The Trivial Notions Seminar
Proudly Announces

Two-Plane Bundles on Complex Projective Three-Space

A talk by
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Abstract

In this talk, I will explain the classification of complex, 2-dimensional (topological) vector bundles on $\mathbb{CP}^3$. Equivalence classes of these bundles lie in bijection with homotopy classes of maps into the classifying space $\text{BU}(2)$. So, one route to understanding these bundles is to analyze the homotopical structure of $\text{BU}(2)$, and use this to build all maps from $\mathbb{CP}^3$ into it. In taking this approach, we encounter friendly instances of important tools in algebraic topology: the Postnikov tower (of $\text{BU}(2)$), the Serre spectral sequence (for specific principal fibrations), Steenrod operations (for cohomology of small Eilenberg–Mac Lane spaces), and more.

Friday, December 6th, at 12:30 pm
Science Center 530