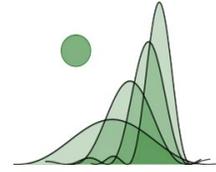




Colloquium Series  
Department of  
Mathematics & Statistics



**Dr. Hector Banos Cervantes**  
Cal State San Bernardino



## **Bringing a Spoon to a Sword Fight: Challenges of Modeling Evolution**

**Abstract:** Mathematical phylogenetics uses mathematics and probability to build models that help us infer how different species are related based on their DNA sequences. However, evolution is extremely complicated, and our models must simplify reality to be usable. These simplifications often work well, but sometimes they can mislead us. In this talk, we will look at such a situation where this happens. Specifically, when there is hybridization, that is, when two different species combine to form a new one. We will discuss what can go wrong when using simple models for more complicated evolutionary histories, and why understanding these limitations matters for both mathematicians and biologists.

March 4, 2026, 1:05-1:50 pm, room 4-2-314

**Join remotely via Zoom:** <https://cpp.zoom.us/j/84908036425>