

Short course:

From photons to aeons – 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 archaeological contexts. 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. Beginning with an overview of the principles of the method, 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 methods-based scientific papers and has basic knowledge about correct OSL sampling in geological and archaeological contexts.

Short course SS 2018 (2 hours equivalent, 4 ECTS points)

4th – 8th of June, 2018

University of Innsbruck, Department of Geology

Innsbruck Quaternary Research Group

Univ. Ass. Prof. Dr. Michael Meyer & Dr. Luke Gliganic

Interested students may register for the course via an e-mail to michael.meyer@uibk.ac.at until the 30th of April, 2018.