COMPOSITE WEAK BOSONS AT THE LHC

PROFESSOR HARALD FRITZSCH

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NUS Contact: Ben Kek / phykcp@nus.edu.sg / 6516 3056
NTU Contact: Kel Lee / kthlee@ntu.edu.sg / 6592 1880

About the Speaker
Professor Harald Fritzsch is a theoretical physicist, who has made important contributions to Quantum Chromodynamics, to Grand Unified Theories and to the physics of quark and lepton flavors. Professor Fritzsch has served as the Chair of the Theoretical Physics at the University of Munich and he was also the President of the Society of German Scientists and Physicians, the German equivalent of the American Association for the Advancement of Sciences in USA. He has won several awards including the prestigious Award of the Volkswagen Foundation in 1989, the Medal for Science Publishing by the German Physical Society in 1994 and the Dirac Medal (UNSW) in 2008.

Abstract
The weak bosons and the leptons and quarks are composite particles. Their constituents are bound by a superstrong gauge force. The Standard Model is a low energy approximation, which fails above 0.5 TeV. No Higgs particle exists. The electroweak mixing is a dynamical process and fixes the scale of the superstrong force to about 0.5 TeV. At energies above 0.5 TeV many excitations of the weak bosons exist, which decay mainly into W and Z bosons. Events with many weak bosons should be observed soon with the LHC.