

## **Review of New Phenomena Searches in the Top Quark Sector with the ATLAS detector**

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In this review, I propose to describe the most recent ATLAS results on search for Beyond the Standard Model (BSM) phenomena in the top quark sector. After quickly reminding why such BSM physics might appear in this sector, I will discuss in more details how the Standard Model can be extended (extra-dimension, compositeness, additional symmetry, etc ...), together with their associated experimental signatures. I will then show the various resonant searches performed in ATLAS as well as many non-resonant searches involving for e.g. vector-like quarks or the production of four top quarks. Experimental techniques such as large-R jets and boosted topology will also be discussed.

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**Classification de Session:** Review of Experimental Results