

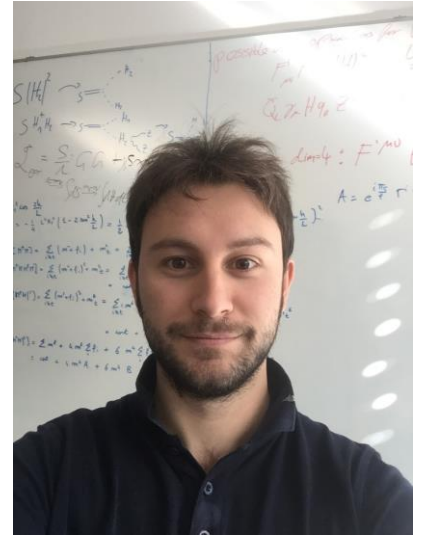
LABORATORY FOR ELEMENTARY-PARTICLE  
PHYSICS (LEPP)

# Theory Seminar

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## Softened Goldstone- symmetry breaking



Composite Higgs models provide an elegant solution to the Hierarchy Problem and new physics near the TeV scale. The lack of positive signals of physics beyond the Standard Model is, however, putting these models under pressure. We discuss a new way of explicitly breaking the global symmetry under which the Higgs is a Goldstone in Composite models. The symmetry is restored in the mixing between the elementary and composite fields by completing the former to full representations of the global symmetry. The explicit breaking is in turn given by vector-like mass terms in the elementary sector. The resulting softened explicit breaking allows for a light Higgs boson, as found at the LHC, and a heavy top quark, without the need of light top partners, which remain elusive at the LHC.

**Wednesday, April 17, 2019**

**2:00pm**

**401 Physical Sciences Building**