Student Seminar



## Exploring Graph Coloring and Its Real-World Applications

## by Ayah Almousa, USC Bridge to Faculty Fellow



In this interactive session, we will explore the fundamentals of graph theory through problemsolving activities. Starting with an introduction to graphs, we will engage with guided worksheets to discover key properties such as graph isomorphisms and planarity. After we build a foundation, we'll delve into graph coloring and its significance in solving practical problems like map coloring, scheduling, and solving sudoku puzzles.

Bio: Ayah Almousa joined the Department of Mathematics this fall as a new Bridge to Faculty fellow. Her research lies at the intersection of algebra (the study of polynomials), combinatorics (the study of counting), and representation theory (the study of symmetry). She earned her PhD in Mathematics from Cornell University in 2021 and completed a postdoc at the University of Minnesota - Twin Cities from 2021 to 2024. She holds a B.S. in Physics and Mathematics from the University of Wisconsin-Madison.

Wednesday 2<sup>nd</sup> October 2024 at 7pm LeConte 118

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