IST AUSTRIA
Institute of Science and Technology

Public outreach event

IST Lecture

Steven Simon (Oxford University)

Host: Maksym Serbyn

Topologically ordered matter and why you should be interested

In two dimensional topologically ordered matter, processes depend on gross topology rather than detailed geometry. Thinking in 2+1 dimensions, particle world lines can be interpreted as knots or links, and the amplitude for certain processes becomes a topological invariant of that link. While sounding rather exotic, we believe that such phases of matter not only exist, but have actually been observed in quantum Hall experiments, and could provide a uniquely practical route to building a quantum computer. Possibilities have also been proposed for creating similar physics in systems ranging from superfluid helium to strontium ruthenate to semiconductor-superconductor junctions to quantum wires to spin systems to graphene to cold atoms.

Wednesday, December 11, 2019 04:30pm - 05:30pm

IST Austria Campus Raiffeisen Lecture Hall

This invitation is valid as a ticket for the IST Shuttle from and to Heiligenstadt Station. Please find a schedule of the IST Shuttle on our webpage: https://ist.ac.at/en/campus/how-to-get-here/ The IST Shuttle bus is marked IST Shuttle (#142) and has the Institute Logo printed on the side.