



**British Society for Geomorphology
Annual Conference 2024**



Loughborough University, 2-5th September



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Welcome to Loughborough

The local organising committee are looking forward to welcoming you to the Loughborough University campus for the BSG Annual Conference. It promises to be an exciting few days of Geomorphology, set within the beautiful surrounds of our campus in the heart of the East Midlands. Loughborough University has deep and long-held geomorphological roots, with the expertise and interests of the local organising committee covering the breadth of the field, from aeolian processes through to glacial landscapes, via all things fluvial in between. The conference programme that we have put together (see page 5) covers this broad spectrum, and we hope it will appeal to all geomorphologists.

Loughborough is, of course, famous for its sporting endeavours (at the time of writing: if Loughborough were a country, we would be just outside the top 10 of the Olympic Medal table!). Our campus is also located close to sites of important geological significance, with some of the oldest rocks in England and some of the oldest animal fossils ever discovered just a few kilometres away in the Charnwood Forest Geopark. We will bring each of these unique Loughborough features to the BSG conference, via the pre-conference fieldtrip and the venue for the Icebreaker reception.

We look forward to seeing you soon!

Edwin Baynes, on behalf of the organising committee (bsg2024@mailbox.lboro.ac.uk)

Conference Venue

The main conference venue will be the Edward Herbert Building (EHB), situated in the middle of the Loughborough University campus. EHB is building number 62 on this campus map: <https://www.lboro.ac.uk/media/media/about/downloads/campus-map.pdf>

The registration desk when you arrive will be located just inside the main entrance of EHB.

EHB will be the venue for the workshops and all oral and poster presentations including the Cuchlaine King Symposium. EHB also contains a café and both indoor and outdoor seating areas.

The Icebreaker reception on Tuesday evening will be held in the Robert Allison Suite at Loughborough University Stadium (Building 10 on the campus map). The Robert Allison Suite is named after the former Chair of the British Society for Geomorphology, and former Vice-Chancellor of Loughborough University.

The Conference Dinner on Wednesday evening will be held in Holywell Park Conference Centre (Building 8 on the campus map).



Edward Herbert Building

Getting to Loughborough

Loughborough is a market town in the heart of the East Midlands, about halfway between Leicester and Nottingham and only a short train ride away from London. With great transport links, Loughborough is an easy place to get to.

For more information on how best to get to Loughborough, and then to the University campus, please visit this webpage: <https://www.lboro.ac.uk/about/location/>

Note on car parking: There are local by-laws prohibiting parking on neighbouring streets around campus. Visitors are asked to use the main entrance to campus on Epinal Way. When you arrive, Security will advise you where to park. Please note that there are charges for visitor parking on campus, see this webpage for more details:

<https://www.lboro.ac.uk/services/fm/services/traffic-parking/visitors/>



Provisional Conference Programme

The latest provisional conference programme is below. *Please note that some of the timings may be subject to minor changes:*

Monday 2 nd September		
13.00–17.00	Pre-conference field trip to Charnwood Forest Geopark	
Tuesday 3 rd September		
10.00-11.00	PGR Forum workshop	
11.15-12.15	Professional Geomorphologists workshop	
Talk Session 1		
13.00-13.15	Conference Opening and Welcome	
13.15-13.30	Jo Nield	New insights into aeolian sediment flux and transport dynamics
13.30-13.45	Natasha Wallum	Surface geochemistry and hydrological controls on 'hot-spots' of dust emission at Etosha Pan, Namibia
13.45-14.00	Jayesh Mukherjee	Development of a dryland river terminus: The Luni River in the Indian Thar Desert
14.00-14.15	Robert Watson	Improving understanding of geomorphological damage and geodiversity loss in armed conflicts
14.15-14.45	Refreshment break	
Talk Session 2		
14.45-15.15	Georgina King	Warwick Medal: Mind the gap! Trapped-charge dating to the rescue!
15.15-15.30	Gemma Harvey	Global diversity and significance of animals shaping the Earth's surface
15.30-15.45	Lucrecia Alvarez-Barrantes	Modeling the transport and deposition of sediment-microplastics fluxes in a braided river, using the software Delft3D
15.45-16.00	Catherine Russell	Sedimentological Insights into Anthropogenic Materials: A Comprehensive Framework for Improving Contemporary Environmental Assessment
16.00-16.15	Stuart Lane	Artificial intelligence and geomorphology: what it means for publishing
16.15-17.30	Poster Session	
17.30-19.30	Icebreaker Drinks Reception <i>Robert Allison Suite, Loughborough University Stadium</i>	

