Institut Henri Poincaré

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String Theory in Greater Paris

Rencontres Théoriciennes

“Supergravité, théorie des cordes et théorie M”

Jeudi 3 Décembre 2015, 11:45

David Tong

Cambridge

The Supersymmetric Quantum Hall Effect

I'll describe a theory in d=2+1 dimensions which is supersymmetric but non-relativistic. The low-energy physics is that of the fractional quantum Hall effect. I'll show that the ground state wavefunction is in the same universality class as the Laughlin wavefunction. I'll also show that the quasi-hole excitations are anyons but, in contrast to the usual quantum Hall story, this doesn't need any assumptions about "plasma analogies"

Institut Henri Poincaré, salle 314, 3ème étage