



LHC Seminar

SPEAKER: Francesco Romeo

TITLE: **Search for leptoquarks with large couplings to third generation quarks with CMS**

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ABSTRACT

Leptoquarks with masses at the TeV scale have been suggested as possible solutions to flavour anomalies reported in the B meson sector. Phenomenological analyses suggest that large leptoquark couplings to third generation quarks and leptons, as well as the existence of more than one leptoquark state and additional gauge boson resonances, could explain these anomalies. Owing to the large dataset collected during Run 2 of the LHC at $\sqrt{s} = 13$ TeV, these states can be probed in high transverse-momentum final states. We present a summary of searches for signatures from the pair production of leptoquarks and gauge boson resonances with large couplings to third generation quarks and leptons based on data taken in proton-proton collisions with the CMS detector.