

**Advanced Research Centre (ARC), University of Glasgow  
Tuesday 21st May – Wednesday 22nd May 2024**

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**Tuesday 21<sup>st</sup> – Room 237A & B**

09:00 – 09:30 Registration & presentation upload  
09:30 – 09:40 Welcome  
09:40 – 10:40 Session 1  
10:40 – 10:45 Social Media update - Laura Young  
10:45 – 11:00 Coffee break, posters and networking  
11:00 – 11:30 Keynote #1 - Professor Mathew Williams, Chief Scientific Adviser (CSA ENRA)  
11:30 – 12:30 Session 1 - continued  
12:30 – 12:45 Fora update CryoExchange, Earth System Modelling & AI  
  
12:45 – 13:30 Lunch, posters and networking  
  
13:30 – 15:00 Session 2  
15:00 – 15:15 Coffee break, posters and networking  
15:15 – 15:30 Fora update, Comparative Planetology & Creating Sustainable Water Futures  
15:30 – 16:15 Session 3  
16:15 – 17:30 Refreshments, posters and networking  
  
19:00 - Dinner The Ashoka, Ashton Lane

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**Wednesday 22<sup>nd</sup> – Research Developer Suite**

08:30 – 09:00 Registration  
09:00 – 10:15 Session 3 - continued  
10:15 – 10:35 Coffee break, posters and networking  
10:35 – 10:45 International SAGES partners – Tina Finsterbusch, Geoverbund ABC/J  
10:45 – 12:30 Session 4  
12:30 – 13:00 Keynote #2 - Professor Julie Fitzpatrick, Chief Scientific Adviser for Scotland  
  
13:00 - 13:45 Lunch, posters and networking  
  
13:45 – 14:00 International SAGES partners – Dr Christine Barnard, ArcticNet  
14:00 – 14:45 Session 5  
14:45 – 15:00 Coffee break, posters and networking  
15:00 – 16:00 Session 5 - continued  
16:00 – 16:30 Prizes

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**Day 1, Tuesday 21st May 2024 - Session Schedules**

Title: Welcome	
Day: Tuesday 21 May 2024	
Registration: 09:00 – 09:30	
Time	Event
09:30 – 09:40	Welcome from Matteo Spagnolo, SAGES Director.

Talks Session 1: Chair - Dr Karen Cameron	
Day: Tuesday 21 <sup>st</sup> May 2024	
Start – End: 09:40 – 10:40	
Time	Event
09:40 – 09:55	Simon Cook (Dundee) - Glacial lake outburst floods in the Tropical Andes
09:55 – 10:10	Calum Hoad (Edinburgh) - Snow melt timing influences Arctic greening in heterogeneous tundra landscapes
10:10 – 10:25	Neil McDonald (Stirling) - Elucidating mysteries at the ice-ocean interface: laminated glaciomarine sediments of the last British-Irish Ice Sheet formed through alternating meltwater plume sources (The Minch, NW Scotland)
10:25 – 10:40	Will Harcourt (Aberdeen) - Surge initiation at the terminus of Borebreen (Svalbard): Drivers and impact on calving

SAGES – Social Media update – Laura Young	
Day: Tuesday 21 <sup>st</sup> May 2024	
Start – End: 10:40 – 10:45	

Coffee Break, posters and networking	
Start – End: 10:45 – 11:00	

Keynote #1 Professor Mathew Williams – Chief Scientific Adviser Environment, Natural Resources and Agriculture (CSA ENRA) “Addressing the climate and nature crises in Scotland – a science-based approach”	
Day: Tuesday 21 <sup>st</sup> May 2024	
Start – End: 11:00 – 11:30	

Talks Session 1: Chair - Dr Karen Cameron	
Day: Tuesday 21 <sup>st</sup> May 2024	
Start – End: 11:30 – 12:30	
Time	Event
11:30 – 11:45	Fernando Benitez (St Andrews) – Mapping forest degradation in South America using scikit-ec
11:45 – 12:00	Richard Williams (Glasgow) – High-resolution topographic surveys of five upland river realignment schemes show restoration increases and maintains geomorphic unit diversity at the decadal scale
12:00 – 12:15	Morrigan Jones (Aberdeen) - Comparative Glaciology: Reconstructing Glaciers on Earth and Mars to understand landscape evolution with respect to climate change
12:15 – 12:30	Steven Wallace (Aberdeen) - Leveraging Deep Learning Foundation Models for Automated Crevasses Mapping in Glacial Environments

Title: SAGES – Fora update – CryoExchange, Earth System Modelling & AI and Source to Sea
Day: Tuesday 21 <sup>st</sup> May 2024
Start – End: 12:30 – 12:45

Lunch, posters and networking
Day: Tuesday 21 <sup>st</sup> May 2024
Start – End: 12:45 – 13:30

Talks Session 2: Chair – Dr Christian Schroeder
Day: Tuesday 21 <sup>st</sup> May 2024
Start – End: 13:30 – 15:00

