

JITCP Seminar

THE UNIVERSITY OF HONG KONG
HKU-UCAS JOINT INSTITUTE OF THEORETICAL AND COMPUTATIONAL PHYSICS
[Thursday afternoon, 4 pm, Zoom (online)]

Topological excitations and quantities in the fractional quantum Hall states

Prof. Zixiang HU

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It was found that many of the fractional quantum Hall ground state model wavefunctions could be written as Jack polynomials with different parameters. In this talk, I will show that except the ground state, the low-lying excited states of the FQH liquids, such as the edge excitations, the bulk excitations and its related topological quantities could also be explored in this context. I will give two examples to consider the scaling dimension and fractional statistics of the FQH quasiparticles. I will also present some recent results of the topological quantity calculations from the momentum polarization, such as the Hall viscosity and guiding center spin, etc.

About the speaker:

Dr. Zixiang Hu got his Ph.D. from Zhejiang University in 2008. He was a visiting scholar at the National high magnetic lab in Tallahassee, U.S., a postdoctoral researcher in Asia Pacific Center for Theoretical Physics (APCTP) in Pohang, Korea and Princeton University, U.S. He joined Chongqing University as a professor since 2013. He is mainly interested in the theory of fractional quantum Hall effects and strongly correlated numerical calculation.

Online Zoom Seminar

Thursday, November 17, 2022, 4:00 pm

Meeting ID: 983 1445 0886

Password: 25600

<https://hku.zoom.us/j/98314450886?pwd=aXdrSE5La2VBVTZVTVpQU0NGSjF6dz09>

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