



Physical Sciences Seminar

Parton paradigm for the fractional quantum Hall effect

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The fractional quantum Hall effect (FQHE) in the lowest Landau level (LLL) is understood in a unified manner in terms of composite fermions, which are bound states of electrons and vortices. The strongest states in the LLL are understood as integer quantum Hall states of composite fermions and the compressible $1/2$ state as a Fermi liquid of composite fermions. For the FQHE in the second LL, such a unified description does not exist: experimentally observed states are described by different physical mechanisms. In this talk, I will discuss our first steps towards a unified understanding of states in the second LL using the parton theory. I will elucidate in detail our recent work on the parton construction of wave functions to describe many of the FQH states observed in the second LL.

Tuesday, May 14, 2019 11:00am - 12:00pm

IST Austria Campus Mondi Seminar Room 2, Central Building



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.