

# Graduate Seminar

**Speaker:**

**Alexander Bihlo,  
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**Thursday, April 5, 2018**

**1:00 p.m., HH-3017**

**Exactly conservative discretization schemes for dynamical systems**

**Abstract:**

In this talk I will introduce a method for finding exactly conservative discretization schemes for systems of ordinary differential equations. The method is constructive and applicable to any system of ordinary differential equations that has at least one first integral. I will illustrate the method with examples from various fields of the mathematical sciences, including a Lotka-Volterra system, the conservative Lorenz-1963 model, and the solar system. This is joint work with Andy Wan and Jean-Christophe Nave at McGill University.