

SIMION STOILOW INSTITUTE OF MATHEMATICS OF THE ROMANIAN ACADEMY

Quasicrystals and almost periodic measures

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IMAR, *Miron Nicolescu* amphitheater

Abstract: In this talk we will introduce the audience to the basics of mathematical diffraction theory, and the diffraction of crystals and quasicrystals. We will discuss systems with pure point (discrete) spectrum, and the deep connection between pure point spectrum and almost periodicity. We will use the approach to diffraction via Harmonic/Fourier Analysis, and we will briefly discuss the connection to spectral theory of dynamical systems and to unitary representations on Hilbert spaces.