

MATHEMATICAL PHYSICS SEMINAR, COREY LUNSFORD, NORTHWESTERN UNIVERSITY, BRNG 1255

Location: BRNG 1255

Time: Tue, March 5, 1:30 PM - 2:30 PM

Title: Lax Matrices & Clusters in Type A & C q -Deformed Open Toda Chain

Abstract: At the turn of the century, Etingof and Sevostyanov independently constructed a family of quantum integrable systems, quantizing the open Toda chain associated to a simple Lie group \mathfrak{g} . The elements of this family are parameterized by Coxeter words of the corresponding Weyl group. Twenty years later, in the works of Finkelberg, Gonin, and Tsymbaliuk, this was generalized to a family of quantum Toda chains parameterized by pairs of Coxeter words. We show that this family is actually a single cluster integrable system written in different clusters associated to cyclic double Coxeter words. Furthermore, if we restrict the action of Hamiltonians to its positive representation, these systems become unitary equivalent.