Wednesday 4 th September		
08.30-09.00	Refreshments	
Talk Session 3		
09.00-09.30	Anya Leenman	Chorley Medal: Floods on alluvial fans: implications for reworking rates, morphology and fan hazards
09.30-09.45	Peter Downs	Quantifying river channel (in)stability
09.45-10.00	David Whitfield	‘Pebble Pushing’: Untangling Variabilities in Gravel Bed Stability using In-Situ Resistance Force Tests
10.00-10.15	Janet Richardson	Sediment budgets in the River Derwent: modelling and monitoring
10.15-11.00	Refreshment break	
Talk Session 4		
11.00-11.15	Athena Eftychiou	Sweeting Award: Investigating the impacts of the 2009 Mt Redoubt eruption on the geomorphology and dynamics of Drift River, Cook Inlet, Alaska
11.15-11.30	Lizzie Dingle	Detection of paraglacial sediment supply using detrital 10Be in postglacial landscapes of southwest British Columbia
11.30-11.45	Rebekah Harries	Warm storms drive sediment export from high-elevation Andes
11.45-12.00	Bethan Davies	Deplete and Retreat: constraining glacio-hydrological processes and systems across the Andes
12.00-12.15	Guy Paxman	Constraining the extent of the Greenland Ice Sheet during past warmer climates: insights from subglacial geomorphology
12.15-14.15	Lunch & Poster Session	
Cuchlaine King Symposium		
14.15-15.00	Sanjeev Gupta	Linton Medal: <i>Talk title to be confirmed</i>
15.00-15.30	Kristen Cook	Himalayan sediment bombs: understanding catastrophic sediment transport events
15.30-16.00	Jeff Warburton	Geomorphic connectivity and sediment delivery along the upland sediment cascade - the role of extreme events
16.00-16.45	Refreshment break	
16.45-17.15	Erin Harvey	The origin and hazard of catastrophic debris flows
17.15-17.45	Andres Payo	UK Coastal Hazards, Multi-hazard Controls on Flooding and Erosion (CHAMFER)
17.45-18.15	Frank Eckardt	<i>Talk title to be confirmed</i>
18.45	Conference Dinner	

Thursday 5 th September		
08.30-09.00	Refreshments	
Talk Session 5		
09.00-09.30	Al Neely	Kirkby Award: Sediment controls on the morphology of steep channels, a journey from fractures to fans
09.30-09.45	Isabelle Utley	Transformations in Exposure to Debris Flows in Post-Earthquake Sichuan, China
09.45-10.00	Will Norriss	Using analogue experiments to assess the impact of sediment supply and base-level fall rate on knickpoint morphology.
10.00-10.15	Luca Mao	Deciphering the morphology and formation processes of freshwater tufa barrages.
10.15-11.00	Refreshment break & Posters	
Talk Session 6		
11.00-11.15	K Rahman	Enhancing Coastal Resilience: Wave Dynamics and Flood Attenuation at the Medmerry Managed Realignment Site
11.15-11.30	Owen James	The Application of Webcams to Create High-Frequency Digital Elevation Models of the Intertidal Zone
11.30-11.45	Stephen Tooth	Using archival visual sources for reconstructing geomorphological changes across the mid Wales coastal uplands: challenges and opportunities
11.45-12.00	Octria Prasajo	Influence of alluvial slope on avulsion in river deltas
12.00-12.15	Lucy Clarke	How do we define academic success amidst a climate and environmental crisis?
12.15-14.15	Lunch & BSG Annual General Meeting	
Talk Session 7		
14.15-14.30	John Boardman	Removing barriers from our rivers. What are the pros and cons?
14.30-14.45	Joshua Ahmed	The importance of connectivity in sustaining the dynamics of oxbow lakes
14.45-15.00	Lucy Daniels	Let the riverscape grow! Post-restoration wood dynamics in a restored Scottish upland gravel-bed river
15.00-15.15	Richard Mason	Drivers of channel morphology in semi-alluvial boulder-bed rivers and implications for river restoration
Conference closes		

Posters:

