



What happened to SUSY?

An experimentalist's perspective on winos, binos, higgsinos and our place in the Universe

Tuesday, 03 June, 2025
Auditorium & Webcast 16:00 h

ZOOM ID: 996 1652 8733
Meeting Password: 733220

Samuel Bein (UC Louvain)

I invite you to join me in reflecting on perspectives acquired after several years of searching for the supersymmetry (“SUSY”) with the CMS experiment. After guiding you on a VIP tour of some of the original motivations for SUSY and WIMP dark matter, I will describe to what lengths we have gone so far to probe, test, discover, or falsify this interesting idea. My aspiration is to quantify — or at least qualify — to what extent the prospects of discovery have shifted, not only in light of the LHC data, but data from dark matter direct detection experiments, neutrino observatories, analysis of the CMB, and more. Finally, I will discuss future experiments, including what we can expect from the Phase 2 upgrade of the CMS detector and an order of magnitude more data expected from the High-Luminosity LHC. Come with rolled up sleeves as we venture into large-parameter spaces, if occasionally into epistemological territory, always making our way back to the data, our analysis of it, and where we might go next.

