

## **Creation of seismic models and subsequent imaging using Matlab**

Instructor: Gary Margrave, University of Calgary

This component of the Seismic Imaging Summer School will introduce students to the creation of synthetic seismic data using acoustic finite difference modelling, and to the subsequent imaging of the created responses using the Kirchhoff approach. The course will concentrate on numerical laboratory exercises using Matlab codes developed by the instructor. The goals are to impart a basic understanding of seismic data, the creation of simple synthetic datasets, and the theoretical foundation and performance of Kirchhoff migration. Critical analysis of the resulting images will also be stressed. Students will be provided with an extensive toolkit of numerical seismology algorithms and will learn the fundamentals of their use.