Disorder, Symmetries and Nonlinear Sigma Models

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Abstract

This talk is based on the author's article J. Math. Phys. 37 (1996) 4986. It is argued that each of the ten known universality classes for noninteracting disordered quasiparticle systems maps on a field theory of the nonlinear sigma model type, where the fields take values in one of the ten large families of Riemannian symmetric superspaces. This general classification scheme includes non-Hermitian systems.