重庆大学研究生全球国际学术课程

二维强关联拓扑理论

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Topics	Schedule
Lecture 1. Quantum mechanics (a) Hilbert space, coherent states and geometry of harmonic oscillators (b) Spherical geometry and second quantization	2022/1/4 19:00-20:30 Tuesday
Lecture 2. Integer quantum Hall effect (a) Hamiltonians with a magnetic field (b) Landau levels on the sphere	2022/1/6 19:00-20:30 Thursday
Lecture 3. Interaction and entanglement (a) The electron-electron interaction and pseudopotentials (b) Model wavefunctions and reduced density matrices	2022/1/10 19:00-20:30 Monday
Lecture 4. Fractional quantum Hall effect (a) A general introduction and the GMP algebra (b) The local exclusion conditions	2022/1/12 19:00-20:30 Wednesday
Lecture 5. Particle statistics I (a) Fermions, bosons and anyons (b) Conformal Hilbert space I	
Lecture 6. Particle statistics II (a) Berry phase and non-abelions (b) Conformal Hilbert space II	
Lecture 7. Emergent particles (a) Bosonization in 2D (b) Fermionization in 2D	
Lecture 8. Single particle and strongly correlated topological orders (a) A unfied picture in the context of quantum Hall effect (b) Research topics	