

## **Rates and Dates: Dating methods and applications**

Organizers: E. Enkelmann (U Calgary) and W. Matthews (U Calgary)

**Post-meeting workshop** - 1 day: Thursday May 14, 2020

The objective of this one-day course is to introduce geoscientists to the fundamentals of radiometric dating techniques. Geo- and thermochronology techniques allow scientists to quantify the timing of geologic events and with this the duration and rates of geologic processes. These methods differ in their sensitivity to temperatures ranging from mineral crystallization at  $>800$  °C to upper crustal heating and cooling at 50–100°C. This one-day short course will provide the principles of radiometric dating. Emphasis will be given to geochronology and thermochronology methods such as U-Pb, Ar-Ar, U-Th/He, and fission track dating, and the possibilities to combine multiple methods on individual samples and single grains. Focus will be given to practical aspects that will allow scientists to choose the best method, conduct sampling in the field and core storage facilities, and project budgeting for a wide range of applications. The workshop also includes a visit of the geo-and thermochronology laboratory in the Geoscience department of U Calgary.

**Enrollment cap for workshop:** 25 attendees

**Cost of workshop:** \$CAD 450 (professionals); \$CAD 150 (students)

**What's included:** workshop booklet and e-copies, morning/afternoon coffee and snacks, certificate

**Time and location:** 08:00-17:00 Thursday May 14, 2020; Dept. Geoscience, U. Calgary (details TBA)