

Nilpotent groups and their linear representations

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Abstract: Most countable groups resist a satisfying representation theory. This is in contrast with the situation for Lie groups where many Lie groups admit a satisfying representation theory. We'll define "satisfying." We then discuss how--even when a satisfying representation theory is impossible--we use recent progress in the theory of C^* -algebras to classify the C^* -algebras (i.e. rings generated by the linearization of a group representation) generated by irreducible representations of nilpotent groups. No familiarity with nilpotent groups, representation theory or C^* -algebras will be assumed.