

Applications of the Recursive Jigsaw Technique to searches for gluino and stop pair production

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The “Recursive Jigsaw Technique” provides a powerful new approach to extract a kinematic basis of variables that can be used to categorise searches for new physics signals at the LHC. This talk will focus on topologies relevant to the LHC in 2015 namely strong production of gluinos and third generation squarks. We demonstrate sensitive analysis strategies to search for beyond standard model signatures by de-composing the final state objects into hemispheres and further sub-dividing them where necessary, based on the topology of interest. Backgrounds are controlled without recourse to conventional approaches based on variables such as missing transverse momentum and effective mass to select regions of sensitivity.

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