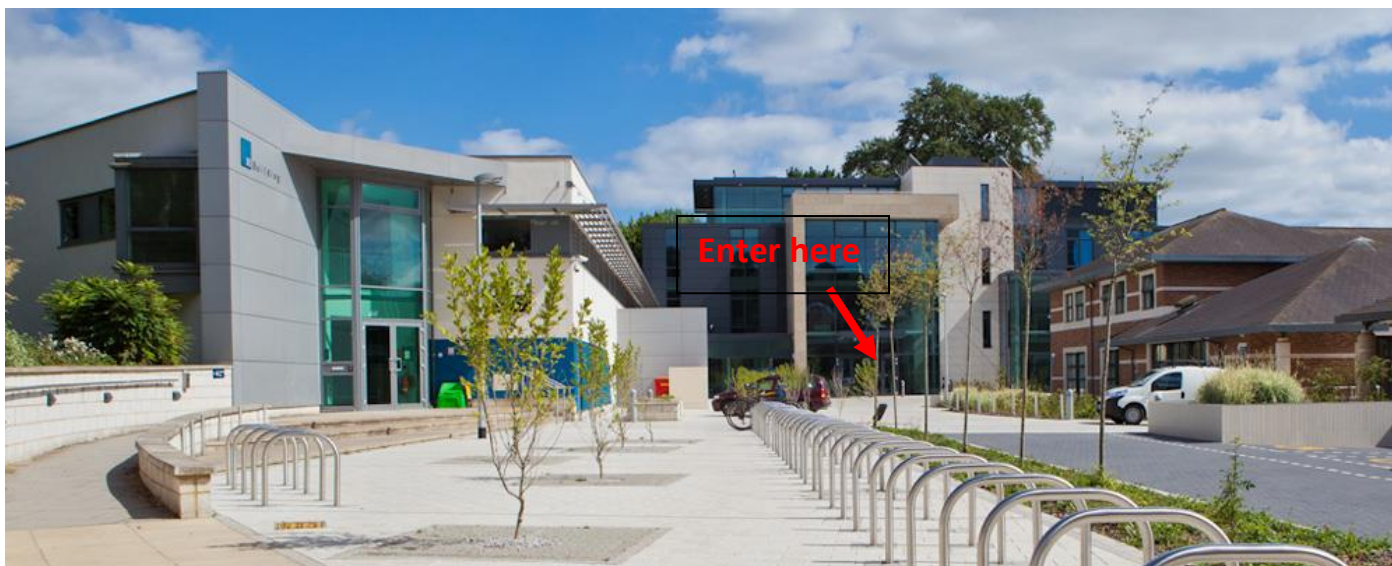
On behalf of Geography at the University of Exeter, we would like to wish you a warm welcome to the South West and Exeter. It is our pleasure to host the 2018 British Branch Meeting of the International Glaciological Society. Thanks to all delegates, presenters and sponsors for supporting the meeting - we look forward to hosting you in our beautiful grounds, and wish you a productive and enjoyable meeting.



Anne Le Brocq, Steve Palmer, Ali Graham, Damien Mansell, Olly Bartlett and Vicky Naylor

Location & Venue

The conference will be held in the Xfi Building, located on the University of Exeter's Streatham Campus (Building 30 on the map on the back page), however, due to building work, you will need to enter via "Building One", (confusingly building 84 on the map!). The main Streatham campus is set within a country estate overlooking the city of Exeter, with the grounds registered as a botanic garden and arboretum, complete with a sculpture trail for the artistically minded. Set in the county of Devon, which is a "stunning county of great contrasts, with two beautiful coastlines, two National Parks and five official Areas of Outstanding Natural Beauty" (Visit Devon website), there is plenty for the outdoor enthusiast.



Xfi Building <https://www.exeter.ac.uk/eventexeter/venues/xfi-building/>

Oral Presentations

Oral presentations will take place in the Henderson Lecture Theatre. The talk slots are 20 mins in duration, so 15 mins for the presentation and 5 mins for questions. The lecture theatre has a desktop PC and we ask that you upload and test your presentation in the break before the session, at the latest.

Poster Presentations

The poster session will take place in Conference rooms 1 & 2 in the XFi building. The poster boards are a portrait format, with a usable area of 2060 x 950 mm (height x width), so will fit an A0 portrait poster. The poster boards will be ready for setup in the coffee break before the poster session, and posters will need to be taken down at the end of the session.

Abstract Booklet

A printed copy of this programme is provided for you at registration, but we will not be printing the book of abstracts, in order to save paper. Please see the website for a downloadable pdf which you can use electronically, or print in advance yourself if you wish.

