

CONDENSED MATTER COLLOQUIUM SERIES

#Ankara

Nur Ünal

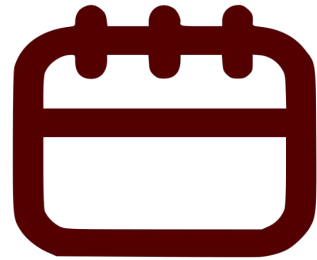
University of Cambridge





Multi-level Topology and Non-Abelian Braiding of Band Singularities

I will present new exotic topologies involving non-Abelian braiding of band nodes in multi-gap non-interacting settings. In systems with a real Bloch Hamiltonian band nodes can be characterised by a non-Abelian frame-rotation charge. The ability of these band nodes to annihilate pairwise is path dependent, since by braiding nodes in adjacent gaps the sign of their charges can be changed. I will demonstrate new anomalous topological phases in out-of-equilibrium settings with no static counterparts. I will demonstrate an interferometry scheme allowing for probing these non-Abelian charges in quantum simulators.

Nur Unal is a theoretical physicist at the University of Cambridge since 2020, first holding a Royal Society Newton International Fellowship and then a Marie Skłodowska-Curie European Fellowship. She is also a senior postdoctoral fellow of Trinity College Cambridge. Before Cambridge, She was a postdoctoral researcher at the Max-Planck Institute PKS in Dresden, Germany. Her PhD is from Bilkent University in Turkey, during the last year of which she worked at Cornell University as a visiting researcher.

 January, 30
Tuesday

 19:00, (Ankara Time)

 Click [here](#) for zoom link
Meeting ID: 432 931 6595
Password: 326852

For more information visit
<http://cmcolloq.bilkent.edu.tr>

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