MATH/STAT COLLOQUIUM

TEDDY EINSTEIN

SWARTHMORE COLLEGE

Groups, Surfaces and Small Cancellation Theory

Max Dehn laid the foundations for small cancellation theory in the 1910s when he studied the topology of surfaces and certain groups associated to surfaces. In the 1960s, Greendlinger and others generalized Dehn's ideas to study symmetry groups of "small cancellation" complexes. In this talk, I will characterize small cancellation complexes combinatorially and construct some examples. We will see why small cancellation complexes have distinctly non-Euclidean geometry, which has interesting ramifications for group theory and low dimensional topology. As time permits, I will give some examples of applications of small cancellation theory in contemporary geometric group theory. No prior knowledge of group theory or topology will be assumed.

TUESDAY, OCTOBER 1 - SC 199

4:15PM REFRESHMENTS, 4:30PM TALK