

Geometry, Groups and Dynamics/GEAR Seminar
(held at the Illinois hub of GEAR)

12:00 pm, Tuesday, October 6, 2015, 345 Altgeld Hall

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Combinatorial rigidity of the arc complex

Abstract: We study the arc complex of a surface with marked points in the interior and on the boundary. We prove that the isomorphism type of the arc complex determines the topology of the underlying surface, and that in all but a few cases every automorphism is induced by a homeomorphism of the surface. This generalizes a result of Irmak-McCarthy. As an application we deduce some rigidity results for the Fomin-Shapiro-Thurston cluster algebra associated to a surface. Our proofs do not employ any known simplicial rigidity result.

[Video](#)