**ALEXANDER BIHLO**, Centre de recherches mathématiques, Université de Montréal
*Invariant and conservative parameterization schemes*

Parameterization refers to the process of including unresolved subgrid-scale processes into a numerical model of the atmosphere-ocean system. In this talk we will introduce several methods for constructing parameterization schemes that preserve symmetries and conservation laws of systems of differential equations. We will illustrate these examples by constructing invariant and conservative closure schemes for the two-dimensional incompressible Euler equations and the shallow-water equations.

This talk is based on joint work with George Bluman and Roman O. Popovych.