

Dr. Yuly Billig

Carleton University

Friday
October 18, 2013
3:30 p.m.
Research and
Innovation Centre
(RIC) 209



Vector Fields on a Torus and Their Representation Theory

Lie theory has applications ranging from the study of the quantum world to the space exploration. An intensive development of the infinite-dimensional Lie theory that happened in the last 40 years was driven in part by string theory. In this talk we will discuss how representations of Lie algebras can be used to build various models of elementary particles. We will conclude with the recent developments in representation theory of the Lie algebra of vector fields on a torus.