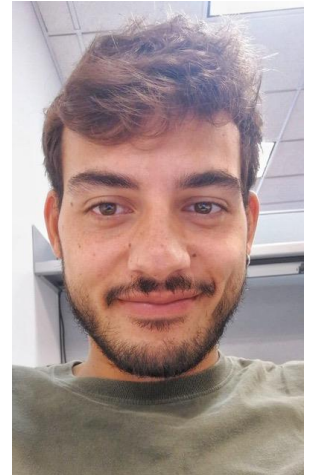


LABORATORY FOR ELEMENTARY-PARTICLE  
PHYSICS (LEPP)

# Theory Seminar

**Francesco Sgarlata**  
**SISSA, Trieste**

**Supersoft bounds and  
Higher Spins EFTs**



Using analyticity properties of the S-matrix, I will derive a class of amplitudes' constraints under the assumptions of a local, unitary and Lorentz-invariant theory. I will show that these bounds strongly constraint a wide class of Wilsonian Effective Field Theories also providing an upper bound on the physical cut-off. As interesting application, I will discuss their impact on massive higher-spins EFTs which turn out to be extremely weakly coupled.

**Friday, Oct. 25, 2019**  
**1:00pm**  
**401 Physical Sciences Building**