

Distinguished Colloquium

Speaker:

**George Bluman,
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**Tuesday, June 19, 2018
1 p.m., HH-3017**

**Direct Construction of Conservation Laws and Connections between
Symmetries and CLs**

Abstract:

Conservation laws yield constants of motion for relevant data. For global convergence of an approximation procedure, it is essential that such constants of motion are preserved. The Direct Method for the construction of all CLs of a DE system will be presented. It will be shown how the DM generalizes the classical Noether theorem (which uses symmetries and only works for variational systems). Further uses of symmetries to obtain CLs will also be presented.

Much of the presented material is joint work with Stephen Anco.