

We [Irving Kaplansky and Paul Halmos] share a philosophy about linear algebra: we think basis-free, we write basis-free, but when the chips are down we close the office door and compute with matrices like fury.

—Irving Kaplansky

# THE TRIVIAL NOTIONS SEMINAR

Keeley Hoek

will speak on

Vector-free linear algebra

ABSTRACT

We are taught at a young age to avoid choosing bases: in this talk we adopt the natural continuation of this philosophy and avoid those pesky vectors altogether. Thinly-veiled veneers—such as  $\mathbb{k}^n \rightarrow V$ —are also not allowed! By the end of the hour we'll have built up all of the basic pieces (determinants, Jordan canonical form, spectral theorem, singular-value decomposition) from this hyper-pure perspective.<sup>1</sup>

In other words, this is an opportunity for Keeley to self-indulge and do linear algebra once and for all the Right™ way. 😊

Tuesday, May 3, 2022

at 1:30 pm

Science Center, Room 232

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<sup>1</sup>You'll have to come along to see how far we're really able to get without busting out the necronomicon.