

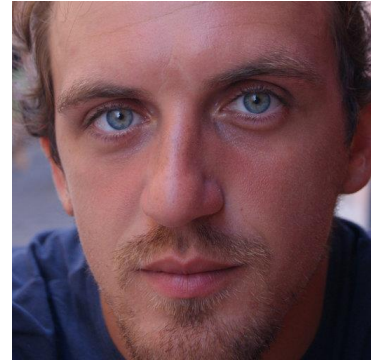
LABORATORY FOR ELEMENTARY-PARTICLE
PHYSICS (LEPP)

Theory Seminar

Diego Redigolo

Tel Aviv

**(Rel)-axions and SM
hierarchies**



I will discuss two scenarios which connects the strong CP problem to other hierarchies of the Standard Models. In the "axiflavor", solving the flavor problem with a global abelian flavor symmetry naturally leads to an axion that solves the strong CP problem and constitutes a viable Dark Matter candidate. In the less tuned window for Dark Matter the axiflavor will be probed by future flavor experiments (like NA62 or KOTO) looking for flavor violating invisible decays of the Kaon. Then, I will move on discussing how the strong CP problem is exacerbated in the context of cosmological relaxation. I will present a simple new solution of the "relaxion strong CP problem" based on the Nelson-Barr construction and discuss its theoretical challenges and phenomenological probes. In the end I will comment on further extensions of both the ideas.

Wednesday, March 21, 2018

2:00pm

401 Physical Sciences Building