Cornell University, USA jeffrey.bergfalk@gmail.com

## Colorings and subdivisions: a partition principle for higher limits

The focus of this talk will be the recent work A descriptive approach to higher derived limits, joint with Nathaniel Bannister, Justin Moore, and Stevo Todorčević. This work's formulation and analysis of a family of multidimensional partition principles  $\mathrm{PH}_n$  synthesize a number of recent results in the set theoretic study of higher derived limits. We'll survey what's known about these principles, as well as a simplicial perspective on the relevant combinatorics which they suggest.