Adam Smith	Discovery of lithospheric drip explains topographic rejuvenation of the Uinta Mountains, USA
Andrew Russell	Geomorphological impacts of large woody debris during the 2009 and 2015 floods, River Derwent, Cumbria, UK
Annie Dowse	Litter in the Skye: wind blown microplastic transport and deposition on the Isle of Skye
Anubhuti Singh	Uncovering Anthropogenic Hydrological Transformations in the Major Indian Peninsula Basin
Arushi Jha	Flood Risk Assessment in the Gandak Basin using multi-criteria decision analysis: A hydro-geomorphic approach
Arved Schwendel	Spatio-temporal floodplain evolution under the influence of valley constrictions, lateral fan input, and reworking of glacial deposits and implications for upland river restoration.
BIKIE GERALD ANICET	Modeling and spatiotemporal monitoring of marine and coastal ecosystems of the Moroccan margin of the Gulf of Cadiz and the Gulf of Guinea a hybrid approach to spaceborne Oceanography and Artificial intelligence
Brian Whalley	Geolocating geomorphological landscapes: Acroscopic solutions to track landsystem approaches to landform development
Cat Hudson	A GIS-based approach to site vegetated buffer strips for erosion control within an agricultural catchment in southern England
Catherine Sanders	Geomorphology controls the establishment of and interactions between co-occurring high-priority invasive species.
Daniel Goss	Quantifying understorey vegetation dynamics along river corridors using environmental sensing techniques
David Milan	Local topographic and texture change around large wood on bars: implications for sediment transfer
Edmore Kori	An exploration of the geoheritage of the Soutpansberg range, South Africa
Edmund Lea	Quantifying patterns of glacial erosion in Arctic landscapes
Elizabeth Orr	'Sediment Cascades and Climate Change' 2024 workshop: Insights into developing an inclusive research community
Faith Imhanze	Understanding how reservoirs influence riverine ecosystem: Investigating ecosystem health in a changing climate
Freya Muir	Future Coastal Change Predictions Using Satellite-Data-Driven Modelling
Hywel Griffiths	Giving Voices to Rivers: Promoting Creative Engagements Through Art-Science Collaborations
Isabel Wapenhans	Reconstructing late Cenozoic spatio-temporal patterns of Alpine topographic changes from glacial morphometric signatures and low-temperature thermochronology
Isabelle Finlay	Steering through the storm: Dust as a road transport hazard in Arizona.
Jamie MacManaway	Monitoring glacier evolution and evaluating glacial lake outburst flood hazard in the Bolivian Andes
Jennifer Snell	Controls on the response and recovery of the glacier and proglacial meltwater system to the December 2021 jökulhlaup, Skeiðarárjökull, Iceland.

Joanna Bullard	Geomorphological classification of aeolian dust sources in ice-free Greenland
Jodie Geldard	Combining high-resolution multibeam swath bathymetry and LiDAR elevation data to map the imprint of the Younger Dryas Lomond Glacier, central Scotland.
John Hillier	Ice Flow and Drumlin Asymmetry at Múlajökull glacier, Iceland
Joshal Bansal	Mapping Hazard Zones for Snow Avalanches in the Northern Western Himalayas Using Object-Based Image Segmentation
Manudeo Singh	'Sentinel wetlands' in drylands: what are they and how can we find them?
Martin Coombes	'HotRocks'? Biogeomorphological thermal interactions on rocky shores
Martin Dawson	The application of machine and deep learning to the identification and mapping of geomorphic and biogeomorphic features from aerial and satellite imagery – a selective review.
Matthew Baddock	Integrating field and flume observations of flow over early-stage aeolian bedforms
Maxwell Arhin	Ten Years On from Rock Coast Geomorphology. A Global Synthesis. Progress and Future Research Directions in Rock Coast Geomorphology.
Mikael Attal	Erosion rates and Holocene sediment storage dynamics inferred from in-situ ¹⁴ C concentrations in Glen Feshie, Scotland
Priyanka Negi	Investigating the Correlations Between SL-Index, Knickpoints, and Concavity Variability within the Dhauli Catchment, Western Himalaya
Reza Motamed	The Stones of Darius Palace: A Geoarchaeological Investigation in Susa, Iran
Richard Mason	Restoring river-valley connectivity: Early results from UK Stage Zero restoration
Robert Houseago	Topographic roughness and flow resistance in rough-bed rivers: flume experiments
Robi Routh	Modeling the Effects of Landslide Debris on the Mass Balance of Svínafellsjökull Using COSIPY
Rosemary Huck	Quantifying the impact of fire disturbance events on potential dust emissions from partially vegetated dune surfaces in the Namibian Kalahari
S. A. Baternay	Analyzing Slope Asymmetry and Ridge Variability in Martian Craters
S. Singh	Assessing Flood Risk and Morphodynamics of the Ghaghra River, Ganga basin, India
Sabyasachi Maiti	Fold inter-limb angle as geomorphic marker of tectonic tilting or equilibrium profile
Soumya Kundu	Quantifying Human Impacts on Suspended Sediment Delivery Using Deep Learning Frameworks
Stuart Grieve	Terrestrial Laser Scanning for forest geomorphology
Thomas Hoseason	Quantifying topographic variability in forested landscapes
Timothy Marjoribanks	Flow and wake structure around flexible submerged vegetation patches

Ying-Tong Lin	Characterizing sequential earthquake and rainstorm-driven landslides in Taiwan over a 30-year period
Yinxue Liu	First global estimation of bankfull river discharge
Zareena Khan	Global signatures of life in landscapes: magnitude and coherence of animal geomorphic effects
Zidong Yao	Linkage between sediment transport and heavy metals dispersal in catchments affected by legacy mines.