

TEMPLE UNIVERSITY GEOMETRY FESTIVAL

Tuesday, March 24, 2009

Third talk (4:30 PM)

Ara Basmajian (Hunter College, CUNY)

will speak on

Half-turns and commutators acting on hyperbolic space

ABSTRACT: Define a half-turn to be an order two (orientation preserving or reversing) isometry of hyperbolic space. In dimensions 2 and 3, it is well known that for any two orientation preserving isometries A and B there exist half-turns, α , β , and γ , so that $A = \alpha\beta$ and $B = \beta\gamma$.

In joint work with Bernard Maskit, we consider the same situation in higher dimensions. We answer precisely the question of when an element can be written as the product of two half-turns and further address the situation mentioned above. As a corollary of our work, every orientation preserving isometry of hyperbolic space is a commutator — this is well known in dimensions two and three.

TUESDAY, 24 MARCH 2009

LECTURES AT 2:00, 3:15, 4:30 PM

COFFEE, TEA, AND REFRESHMENTS FROM 3:00–5 PM

ROOM 617, WACHMAN BUILDING

DEPARTMENT OF MATHEMATICS