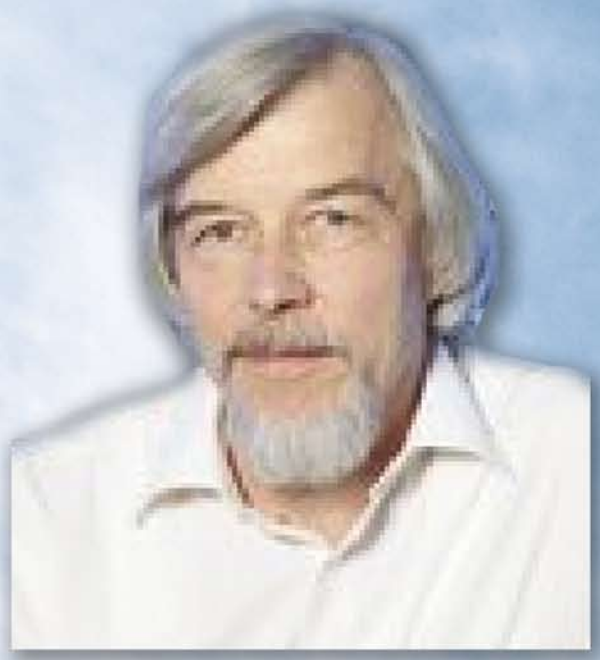
# "The Large Hadron Collider: Shedding light on the Dark Universe"

## *Séminaire général du Département de Physique de l'École Polytechnique*



Despite the great success of the Standard Model, many key questions in particle physics and cosmology are unanswered. In particular, some 95% of the Universe consist of unknown dark matter and dark energy. Today, particle physics is about to enter the Terascale, the energy regime of Tera electron Volt, opening up a new chapter in high-energy physics. This will provide a deeper understanding of the Universe and any of the insights gained could dramatically change our view of the world. With the start-up of the Large Hadron Collider (LHC) at CERN this year we expect revolutionary results explaining the origin of matter, unravelling the nature of dark matter and providing glimpses of extra spatial dimensions or grand unification of forces and hints on dark energy. The talk will address these fascinating questions and will have a look into the future of particle physics.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