



LABORATORY FOR ELEMENTARY-PARTICLE  
PHYSICS (LEPP)

# Theory Seminar



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## **Anderson localisation in theory space**

I present a mechanism for generating exponential hierarchies in the couplings of a "theory space" of four dimensional field theories, which is closely analogous to the Anderson localisation of electron energy eigenstates along a one dimensional wire. After discussing the parametric size of this phenomenon, I give two toy applications to hierarchies in the Standard Model - those of small neutrino masses and hierarchical quark Yukawas.

**Wednesday, March 14, 2018**  
**2:00pm**  
**401 Physical Sciences Building**