13:30 – 13:45	Vahid Akbari (Stirling) - Multimodal remote sensing for monitoring the spread of water hyacinth ( <i>Pontederia crassipes</i> ).
13:45 – 14:00	Louise Smith (Aberdeen) - Testing new interdisciplinary methods to understand the effects of post-medieval crofting on the vegetation ecology of the uplands
14:00 – 14:15	Robert McHenry (UHI) - Quantifying the effects of roads on predator movement, vegetation and eco-hydrology in the Flow Country peatlands.
14:15 – 14:30	Herath, Bandara (Abertay) - Optimising soil organic carbon assessment: Comparative analysis of Walkey-Black and Loss on Ignition methods
14:30 – 14:45	Beth Langley (Glasgow) - Quantifying organic carbon in Arctic and sub-Arctic marine sediments
14:45 – 15:00	Vahid Akbari (Stirling) - Big Data Analytics with Synthetic Aperture Radar for Forestry Applications

Coffee Break, posters and networking
Start – End: 15:00 – 15:15

Title: SAGES – Fora update – Comparative Planetology & Creating Sustainable Water Futures
Day: Tuesday 21 <sup>st</sup> May 2024
Start – End: 15:15 – 15:30

Talks Session 3: Chair – Dr Rebecca Wade
Day: Tuesday 21 <sup>st</sup> May 2024
Start – End: 15:30 – 16:15

Time	Event
15:30 – 15:45	Mary Abel Al Ahad (St Andrews) - Long-term exposure to air pollution and mortality in Scotland: A register-based individual-level longitudinal study
15:45 – 16:00	David Haro Monteagudo (Aberdeen) - A detailed abstraction database to plan assessing current and future water resources availability in Scotland
16:00 – 16:15	Carolyn Cload (Glasgow) - Monsoon-driven changes to river bifurcations in Nepal

Title: Refreshments, posters and networking
Day: Tuesday 21 <sup>st</sup> May 2024
Start – End: 16:15 – 17:30

Title: Conference dinner – The Ashoka, Ashton Lane
Day: Tuesday 21 <sup>st</sup> May 2024
Start 19:00

**Day 2, Wednesday 22nd May 2024 - Session Schedules**

Title: Welcome
Day: Wednesday 22 May 2024
Registration: 08:30– 09:00

Talks Session 3: Chair – Dr Rebecca Wade	
Day: Wednesday 22 <sup>nd</sup> May 2024	
Start – End: 09:00 – 10:15	
Time	Event
09:00 – 09:15	Lea Stolpmann (Glasgow) - Comparing Carbon Fluxes at Geomorphic Different Salt Marsh Sites
09:15 – 09:30	Andrew Minto (Abertay) - Assessing the vulnerability of soils to mechanical erosion through Cone Penetration Testing: Coastal and fluvial erosion case studies
09:30 – 09:45	Octria Prasojo (Glasgow) - Clyde in the face of climate change: exploring tidal flood mitigation options
09:45 – 10:00	Sian Henley (Edinburgh) - Rising Heat, Raising Hope: Climate Change for Kids
10:00 – 10:15	Amanda Owen (Glasgow) - A new sedimentary cycle: Interactions of Anthropogenic geomaterials and marine processes resulting in the rapid lithification of coastlines

Coffee Break, posters and networking
Start – End: 10:15 – 10:35

Title: International SAGES partners – Tina Finsterbusch, Geoverbund ABC/J
Day: Wednesday 22 <sup>nd</sup> May 2024
Start – End: 10:35 – 10:45

Talks Session 4: Chair – Dr Andrew Schurer	
Day: Wednesday 22 <sup>nd</sup> May 2024	
Start – End: 10:45 – 12:30	
Time	Event
10:45 – 11:00	Aideliz Montiel Alvaraz (Edinburgh) - Insights into the lithosphere of Scotland from a new 3D conductivity model of Britain based on long-period magnetotelluric data
11:00 – 11:15	Chenzhe Xu (Edinburgh) - Assessment of biochar longevity in the soil by modelling
11:15 – 11:30	John MacDonald (Glasgow) - Lithification of Anthropogenic Geomaterials into Sedimentary Rocks
11:30 – 11:45	Ayushi Arora (Edinburgh) - A low cost and easily synthesised Bi-TiO <sub>2</sub> solar photocatalyst and its journey from laboratory to field trials
11:45 – 12:00	Iain Neill (Glasgow) - Can deep closed loop geothermal contribute to a just Highlands and Islands energy transition?
12:00 – 12:15	Szabolcs Pap (UHI) - Biochar produced from sewage sludge for phosphorus removal and recovery: A Scottish case study

Keynote #2 Professor Julie Fitzpatrick, Chief Scientific Adviser for Scotland  
"Scotland – a Science and Innovation Nation".

