Master’s opportunities at Queens College, City University of New York

Master’s research projects are available for motivated students in the Volcanology, Petrology, and Tectonics research group at Queens College, City University of New York. Group members are currently working on projects in the Central American Volcanic Arc, Canary Islands, western Bangladesh, and the Canadian Shield. The department houses state of the art optical microscopy and digital imaging equipment, a SEM-EDX lab, and a newly installed fluid inclusion lab. A description of some of the available research projects is found below.

Interested students holding a Bachelor’s degree in Earth Sciences or equivalent should send a CV, academic transcripts as well as two letters of reference to Marc-Antoine Longpré (mlongpre@qc.cuny.edu) or Jeff Marsh (jmarsh@qc.cuny.edu) by March 21st.

**Quantifying thermal evolution and deep crustal dynamics in a large, hot collisional orogen**

**PI: Dr. J.H. Marsh**

Graduate research will contribute to an ongoing project that aims to define the structural, rheological, and metamorphic evolution of high-pressure mafic complexes and their bounding gneisses across a continuous section of orogenic lower crust within the western Grenville Province, Ontario, Canada. Student projects will be multidisciplinary, and may include aspects of field-based structural mapping and data collection, microstructural and petrological analysis of metamorphic assemblages and reaction textures, accessory mineral U-Pb geochronology and trace element analysis, and numerical modeling of phase equilibrium relationships and diffusion-limited kinetic processes. The results will enhance our understanding of deep crustal deformation processes and metamorphic mineral-chemical systems, and be integrated with numerical geodynamic models in order to obtain a more comprehensive understanding of deep crustal dynamics through an orogenic cycle.
Magma plumbing and degassing at arc and intraplate volcanoes

PI: Dr. M.-A. Longpré

Student research will contribute to an ongoing effort that aims to better understand the dynamics of magma plumbing and degassing at Central American and Canary Island volcanoes. Projects may involve fieldwork and petrological analysis of volcanic rocks, including the compositions of crystals, melt inclusions and fluid inclusions. The results will help constraining the past and future eruptive behavior of these volcanoes.