Particle Physics Seminar

Top tagging techniques for SUSY searches

Tuesday

April 18

4:00 P.M.

Rm 415 NSH

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Many models of supersymmetry, especially those motivated by naturalness arguments, feature top quarks in the sparticle decay chains. Depending on the model, there can be up to four top quarks in the final state, all of which can have a wide range of top quark transverse momentum. In this seminar, I will discuss top tagging techniques, both standard algorithms and algorithms optimized for use in searches for SUSY in hadronic final states. A hadronic SUSY search performed with the CMS detector will be used as a case study to highlight how these top tagging techniques can be incorporated into an analysis.