Day: Wednesday 22<sup>nd</sup> May 2024

Start – End: 12:30 – 13:00

Lunch, posters and networking

Day: Wednesday 22<sup>nd</sup> May 2024

Start – End: 13:00 – 13:45

Title: International SAGES partners - Dr Christine Barnard, ArcticNet

Day: Wednesday 22<sup>nd</sup> May 2024

Start – End: 13:45 – 14:00

Talks Session 5: Chair – Dr Jamie Stevenson

Day: Wednesday 22<sup>nd</sup> May 2024

Start – End: 14:00 – 14:45

Time	Event
14:00 – 14:15	Mhairi Hallford (Aberdeen) - Testing the veracity of satellite-derived end of season snowline altitudes as a proxy for the glacier ELA
14:15 – 14:30	Luke Daly (Glasgow) - Windy with a chance of hail: Space weathering and its effect on asteroids and the Moon
14:30 – 14:45	Craig MacDonell (Glasgow) - Towards building robust topography with consumer-grade UAV LiDAR across wet and dry surfaces

Coffee Break, posters and networking

Start – End: 14:45 – 15:00

Talks Session 5: Chair – Dr Jamie Stevenson

Day: Wednesday 22<sup>nd</sup> May 2024

Start – End: 15:00 – 16:00

Time	Event
15:00 – 15:15	Anna Crawford (Stirling) - Representing the "footloose mechanism" in models of iceberg deterioration
15:15 – 15:30	Miracle Israel Nazarious (Aberdeen) - Exploring the habitability of extreme aquatic environments on Earth and Space
15:30– 15:45	Leam Howe (Edinburgh) - SatSchool: Observing the Earth from Space, in the Classroom
15:45 – 16:00	Freya Muir (Glasgow) - Coupling satellite-derived indicators of coastal change highlights geomorphic processes and regimes

Title: Prizes

Day: Wednesday 22<sup>nd</sup> May 2024

Start – End: 16:00 – 16:30

Title: Conference close Day: Wednesday 22<sup>nd</sup> May 2024 End 16:30

**Poster details**

Posters – Theme 1, Landscape Form, Use & Change	
Name	Title
Rachel Oien, Aberdeen	Geomorphological Analysis of Cirques in the Western Islands of Greenland
Ioanna Samakovlis, Aberdeen	Research intention declaration: Spatiotemporal development of irrigation extent and irrigation intensity in agricultural systems
Leam Howe, Edinburgh	Methods for automated mapping of late-lying snow from Sentinel-2 satellite data
Carla Huynh, Edinburgh	The Last Glacial Termination in southernmost Patagonia and implications for past climate
Anya Towers, Edinburgh	Controls on river erosion rates and sediment storage dynamics in Scotland
Eilidh Vass Payne, Edinburgh	Squished, Stressed and Salty
Nasser Al Mansoori, Glasgow	Ecological mangrove restoration
Lucy Daniels, Glasgow	The influence of wood on the post-restoration adjustment of the Allt Lorgy riverscape
Martin Lee, Glasgow	How well are rocks from outer space preserved in the Antarctic freezer?
Nina Merz, Glasgow	Assessing the contributions of <i>Bolboschoenus maritimus</i> and <i>Phragmites australis</i> to current velocity attenuation in the Inner Clyde Estuary using the Mini-Buoy
Neve Norris, Glasgow	Spatial Variability of Meander Characteristics Within a Distributive Fluvial System Experiencing an Avulsion
Yuchen Wang, Glasgow	Examining an overlooked type of beach: Urban anthropogenic mixed beaches along the coastal and estuarine environment of Scotland
Jamie MacManaway, UHI	Monitoring glacier evolution and assessing glacial lake outburst flood hazard in the Bolivian Andes

Posters – Theme 2, Carbon & Biogeochemical Cycles	
Name	Title
Haosheng Yang, Edinburgh	Microbial communities in sustainable and conventional managed soils respond differently to drought-rewetting events.
Edward Gakpe, Glasgow	Methane and Carbon dioxide measurement and quantification from River Clyde mudflat and riparian

Posters – Theme 3, Atmosphere, Oceans & Climate	
Name	Title
Jacob Seston, Aberdeen	Using Machine Learning to Analyse Sea Ice Lead effects on shipping patterns in the Canadian Arctic
Hannah Calleja, Edinburgh	Using the PiCam UV-SO <sub>2</sub> camera to measure Kīlauea’s gas plume during non-eruptive periods
Ryan Ing, Edinburgh	40 years of Landsat-derived Surface Temperatures of Greenland’s Subglacial Buoyant Meltwater Plumes and Fjord Waters
Lokesh Jain, Edinburgh	Modelling ocean melt of ice mélange at Greenland's marine-terminating glaciers
Hannah Picton, Edinburgh	A reassessment of the role of atmospheric and oceanic forcing on ice dynamics at Jakobshavn Isbræ, Ilulissat Icefjord
Kang Xie, Glasgow	A history of storminess and flooding on the west coast of Scotland reconstructed from metamorphic cave-grown speleothems
Emma Cameron, St Andrews	Exploring the controls on temperature and salinity in Greenland’s Fjords

Posters – Theme 4, Transformations in Society & Environmental Policy	
Name	Title
Sarah Halliday, Dundee	Blue Access Scotland: An inclusive and sustainable blue space infrastructure for disabled people in Scotland
Bethan Payne, Edinburgh	Microbial Consumption of Geological Disposal Facility (GDF) Gases in Lower Strength Sedimentary Rocks and Implications for Long-Term GDF Performance.
Mark Taggart, UHI	SHOT-SWITCH: Transitioning towards Pb-free hunting practices in the UK