LABORATORY FOR ELEMENTARY-PARTICLE PHYSICS (LEPP)

Theory Seminar

Bernardo Zan

IHES

Walking, weakly first order phase transitions and complex CFTs

I will discuss walking behavior in gauge theories and weakly first order phase transition in statistical models. Despite being phenomena appearing in very different physical systems, they both show a region of approximate scale invariance. They can be understood as a RG flow passing between two fixed points living at complex couplings, which we call complex CFTs. By using conformal perturbation theory, knowing the conformal data of the complex CFTs allows us to make predictions on the observables of the walking theory. As an example, I will discuss the two dimensional Q-state Potts model with Q>4.

Tuesday, Nov. 13, 2018

4:00pm

438 Physical Sciences Building