

SBU DEPARTMENT OF MATHEMATICS &  
INSTITUTE FOR MATHEMATICAL SCIENCES

# Dynamical Systems Seminar

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*On the dimension of Furstenberg measure  
for  $SL(2, R)$  random matrix products and  
the Diophantine condition in matrix  
groups*

Let  $\mu$  be a finitely supported measure on  $SL(2, R)$  generating a non-compact and totally irreducible subgroup. Furstenberg proved that there is a unique stationary measure for the induced action on the projective line (now often called the “Furstenberg measure”), with a positive Lyapunov exponent. In joint work with M. Hochman, we computed the Hausdorff dimension of the Furstenberg measure, assuming a Diophantine condition on the support of  $\mu$ . I will also discuss some follow-up results on the Diophantine property in matrix groups and on the dimension of the support of the Furstenberg measure, joint with Y. Takahashi.

Friday - February 01, 2019  
Room Math Tower P-131      2:30 pm