

## **Pseudofinite Model Theory**

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Abstract: In model theory, we study mathematical structures and the things we can say about them—classically, in first-order logic. Pseudofinite structures are infinite mathematical structures that "behave like" finite structures. In this talk, I will outline the basics of model theory and first-order logic, and clarify what I mean by "behave like" in the previous sentence. I will illustrate pseudofiniteness with some examples and non-examples, and share some instances of how pseudofinite model theory has been used to answer concrete questions in combinatorics.



