



Predictive models for strategic metal rich, granite-related ore systems based on mineral and geochemical fingerprints and footprints



MOSTMEG PROJECT (<https://mostmeg.rd.ciencias.ulisboa.pt/>)

DISSEMINATION SEMINAR

Programme

Day 1 (February 9, 2024)

9:30 – 9:45: Opening Session. Welcoming words to participants.

9:45 – 10:00: General overview of the MOSTMEG project (*A. Mateus*)

THE GÓIS-PANASQUEIRA-ARGEMELA-SEGURA STRIP

10:00 – 10:20 (+ discussion): Harmonised lithostratigraphy and structural arrangements; progress and issues open to debate (*Í. Dias da Silva*)

10:30 – 10:50 (+ discussion): Geochemical and mineralogical features of the Beiras Group metasediments; are they relevant to regional metal endowment? (*I. Martins*)

11:00 – 11:20 (+ discussion): Compositional attributes and geochronology of granite suites; implications to metallogenic processes (*A. Mateus and I. Martins*)

Coffee Break (11:30 – 12:00)

12:00 – 12:20 (+ discussion): What do mineralogical variations in contact metamorphic haloes tell us? (*M. Cathelineau*)

12:30 – 12:50 (+ discussion): What is the relevance of mapping regional shear zones? What constraints do these structures impose to the delimitation of Sn-W and Li-rich systems? (*Í. Dias da Silva and A. Mateus*)

Lunch Break (13:00 – 14:00)

NEW DATA ON SELECTED MINERALISING SYSTEMS

14:00 – 14:20 (+ discussion): Geological characteristics of the Argemela-Fundão, Mata da Rainha and Segura sectors (*Í. Dias da Silva and A. Mateus*)

14:30 – 14:50 (+ discussion): Geochemical and mineralogical features of the Li-rich aplite-pegmatite system of Segura (*M. Cathelineau and M.-C. Boiron*)

15:00 – 15:20 (+ discussion): Tin ores and fluids in the Segura district: from magmatic to hydrothermal stages (*M.-C. Boiron and M.A. Guedes*)

15:30 – 15:50 (+ discussion): The W-Sn quartz lodes of Mata da Rainha and related anomalous tourmalization; insights from integrated fluid inclusion analysis and boron isotopes (*M.-C. Boiron*)

Coffee Break (16:00 – 16:30)

16:30 – 16:50 (+ discussion): The nature of mineralising fluids involved in the Pedra-Alta (Sn-Li) and Vale Pião (W) systems (*M.A. Guedes*)

17:00 – 17:20 (+ discussion): Fluid evolution and PTX-t path during the long-lived magmatic systems related to Sn-W mineralizations Panasqueira, Mata da Rainha and Segura (*M. Cathelineau*)

Day 2 (February 10, 2024)

RELEVANT MINERAL/GEOCHEMICAL FINGERPRINTS/FOOTPRINTS TO ORE-FORMING SYSTEMS

9:30 – 9:50 (+ discussion): The usefulness of alluvial heavy minerals in the exploration of granite-related mineral systems; the case of Segura (*R. Salgueiro*)

10:00 – 10:20 (+ discussion): Indications provided by compositional variations recorded in TiO₂ polymorphs and tourmaline (*L.M. Gaspar*)

10:30 – 10:50 (+ discussion): Trace element analysis of cassiterite and its effectiveness in the recognition of different provenances (*L.M. Gaspar and P. Moita*)

Coffee Break (11:00 – 11:30)

11:30 – 12:00: Display of materials on different stands/tables for consultation and discussion.

12:00 – 12:20 (+ discussion): Geochemical proxies to granite-related mineral systems using multi-element whole-rock analysis (*I. Martins*)

12:30 – 12:50 (+ discussion): Are the REE, U, and Th contents of zircon sensitive to magmatic-hydrothermal processes concurrent of mineralisation? (*A. Mateus*)

Lunch Break (13:00 – 14:00)

PRACTICAL TOOLS AND METHODS EASILY TRANSFERABLE TO EXPLORATION SURVEYS

14:00 – 14:20 (+ discussion): Production and characterisation of heavy minerals concentrates from alluvial sediments (*R. Salgueiro*)

14:30 – 14:50 (+ discussion): The use of μ XRF to resolve textural and mineral arrangements (*M. Cathelineau*)

15:00 – 15:30 (+ discussion): Advantages of using the mineral-system approach in planning exploration surveys (*A. Mateus*)

15:30 – 16:00: Display of materials on different stands/tables for consultation and discussion.

Coffee Break (16:00 – 16:30)

16:30 – 17:00: Closing session. Ongoing work and what is expected to be concluded by June 2024. The next MOSTMEG Seminar.