



## Physical Sciences Seminar

# Entanglement order parameters from symmetric tensor networks

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Host: Maksym Serbyn

Tensor networks provide a framework to describe complex entanglement quantum many-body systems from local tensors, which highlight the role played by quantum entanglement in the physics of those systems. This allows us to understand how different symmetries - acting either on the physical or on the entanglement degrees of freedom - play together to form the rich physical behavior displayed by such systems, in particular order beyond the Landau paradigm. In my talk, I will provide an introduction to tensor networks and show how their ability to combine symmetries, locality, and entanglement allows us to construct novel probes for the quantum phenomena displayed by those systems, and how those entanglement order parameters enable us to probe both topological and conventional phase transitions in novel ways.

**Tuesday, October 19, 2021 11:00am - 12:00pm**

Big Seminar Room A (small) 27 people (I23.EG.102)



This invitation is valid as a ticket for the ISTA Shuttle from and to Heiligenstadt Station.

Please find a schedule of the ISTA Shuttle on our webpage:

<https://ista.ac.at/en/campus/how-to-get-here/> The ISTA Shuttle bus is marked ISTA Shuttle (#142) and has the Institute Logo printed on the side.