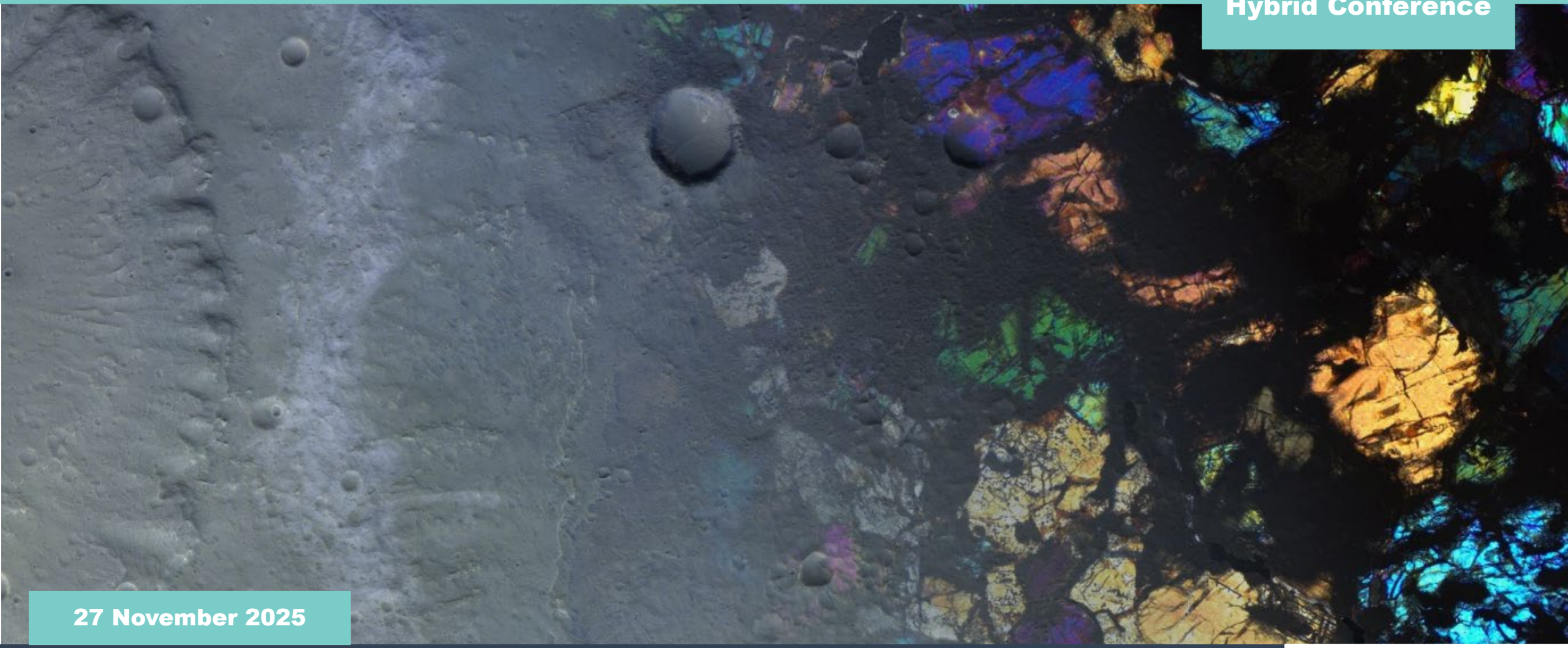
Hybrid Conference



27 November 2025

The Impact of UK Planetary Geoscience

CONFERENCE PROGRAMME

The Geological Society

Supported by

UK SPACE AGENCY

Royal Astronomical Society

Thursday 27th November 2025		
0845-0915	**Registration and refreshments**	
0915-0930	Welcome Address	Peter Fawdon, UKPF
0930-1045 Session one	Mars 2020 Perseverance: exploring Jezero crater and preparing for Mars Sample Return	Keyron Hickman-Lewis, *Birkbeck, University of London*
	A mountain of evidence for a habitable environment: Curiosity's ascent of Mount Sharp.	Steven G.Banham, *Imperial College London*
	Seeing Red with CaSSIS: Shocked Plagioclase in the Martian Highlands	Joseph McNeil, *Natural History Museum, London*
	Martian quakes and structure: UK contributions from InSight	Anna Catherine Horleston , *University of Bristol*
	Seismic evidence for a highly heterogeneous martian mantle	Constantinos Charalambous, *Imperial College London*
	Panel Session	
1045-1115	**Tea & coffee break**	
1115-1230 Session two	Understanding the formation and evolution of bodies in our Solar System through analysis of extra-terrestrial samples: The UK Cosmochemistry Network	Katherine Joy, *The University of Manchester (virtual)*
	Non-destructive mineralogy and petrology of Bennu samples using correlated imaging and diffraction at Diamond Light Source	Helena Bates, *Natural History Museum*
	Using Radiogenic Isotopes as Tools for Deciphering the Chronology of Lunar Volcanic Rocks	John Pernet-Fisher, *University of Manchester*
	Néma 001, a diorite with affinities to the acapulcoite-lodranite clan	Romain Tartese, *University of Manchester*
	Building Habitable Worlds: What Zinc Isotopes in Meteorites Reveal about Volatile Delivery to Earth and Mars	Rayssa Martins, *University of Cambridge; Imperial College London*
	Panel Session	
1230-1240	Community Session – Geological Society of London	Thomas Harvey
1240-1250	Community Session – UKSA & Q&A	Henry Ayres
1250-1300	Community Session – Royal Astronomical Society	Robert Massey
1300-1305	Group photo in the Lower Library	
1305-1400	**Lunch**	

