

PhD School of Earth Sciences

Short Course

Submarine landslides: processes, products and implications

12h of lectures, discussions and practicals – 3 ECTS credits

Kei Ogata

22-23-24 June 2021

Prerequisites: Basic knowledge of sedimentology, stratigraphy and structural geology.

Course Outline:

- 1) Introduction to mass transport deposits and complexes, and definition of case studies – 3 hours
 - Submarine Landslides: why bother?
 - Recent MTDs in modern continental margins
 - Olistostromes and sedimentary mélanges in orogenic belts
- 2) Structural-stratigraphic principles and methods applied to the study of submarine landslide deposits in outcrops – 3 hours
 - Mass transport deposit facies and associations
 - Physical stratigraphy and structural geology of MTDs
 - Using MTDs for basinal reconstructions
- 3) Comparison and integration with modern/recent analogs and geophysical examples – 3 hours
 - Combining onshore and offshore datasets
 - Seismic-acoustic mass transport facies and associations
 - Cores and borehole data
- 4) Final discussion of case studies – 3 hours
 - Practical on selected examples
 - Critical evaluation
 - Round table and wrap up

Suggested introductory readings:

- Mountjoy, J., & Micallef, A. (2018). Submarine Landslides. Springer Geology, July, 235–250.
https://doi.org/10.1007/978-3-319-57852-1_13
- Festa, A., Ogata, K., Pini, G. A., Dilek, Y., & Alonso, J. L. (2016). Origin and significance of olistostromes in the evolution of orogenic belts: A global synthesis. Gondwana Research, 39.
<https://doi.org/10.1016/j.gr.2016.08.002>

The maximum number of participants is 15.

For registration and further information, please contact kei.ogata@unina.it