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An Algorithmic Approach to String Phenomenology

Sunday, 28 August 2011 11:45 (25 minutes)

In this talk I will present recent work on systematic approaches to realistic particle physics in string theory. Using new techniques in computational algebraic geometry we are able to scan literally hundreds of billions of string vacua. A detailed study of the corresponding physical theories with broadly desirable physical characteristics – such as anomaly-free theories, Standard Model particle spectra and consistent

$N = 1$ supersymmetry – can dramatically advance our understanding of particle physics in string theory. In addition, I will present 200 new smooth heterotic compactifications with exact MSSM spectra.

Presenter: Dr ANDERSON, Lara (University of Pennsylvania)

Session Classification: Parallel Session 1