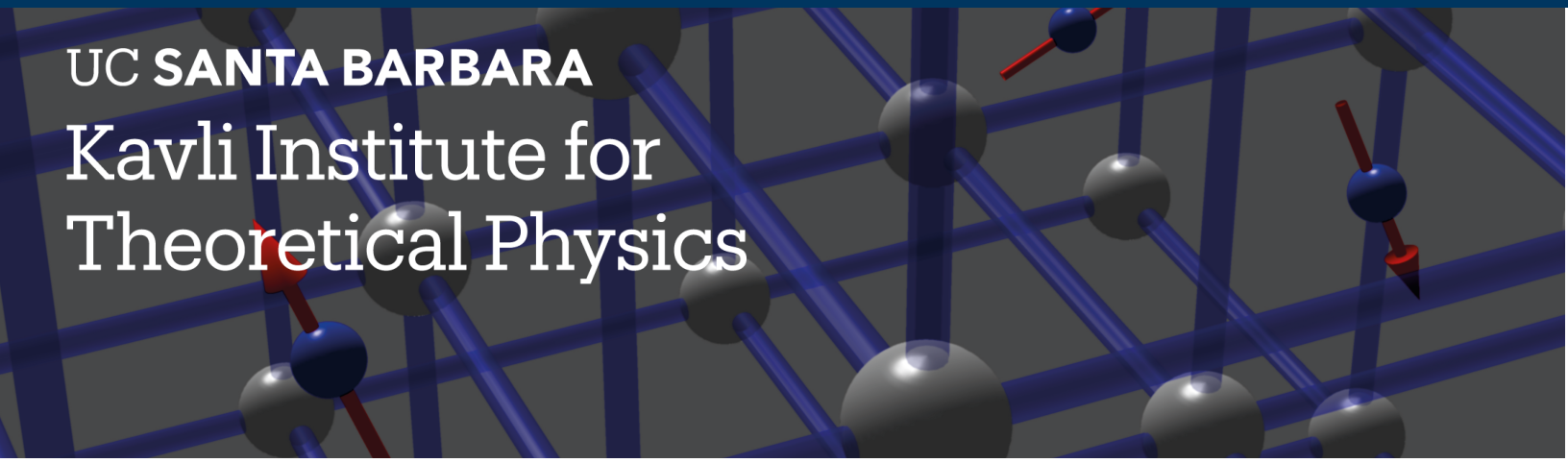


UC **SANTA BARBARA**

Kavli Institute for Theoretical Physics

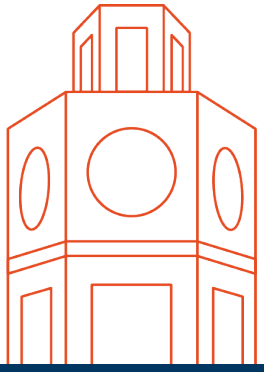
Chalk Talk

All But Frustrating:
When Quantum Materials Meet Topology

Quantum materials exhibit exotic physical properties that are a manifestation of the quantum nature of their constituent electrons. Examples are superconductivity, quantum magnetism or spin liquid phases. At the same time, the mathematical field of topology is recently becoming a key ingredient to understand these quantum-mechanical states of matter and even predict new emerging phenomena. We will explore the combination of the two fields in the context of their historical development, and uncover what 'frustration' has to do with it.

Tuesday, September 17th
5:30 PM - Courtyard Reception
6:15 - 7:15 PM - Presentation and Discussion

Attendance by Reservation only
RSVP by Thursday, September 12th
Online at https://www.kitp.ucsb.edu/chalk-talk-rsvp
By phone 805-893-6350 or email friends@kitp.ucsb.edu



Roser Valenti is professor of physics at the Goethe University Frankfurt. She received her Ph.D. degree in theoretical physics at the University of Barcelona. Before joining Frankfurt, she was postdoctoral Fulbright fellow at the University of Florida at Gainesville, Habilitation researcher at the University of Dortmund and Heisenberg fellow at the University of Saarland, Germany. From 2009 to 2012 she was vice-president of the Goethe University Frankfurt and since 2016 she is an American Physical Society Fellow. Her field of research is the microscopic modeling of correlated materials such as unconventional superconductors, frustrated magnets and systems with topologically non-trivial states via a combination of first-principles- based methods and many-body numerical techniques.

Lot 10 parking
As you enter campus from Highway 217, turn right onto Mesa Rd, merge into the left lane, and at the stop light turn left into Parking Structure 10. **A parking permit WILL BE PROVIDED to you upon entry.** Please display the permit on your dashboard. KITP is the orange building right next door to the parking structure.