Mathematics, Statistics, and Computer Science   **@ UIC**

Special Colloquium

Artin groups and non-positive curvature

Jingyin Huang (Ohio State University)

Abstract: Artin groups emerged from the study of braid groups, complex hyperplane arrangements and Coxeter groups. Recently they also play an important role in the understanding of 3-manifolds. Despite the seemingly simple presentation of Artin groups, they have rather mysterious geometry with many basic questions widely open.

I will present a way of understanding certain Artin groups and Garside groups by building geometric models on which they act. These geometric models are non-positively curved in an appropriate sense, and such curvature structure yields several new results on the algorithmic, topological and geometric properties of these groups. No previous knowledge on Artin groups or Garside groups is required. Based on work with D. Osajda.

Friday, January 24 at 10:00 AM in 636 SEO