

abstract

[Video of this lecture](#) COMPUTER SCIENCE/DISCRETE MATH II

Topic:

Speaker:

Affiliation:

Date:

Time/Room:

In this survey lecture (which will be continued), I plan to explain basic aspects of the representation theory of finite groups, and how these are applied to various questions regarding expansion and random walks on groups. These applications include - Expanding generators in every group (Alon-Roichman, Xiao-Wigderson) - Inhomogeneous random walks on non-Abelian groups (Gowers, Babai-Nikolov-Pyber) - Shuffling of cards (Diaconis-Shahshahani) - Expansion in solvable groups (Meshulam-Wigderson) - Dimension expanders (Lubotzky-Zelmanov) No special background in group theory will be assumed.