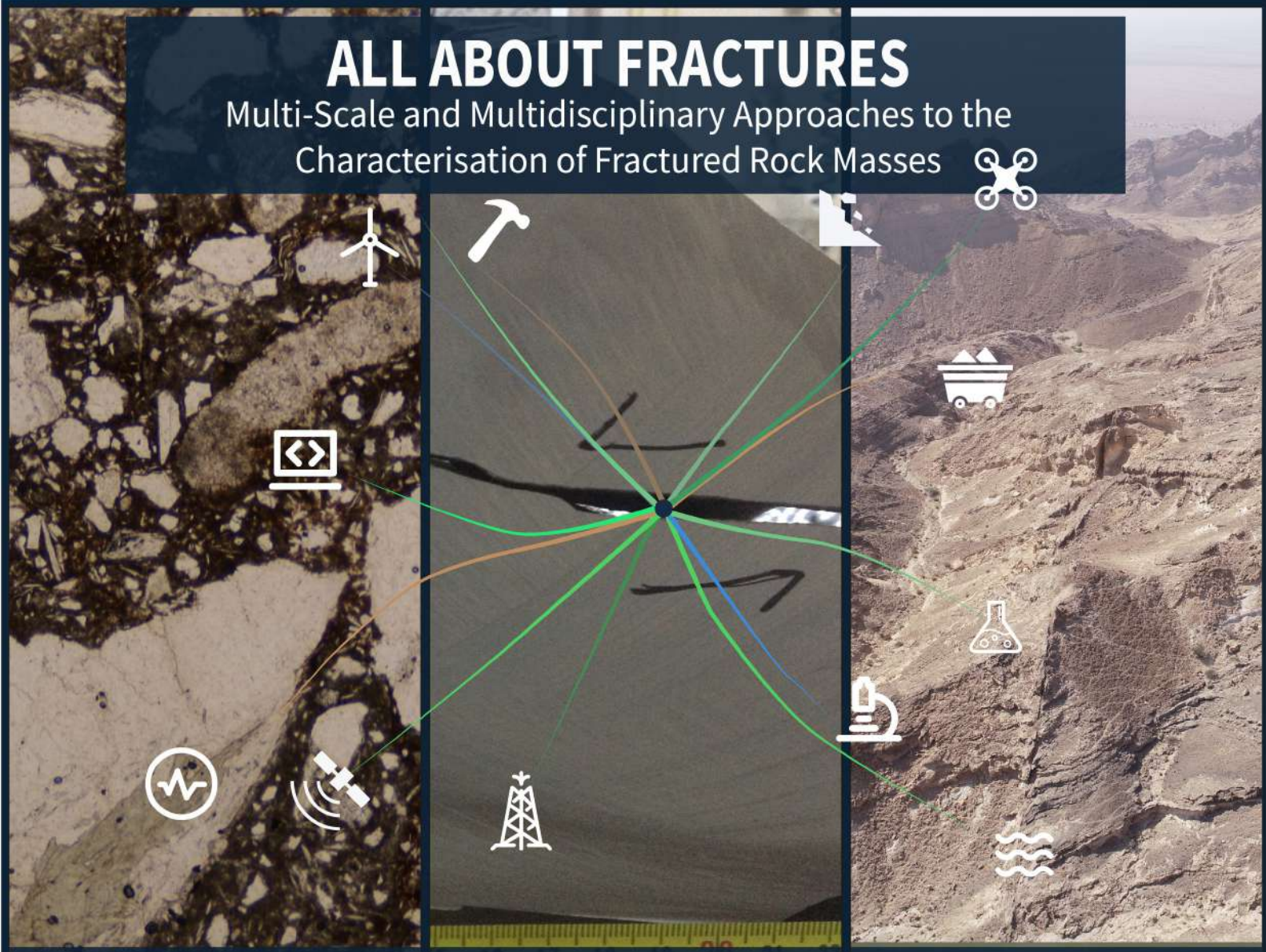
EGU 2026 Session TS1.9

Conveners: Luigi Massaro, Tümay Kadakci Koca, Elisa Mammoliti, Ludovico Manna, Niccolò Menegoni

ALL ABOUT FRACTURES

Multi-Scale and Multidisciplinary Approaches to the Characterisation of Fractured Rock Masses



MICRO-SCALE FRACTURES | MESO-SCALE FRACTURES | MACRO-SCALE FRACTURES & FAULTS

CALL FOR ABSTRACTS!

Co-organized by TS1/EMRP1/NH14

#EGU2026 #Fractures #Rock Masses #Geosciences #MultiScale

EGU26 GENERAL ASSEMBLY

All about fractures: multi-scale and multidisciplinary approaches to the characterisation of fractured rock masses

Co-organized by EMRP1/NH14

Convener: Luigi Massaro[ECS] ✉ | Co-conveners: Tumay Kadakci Koca[ECS], Elisa Mammoliti[ECS], Ludovico Manna[ECS], Niccolò Menegoni[ECS]

Abstract submission

Fracture systems are fundamental structural features controlling the mechanical, hydraulic, and geochemical behaviour of rock masses. Their influence ranges from the stability of natural and engineered slopes to fluid migration processes.

This session aims to bring together researchers from different fields to explore and compare methodologies for investigating fractured rock masses, emphasising the value of integrated multi-scale (from grain-scale microcracks to meso-scale fracture networks, up to tectonic-scale systems) and multidisciplinary approaches.

We welcome contributions across a broad geological and process-based context, linking observations and methods from field-based surveys, outcrop characterisation, laboratory testing, microstructural analysis, numerical and analogue modelling, remote sensing, and geophysical imaging. Applications to natural hazards (e.g., rockfalls, landslides), energy and resource exploration, fluid transport and storage, structural geology and tectonics, are particularly encouraged. By bringing together structural geology, rock mechanics, and engineering geology, the session aims to foster a constructive and stimulating discussion on fractures across scales and disciplines, addressing both scientific and practical challenges.