

## **Quantifying sediment provenance and basin thermal histories**

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

**Post-meeting workshop** - 1 day: Friday May 15, 2020

The objective of this one-day course is to introduce geoscientists to the fundamentals of radiometric dating techniques and their use to study sediment basins. New developments in geo- and thermochronology techniques allow effectively dating large quantities of individual grains and the application of multiple methods on single grains. This offers to answer a wide range of geologic questions regarding sedimentary basins. These include: 1) sediment provenance and identify sediment recycling, 2) reconstructing the tectonic evolution of the sediment source region, 3) quantifying maximum and minimum temperature of sediment burial, 4) quantifying timing and rate of basin inversion, 5) determining sediment deposition age, 6) quantifying amount of removed sediment strata or tectonic overburden. 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 and time planning. 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) (\$CAD 100 discount for participants that also register for the course "Rates and Dates: Dating methods and applications")

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

**Time and location:** 08:00-17:00 Friday May 15, 2020; Dept. Geoscience, U. Calgary (details TBA)