



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



Madalyn R. Radlauer

SJSU (Chemistry)

*Chemistry and Group Theory:
Symmetry, Spectroscopy, and
Tabletop Games*

WED NOV 20, 2024, MH320

Abstract: Molecular symmetry turns out to impact the ways that electromagnetic radiation (i.e., light) interacts with a molecule. This talk will discuss ways that chemists take advantage of group theory to categorize molecules into “point groups” that allow us to make predictions and interpret spectroscopic data. It will also examine visual representations of point groups — including a tabletop game called SALC: An Orbital Arrangement Game — that allow students to connect with the material even if they have not taken linear algebra.

Background: No background necessary.

About the speaker: Madalyn R. Radlauer is an Assoc. Prof. of Chemistry at SJSU who loves molecular symmetry, inorganic chemistry, and tabletop games. She earned her PhD in Chemistry at Caltech and did postdoctoral research at U. Minn - Twin Cities. Her research group at SJSU focuses on developing catalysts (molecules that work to facilitate challenging chemical reactions), with potential applications in environmental remediation, energy production, and human health.

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/>