

## Algebra, Combinatorics and Number Theory Seminar

Date. Wednesday, February 26, 2025 - 3pm

Place. Room FC1 004

Speaker. Lucas Queiroz Pinto - Universidade de São Paulo (USP)

**Title.** Weight sl(2)-modules as Gelfand-Tsetlin modules: a friendly introduction for Gelfand-Tsetlin Theory

## Abstract.

In the previous talk, we revisited some general aspects of the representation theory of the Lie algebra gl(n) and used them as motivation to study Gelfand-Tsetlin modules via Drinfeld categories. In this seminar, we will take a step back to build a solid foundation before diving into Gelfand-Tsetlin modules. We will start by recalling key results from the classical representation theory of sl(2), ensuring that we have the necessary tools and intuition. With this groundwork in place, we will then explore how Gelfand-Tsetlin modules appear in this setting. If time allows, we will also look at some examples for sl(3).









