# Center For Neutrino Physics Seminar

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### L∞ Algebra of Perturbative Field Theory

## Tuesday, November 29th, 2016

## 4:00 PM - 5:00 PM

## 304 Robeson Hall

The homotopy Lie algebra L∞ is an extension of Lie algebras in which the Jacobi identity for the bracket fails, but the violation can be expressed in terms of an infinite set of higher brackets. I will give an introduction to this algebra and its axioms. Then I will provide evidence that perturbative field theories provide realizations of this algebra with irreducible with n-point functions describing structure constants of the algebra.