



LABORATORY FOR ELEMENTARY-PARTICLE  
PHYSICS (LEPP)

# Theory Seminar



**Paul Oehlmann**  
**Virginia Tech**

**F-theory and global  
models of high energy  
physics**

Using F-theory, we construct globally consistent 4d three family models of particle physics including Trinification, Pati-Salam as well as the MSSM. To forbid dimension four proton decay of the MSSM we additionally engineer a matter parity. We emphasize the geometry of the construction, starting first with the appropriate torus fiber of the fourfold which we complete with sufficient base and fluxes to satisfy tadpole and quantization conditions.

**Wednesday, Sept 12, 2018**  
**2:00pm**

**438 Physical Sciences Building**

