

Mathematical Physics Seminar

Speaker: Matvei Libine (Math, IU Bloomington)

Wed, Jan 26, 2022

2:30-3:30 pm (unusual time!)

Title: Quaternionic Analysis, Vacuum Polarization and Quaternionic Algebras

Abstract:

I will give a quick colloquium-style introduction to quaternionic analysis. Then I will present recent developments in quaternionic analysis from the point of view of representation theory of the conformal group $GL(2, \mathbb{H})$ (group locally isomorphic to $O(5,1)$). In particular, I will talk about connections with vacuum polarization diagrams from particle physics and then about a new algebra structure on quaternionic functions that commutes with the action of $GL(2, \mathbb{H})$. I will not assume any knowledge of quaternionic analysis from the audience.

This is a joint work with Igor Frenkel from Yale University.

Meeting ID: **953 1862 5523**

Passcode: **184222**

<https://purdue-edu.zoom.us/j/>