

1118-11-241 **Dmitry Kleinbock*** (kleinboc@brandeis.edu), 450 South St, Department of Mathematics,
Brandeis University, Waltham, MA 02454-9110. *Homogeneous dynamics and intrinsic
approximation.*

Dynamics on homogeneous spaces has been a useful tool in solving many previously intractable Diophantine approximation problems for almost three decades, starting from the work of Margulis on the Oppenheim conjecture. In this lecture I will describe some existing connections between homogeneous dynamics and Diophantine approximation, and then show how a similar approach can help quantify the density of rational points on quadric hypersurfaces (intrinsic approximation problems). The new work is joint with Lior Fishman, Keith Merrill and David Simmons. (Received February 02, 2016)