

# Travels to Hyperbolic Space Starting from an $sl(2)$ Base

Georgia Benkart  
University of Wisconsin at Madison

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007 Kemeny Hall, 4:00 pm  
(Tea 3:30 pm 300 Kemeny Hall)

## Abstract

This talk will focus on the Lie algebra  $sl(2)$  of  $2 \times 2$  matrices of trace zero and a choice of basis for it that makes transparent connections with the modular group, the braid group on 3 strands, hyperbolic space, automorphisms of the Poincaré disk, Tits buildings, a geometry over the field of one element, and more.