



Department of Physics and Astronomy  
SPRING 2023 Colloquium Series

# “Evaluating the Thermal Conductivity of 3D-Printed PLA”

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*Sac State Physics Major Senior Project Research*

This study aims to enhance our understanding of the low-temperature thermal properties of 3D-printed thermoplastics, specifically Polylactic Acid (PLA). The growing accessibility of commercial 3D printers has facilitated the rapid and cost-effective creation of custom components. Our research investigates the suitability of these components for cryogenic applications by employing a novel approach to measure thermal conductivity – the wire-based  $3\omega$  technique.

**\*Tuesday, May 9, 2023**

**4:00 - 5:20PM**

**MND1015**

*Open & Free to all students, faculty and public*