Fixed point properties for groups acting on L^p spaces

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Abstract

Groups can be investigated by considering how they can act on suitable spaces. For example, the notion of Kazhdan's property (T), relating to how groups can act on Hilbert spaces, has been used very successfully for many applications over the last fifty years. More recently, similar definitions have been used to study actions on other L^p spaces. After outlining some of this story, I'll explain why actions of certain random groups on L^p spaces have fixed points. (Joint work with Cornelia Drutu.)