

Mini-course

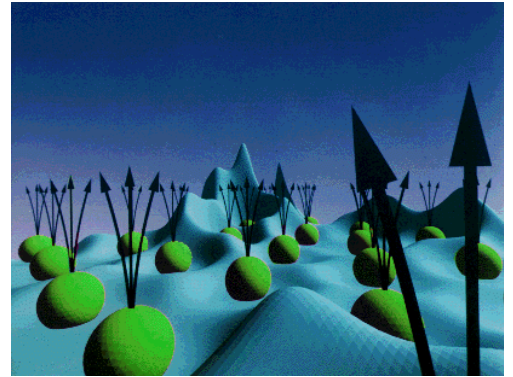
Some Remarks on the Quantum Hall Effect

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Abstract:

These lectures are intended for nonspecialists, the aim being to indicate a few research directions in the quantum Hall effect and incompressible quantum fluids. In the first lecture, I introduce the Landau levels on the disc, the torus and the sphere and explain how the bulk incompressible wave functions can be modelled through effective interactions. I review some well known wave functions (Laughlin, Jain, Moore-Read). In the second lecture, I consider the excitations of these wave functions and try to motivate the fractional statistics they obey. I review the bulk-edge correspondence, and relate it to a boundary conformal field theory and explain why the CFT approach accounts for bulk properties through entanglement. In the last lecture, I describe the recent MPS approach to wave functions and attempt to relate the Hall effect to deformations of the area preserving diffeomorphisms.



Where:

Instituto de Física de São Carlos
(IFSC-USP). Sala F-210.

When:

Nov 10, 10:30 - 11:50

Nov 17, 10:30 - 11:50

Nov 19, 10:30 - 11:50

For more information, please contact Rodrigo Pereira at rpereira@ifsc.usp.br.