

# SPAMS

Simple Person's Applied Math Seminar

**Flavor:** *Projective Representations in Quantum Mechanics*, by **Ethan Sussman**

**Ingredients** : When they are first learning quantum mechanics, central extensions are every student's bane, even if they don't necessarily know them by that name. They seem to pop up everywhere, and they are hard to interpret physically. In this talk, we will learn what precisely a central extension is, what they have to do with projective representations, and why they are so ubiquitous. Along the way, we will cover a theorem of Bargmann and learn why thinking projectively is critical when constructing quantum mechanical models. Time permitting, we will look at some neat examples coming from elementary quantum mechanics and conformal field theory.

**Best Before:** Apr 11<sup>st</sup> 2019, 6:00–7:00pm  
at Room 2-132

Please visit <https://math.mit.edu/spams> for detailed nutrition information for SPAMS.