Thursday 27th November 2025 continued...		
1400-1515 Session three	Metastable hydrate of sodium chloride: A new mineralogical indicator of rapid freezing of brines at icy worlds	Rachael Hamp, *The Open University*
	Miniature laboratory experiments on salt-water solutions under high-pressure, low-temperature conditions representative of icy moon interiors	Ines Collings, *Natural History Museum*
	Serpentinisation-driven liberation of bioessential phosphite (P(III)) on Europa: an analogue study.	Leanne Staddon, *University of St Andrews*
	Two end-member analogue sites for depositional paleoenvironments and biosignature preservation at Oxia Planum	Grace C. Nielson, *University of St Andrews*
	Biosignature Stability under Simulated Martian Conditions: Implications for sample analysis by the Rosalind Franklin Rover	Louisa J Preston, *Mullard Space Science Laboratory, UCL The Natural History Museum, London*
	Panel Session	
1515-1545	**Tea & coffee break**	
1545-1700 Session four	Science objectives and status of the EnVision Mission to Venus	Philippa Jane Mason, *Imperial College London*
	Multi-wavelength Polarimetric Radar Analysis of Lava Flows at Askja, Iceland: A Venus Analogue Study	Nikol Davidova, *Imperial College London*
	Determining Impact Angle from the Spatial Distribution of Shock Metamorphism: A Case Study of the Gosses Bluff (Tnorala) Impact Structure, Australia	Auriol Rae, *University of Edinburgh*
	Rays and secondary craters of the Tycho impact event revealed through deep learning	Giulia Magnarini, *Natural History Museum London*
	Exploring structures within the Caloris Basin	Christopher Brooks, *The Open University*
	Panel Session	
1700-1705	Closing Remarks	
1705-1800	**Drinks Reception**	

Poster Title	Author
The Fluvial History of Hadriacus Cavi	Adam Losekoot, *The Open University*
Microbial activity and biosignature preservation amongst alkaline hot springs at Lake Magadi, Kenya	Amy Quinton, *Birkbeck, University of London, and Natural History Museum, London*
Numerical Modelling of the Moon's South Pole – Aitken Basin Formation	Carys Bill, *Imperial College London*
Alteration of 2:1 clay minerals in brine: Implications for sediments on Mars	Elshan Abdullayev, *University of Georgia*
Cracks in the Map: Unresolved Topographic Anomalies on Venus from Magellan Altimetry Data	Gerard Gallardo i Peres, *Imperial College London*
PROSPECT- a miniaturised geochemistry lab for exploring lunar surface volatiles in situ	James Mortimer, *The Open University*
New Magnitude Scaling and Source Characterization of Marsquakes	Jung-Hun Song, *Imperial College London*
Classifying Iron Meteorites: A Machine Learning Approach	Louis-Alexandre Lobanov, *Birkbeck, University of London & Natural History Museum, London*
The Enfys InfraRed Spectrometer for the ExoMars Rosalind Franklin rover	Matt Gunn, *Aberystwyth University*
The application of orbital and rover observations of fluvial and lacustrine environments to the 2028 ExoMars Rosalind Franklin Rover in Oxia Planum.	Nisha Gor, *The Open University*
Geological maps as a tool for planetary exploration and the geological mapping of the ExoMars rover landing site in Oxia Planum	Peter Fawdon, *The Open University*
I would rove 500 miles: Long Range Rover Investigations on Mars	Matt Balme, *The Open University*
Anatomy of a Breakup: High-Resolution Study of a New Crater Cluster on Mars	Peter Grindrod, *Natural History Museum, UK*
Reflections from Earth: L-Band Radar Studies of Lunar South Pole Analogues	Poppy McVann, *Royal Holloway, University of London*
Sample analysis using the PanCam Training Model	Rebecca Warrilow, *MSSL, UCL*
The future exploration of the Venus	Richard Ghail, *Royal Holloway, University of London*
Late deformation and hydrofracturing of the Bright Angel formation, Jezero crater, Mars.	Robert Barnes, *Imperial College London*
Rainbow Vision across the Reality Spectrum: Preparing for Planetary Surface Spectral Sensing across Theoretical, Computational, Laboratory and Field Simulations in the UK and Beyond	Roger Stabbins, *Natural History Museum, London*
Biology of Biosignature Detection: Integrating Life Sciences and Planetary Exploration	Scott Perl, *UCLA Earth, Planetary, and Space Sciences*
A Novel Unsupervised Change Detection Method for Inter-Mission SAR images	Yao Gao, *Imperial College London*

Convenors:
Peter Fawdon – The Open University
Karen-Anne Devoil – University College London
Mark Nottingham – University of Glasgow
Stephanie Halwa – University of Manchester
Steven G. Banham – Imperial College London
Mark Fox-Powell – The Open University

THANK YOU

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