

FAKULTÄT für PHYSIK
LUDWIG-MAXIMILIANS-UNIVERSITÄT
MÜNCHEN/GARCHING

PHYSIK-DEPARTMENT
TECHNISCHE UNIVERSITÄT MÜNCHEN
MÜNCHEN/GARCHING

MLL-KOLLOQUIUM

Donnerstag, 01.06.2017, 16¹⁵ Uhr

Hörsaal der LMU in Garching, Am Coulombwall 1
Treffen zum gemeinsamen Kaffee 16 Uhr

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Searching for Supersymmetry at the Large Hadron Collider: Quo Vadis?

Supersymmetry is the most promising extension of the Standard Model of Particle Physics postulating the existence of new particles with spin differing by one half from their Standard Model partners. The introduction of these new supersymmetric particles provides a potential solution to the hierarchy problem. In addition, it provides a natural candidate for dark matter and explains the small value of the Higgs boson mass within the framework of the Grand Unified Theory. The current status of the searches for supersymmetric particles with the ATLAS experiment at the Large Hadron Collider is summarised. Future directions are also discussed with emphasis on the electroweak production of supersymmetric particles, on searches for superpartners of the third-generation fermions and on possible scenarios with R-parity violation in which the lightest supersymmetric particle is allowed to decay

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