(Re)interpreting the results of new physics searches at the LHC

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Recasting searches using a simplified likelihood approach

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Searches for BSM signatures at the LHC often involve sophisticated analyses which exploit numerous kinematic and detector level discriminators to distinguish a potential signal from the large SM backgrounds and achieve the highest sensitivity. Exact re-interpretations of such searches often require detailed knowledge about the likelihood models used, which are impractical to provide to the community. In this talk, a procedure for recasting BSM searches using a simplified likelihood approach is presented along with caveats for its use. The method uses a reduced set of information on the likelihood model which could be provided by the experimental collaborations for a variety of BSM searches.

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