Map of Presentations

In addition, in true geographical style, we have created a map version of the abstracts! Scan the QR code on the right to view application on your mobile device, or go to <https://tinyurl.com/IGSBB2018>. Once on the website, click the bookmark button (top left) to see the information for each session (including abstract summaries).



Accommodation

For those that have booked University Accommodation with their registration, you are booked into Holland Hall, please see <https://www.exeter.ac.uk/eventexeter/venues/holland-hall/> for details. Holland Hall is circled on the map on the last page of this booklet, building number 62.

Ice Breaker

If you are arriving on the 3rd September, we will be at The Imperial pub from 7pm, the Imperial is near to the University accommodation, see <https://www.jdwetherspoon.com/pubs/all-pubs/england/devon/the-imperial-exeter> for the location.

Conference Dinner

The conference dinner will take place on campus at Reed Hall (see map on back cover) at 7pm on the evening of the 4th September. The dinner is only open to those who have pre-booked. Drinks are not included, but there is a bar from which drinks can be bought – the bar will be open from 6pm.



Reed Hall <http://www.reedhall.co.uk/about-reed-hall/>

Twitter

Follow @igsbbm2018 on Twitter for conference announcements and use the hashtag #igsbbm2018 for any conference related tweets.

Sponsors

We thank ESRI UK for their sponsorship of the conference.



Cover Photo

Russell Glacier - credit: Olly Bartlett, Tim Barrows, Steve Palmer.

Tuesday 4 th September		
0900-0930	Registration & Refreshments	Henderson Lecture Theatre Foyer, Xfi Building
0930-0940	Welcome	Henderson Lecture Theatre, Xfi Building
Session 1: Greenland Ice Dynamics. Chair: Steve Palmer		
0940-1000	Suzanne Bevan	Helheim and Kangerdlugssuaq Glaciers in retreat
1000-1020	Joshua Williams*	Decadal Scale Ice Velocity Change at Land-Terminating Margins of the Greenland Ice Sheet
1020-1040	Joseph Mallalieu*	Integrating Structure-from-Motion and time-lapse imagery to investigate ice-margin dynamics
1040-1100	Tom Chudley*	Using GNSS-assisted aerial triangulation and UAV photogrammetry to study short-term dynamics of the Greenland Ice Sheet
1100-1130	Refreshments	La Touche, Building One
Session 2: Greenland Mass Balance & Hydrology. Chair: Rachel Carr		
1130-1150	Edward Hanna	Greenland Ice Sheet mass balance and climate interactions
1150-1210	Stephen Chuter	Annual Greenland mass trends from 2003-2015 from a Bayesian hierarchical modelling approach
1210-1230	Liz Bagshaw	High elevation firn conditions assessed by wireless sensors
1230-1250	Sam Cook*	Modelling subglacial hydrology at a large Greenland outlet glacier
1250-1310	Alexis Moyer*	A simplified approach for estimating iceberg freshwater flux into glacial fjords
1310-1400	Lunch	La Touche, Building One
Session 3: Ice Caps & Glaciers. Chair: Damien Mansell		
1400-1420	Paul Tepes*	Mass balance of Arctic ice caps from CryoSat-2 swath altimetry
1420-1440	Adrian Luckman	Investigating surging and calving in Svalbard glaciers with long time-series of satellite radar images
1440-1500	Felicity Holmes*	Linking the recent retreat of Kronebreen, western Svalbard to glacial proximal water temperatures in Kongsfjorden
1500-1520	John Hillier	Production and preservation of the smallest drumlins
1520-1540	Rachel Carr	Quantifying ice thickness, sub-surface characteristics and surface topography of a large debris-covered glacier: Annapurna South Glacier, Nepal
1540-1600	Refreshments	La Touche, Building One
Session 4: Poster session		
1600-1800	Posters	Conference Room 1 & 2, XFi Building
1900-2100	Dinner	Reed Hall

