The Math/Stats Colloquium
Department of Mathematics and Statistics
San José State University

Jon Rawski

SJSU Linguistics

The mathematics of language and learning

WED OCT 09, 2024, MH320

Abstract: Mathematics is the study of structures, and mathematical linguistics studies linguistic structures. Understanding the fundamental laws of language created entire fields of mathematics and statistics, like formal language theory, computational learning theory, and beyond. This talk will tour some foundational results in the field. We will discuss impossibility theorems regarding: What can be a possible language? Under what conditions is a language learnable (or not) from data? What are the limitations of so-called "language models"? Under each of these questions lies a surprising amount of algebraic structure, which we will explore.

Background: No specific background required; familiarity with discrete math and abstract algebra may be helpful.

About the speaker: Jon Rawski received his PhD from Stony Brook Univ., and is an Asst. Prof. in the Dept. of Linguistics and Language Development at SJSU. He works in mathematical linguistics, theoretical computer science, and cognitive science.

SNACKS IN MACQUARRIE HALL 331B AT 2:40PM
TALK STARTS AT 3:00PM

For more information, see our full schedule at:

http://www.timhsu.net/colloq/