

Short course:

Measuring time – optical dating in earth sciences and archaeology



Luminescence dating is an important tool for studying the Quaternary. Classical luminescence dating dates when a grain of sand was last exposed to sunlight and subsequently buried, enabling researchers to address many questions in areas of Earth and environmental sciences as well as archaeology. Additionally, the versatility of the luminescence signal allows for novel questions to be addressed – from soil mixing rates to geological uplift rates to sediment provenancing to dating of geological and archaeological rock surfaces.

This course will provide an introduction to the principles and potential applications and limitations of optical dating. The many potential applications of luminescence methods will be discussed through case studies. Practical insights into OSL sampling in field contexts, sample preparation and environmental dose rate determination will be provided. After the course, the student will understand the principles, limitations, and potential applications of luminescence dating, be capable of critically assessing method-based scientific papers and has basic knowledge about correct OSL sampling in geological and archaeological contexts.

Short course SS 2024 in English (2.5 hours equivalent, 5 ECTS points)

Date: 24th of June – 28th of June, 2024

University of Innsbruck, Department of Geology

Innsbruck Quaternary Research Group

Assoc. Prof. Dr. Michael Meyer

<https://quaternary.uibk.ac.at/Research/Current-Research/Luminescence-geochronology.aspx>

Interested students may register for the course via the University Innsbruck VIS online tool (LV 800.713 – VU Measuring time) or via an e-mail to michael.meyer@uibk.ac.at until 31st of March.