*Denotes student presenter eligible for John Glen oral/poster prizes

Wednesday 5 th September		
Session 5: Subglacial & Englacial Environments. Chair: Ali Graham		
0830-0900	Refreshments	La Touche, Building One
0900-0920	David Sugden	The pre-glacial geomorphology of Antarctica and its relevance to the Antarctic Ice Sheet
0920-0940	Kate Winter	Topographic controls on ice flow at the bottleneck between East and West Antarctica
0940-1000	Francesca Falcini*	Quantifying bed roughness beneath contemporary and palaeo-ice streams
1000-1020	Emma Pearce*	Estimation of Englacial Seismic Properties using Full Waveform Inversion: Scope and Sensitivity
1020-1040	IGS British Branch AGM	
1040-1110	Refreshments	La Touche, Building One
Session 6: Snow & Firn. Chair: Liz Morris		
1110-1130	Nick Rutter	Impact of tundra snow layer thickness on modelled radar backscatter
1130-1150	Markus Todt*	Sub-canopy longwave radiation and its impact on snow cover in boreal forests simulated by a global climate model
1150-1210	Johanna Malle*	Influences of shading and fractional snow cover on sub-canopy effective albedo
1210-1230	Andrew Tedstone	Assessing the impact of ice algae on Greenland Ice Sheet melting
1230-1250	Caroline Clason	Storage and release of anthropogenic pollutants from glaciers: a future problem for environmental quality?
1250-1350	Lunch	La Touche, Building One
1350-1430	IGS AGM	Henderson Lecture Theatre, Xfi Building
Session 7: Ice – Water Interactions: Chair: Anne Le Brocq		
1430-1450	Jan De Rydt	Coupled ice shelf-ocean modelling for glaciers in the Amundsen Sea
1450-1510	Rebecca Dell*	Applying semi-automated methods to investigate the changing surface hydrology of the Nivlisen Ice Shelf, Dronning Maud Land, East Antarctica
1510-1530	Chris MacMackin*	A horizontally integrated model of rotational meltwater plume flow beneath ice shelves
1530-1550	Adrian Dye*	Cold ice in a warm bath: Observations of high proglacial lake temperatures across Arctic Sweden from ASTER thermal infrared satellite imagery and thermistor surveys
1550-1600	John Glen Prizes	
1600	Close & Refreshments	La Touche, Building One

	Posters		
1	Robert	Arthern	Seismic acoustic impedance, effective pressure, and basal drag
2	Rosie	Bisset*	Towards automatic grounding-line detection from optical satellite imagery
3	Claudio	Bravo Lechuga*	Energy balance on the South Patagonia Icefield: First results from meteorological observations
4	Stephen	Brough	Monitoring of east Greenland marine-terminating glaciers, 2013-2017
5	Joshua	Chambers*	Glacial aerodynamic roughness (z_0): methodological sensitivities, precision and uncertainty
6	Frazer	Christie*	Glacier change along the Central Pacific-facing margin of West Antarctica driven by spatial and inter-decadal atmosphere-ocean variability
7	Stephen	Cornford	Results of the third marine ice sheet model intercomparison project (MISMIP+)
8	Ben	Davison*	Contrasting seasonal speed-ups of neighbouring Greenlandic tidewater glaciers
9	Ali	Graham	Evidence from ice-keel landforms for rapid retreat of the ancestral Dotson-Getz ice stream by ice-cliff failure mechanisms
10	Hilmar	Gudmundsson	Is the Antarctic Peninsula getting warmer or colder?
11	Adam	Hepburn*	High-resolution digital elevation models for studying the martian cryosphere
12	Emily	Hill*	The instantaneous velocity response of Petermann Glacier, northern Greenland to future ice tongue loss
13	Sigurdís	Jónasdóttir*	Reconstructing palaeo jökulhlaup magnitude and frequency on the western and north western flanks of Bárðarbunga volcano, Iceland.
14	Jim	Jordan	Synchronous Ice-Ocean Coupling using MITgcm
15	Jim	Jordan	How stable is the East Antarctic Ice Sheet?
16	Siobhan	Killingbeck*	Subglacial Sediment Characterisation using Analysis of Seismic Surface Waves and Time Domain Electromagnetics
17	Anne	Le Brocq	The Snow_blow model: Application and testing in the Ellsworth Mountains, Antarctica
18	Harold	Lovell	Investigating the sedimentary architecture and morphology of the Brampton kame belt using ground-penetrating radar (GPR) and high-resolution LiDAR data
19	Jennifer	Maddalena*	Sentinel-3A's SAR altimetry for the Greenland Ice Sheet
20	Luca	Maffezzoni*	The Impact of Extratropical Cyclones on the Greenland Ice Sheet
21	Damien	Mansell	InVENTA: Interactive Virtual Environments for Teaching and Assessment – Applications for Virtual Fieldtrips in the Cryosphere
22	Damien	Mansell	Utilising Esri's Collector App for Learning & Assessment on an Undergraduate Fieldtrip in Iceland
23	Katie	Miles*	Characterising the subsurface hydrology of a Himalayan debris-covered glacier using dye-tracing
24	Tom	Mitcham*	Modelling the instantaneous response of the Larsen C ice shelf and its tributary glaciers to shelf thinning
25	Felipe	Napoleoni*	Subglacial Lakes in Ellsworth-Whitmore Block, West Antarctica
26	Steve	Palmer	Developing Python software tools for quantifying elevation changes in the Arctic
27	Sebastian	Rosier	A New Bathymetry for the Southeastern Filchner-Ronne IceShelf: Implications for Modern Oceanographic Processes and Glacial History
28	Rebecca	Schlegel*	Drumlin and MSGL formation underneath the Rutford Ice Stream, West Antarctica

Notes

