

Geometry/Topology Seminar

The space of characters, its dynamics, and applications to arithmetic groups.

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Abstract: To any group G is associated the space $\text{Ch}(G)$ of all characters on G . After defining this space and discussing its interesting properties, I'll turn to discuss dynamics on such spaces. Our main result is that the action of any arithmetic group on the character space of its amenable/solvable radical is stiff, i.e, any probability measure which is stationary under random walks must be invariant. This generalizes a classical theorem of Furstenberg for dynamics on tori. Relying on works of Bader, Boutonnet, Houdayer, and Peterson, this stiffness result is used to deduce dichotomy statements (and 'charmenability') for higher rank arithmetic groups pertaining to their normal subgroups, dynamical systems, representation theory and more. The talks is based on a joint work with Uri Bader.

At 1-2 we plan to go for lunch with the speaker. Please email furman@uic.edu if you would like to join.

Wednesday, October 4 at 3:00 PM in 636 SEO