

Thursday, March 23rd, 2023

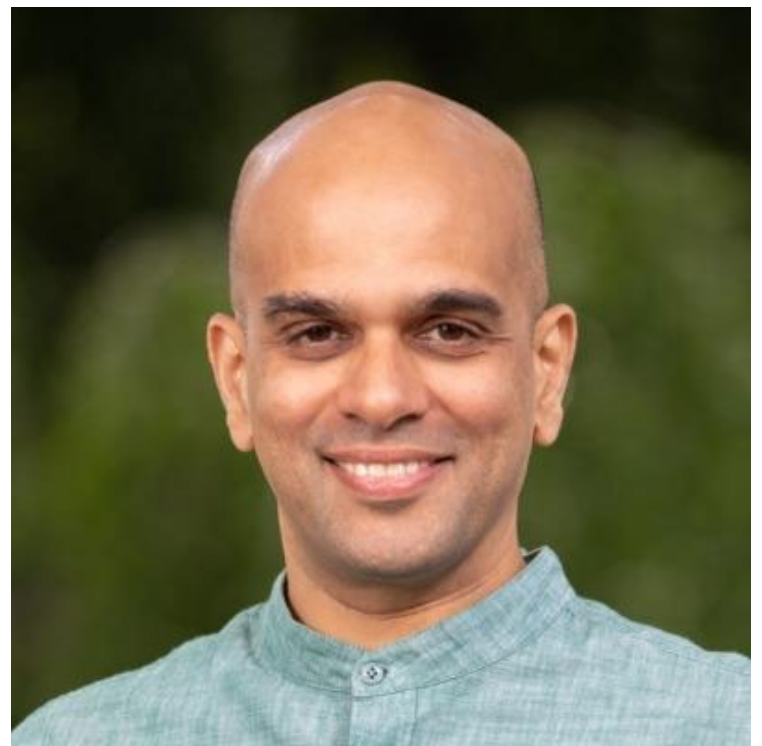
Refreshments at 3:15pm in PSF 186

Colloquium from 3:30 PM – 4:30 PM in PSF 101

Fundamental Physics from Complex Materials

Professor Ribhu Kaul

Penn State University



Abstract:

A beautiful aspect of condensed matter physics is how fundamental ideas in theoretical physics emerge from studying phenomena in seemingly complex materials. In the first half of this colloquium, I will present a “broad-interest” introduction of how this happened historically in the Ising model a century ago and an overview of the wonderful abstract theoretical ideas that have continually emerged from the Ising model in these 100 years (explained in a non-technical manner). In the second half, I will show how some of these abstract ideas were useful in my own study of a THz optics experiment on a particular material, CoNb₂O₆ and how our study fits into some of the bigger goals of my field.

Biography:

Ribhu Kaul is a professor of physics at Pennsylvania State University, who has broad interests in condensed matter theory ranging from the details of material science to the emergence of quantum field theory in these systems.

Host: Prof. Onur Erten

View our Spring 2023 Physics Colloquium schedule at <https://physics.asu.edu/colloquia>