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CLUSTER ALGEBRAS SEMINAR

Speaker: Al Garver
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Date: Tuesday, February 18, 2020
Time: 12:00 PM
Location: 125 Hayes-Healy Hall

Lecture Title:
Chapoton triangles for nonkissing complexes

Abstract
For any finite real reflection group W, Chapoton defined three polynomials enumerating combinatorial objects associated with W: the F-triangle F(x,y), the H-triangle H(x,y), and the M-triangle M(x,y). In particular, F(x,y) enumerates faces of the cluster complex associated with W. Chapoton conjectured certain identities satisfied by F(x,y) and H(x,y) and by F(x,y) and M(x,y), which were later proved by Thiel and Athanasiadis, respectively. We present analogues of these three polynomials given the initial data of a nonkissing complex in the sense of Petersen, Pylyavskyy, and Speyer. The cluster complex associated with the symmetric group is a special case of the nonkissing complex. We prove the analogue of Chapoton's F(x,y) and H(x,y) identity and conjecture the analogue of his F(x,y) and H(x,y) identity. This is joint work with Thomas McConville.