Title: **The higher separable closure of the real numbers**

Abstract:

There is a sense in which the symmetric monoidal category of complex vector spaces does not have solutions to all "polynomial equations"; adjoining one such solution leads to the category of super vector spaces. Remarkably, a theorem of Deligne suggests that this category now is "algebraically closed" and is in fact uniquely characterized as the "algebraic closure" of the category of vector spaces. In this talk, I will outline ongoing joint work with Theo Johnson-Freyd on a higher categorical Galois theory in which the complex numbers are merely the first rung in a ladder of higher-categorical separable closures of the real numbers.