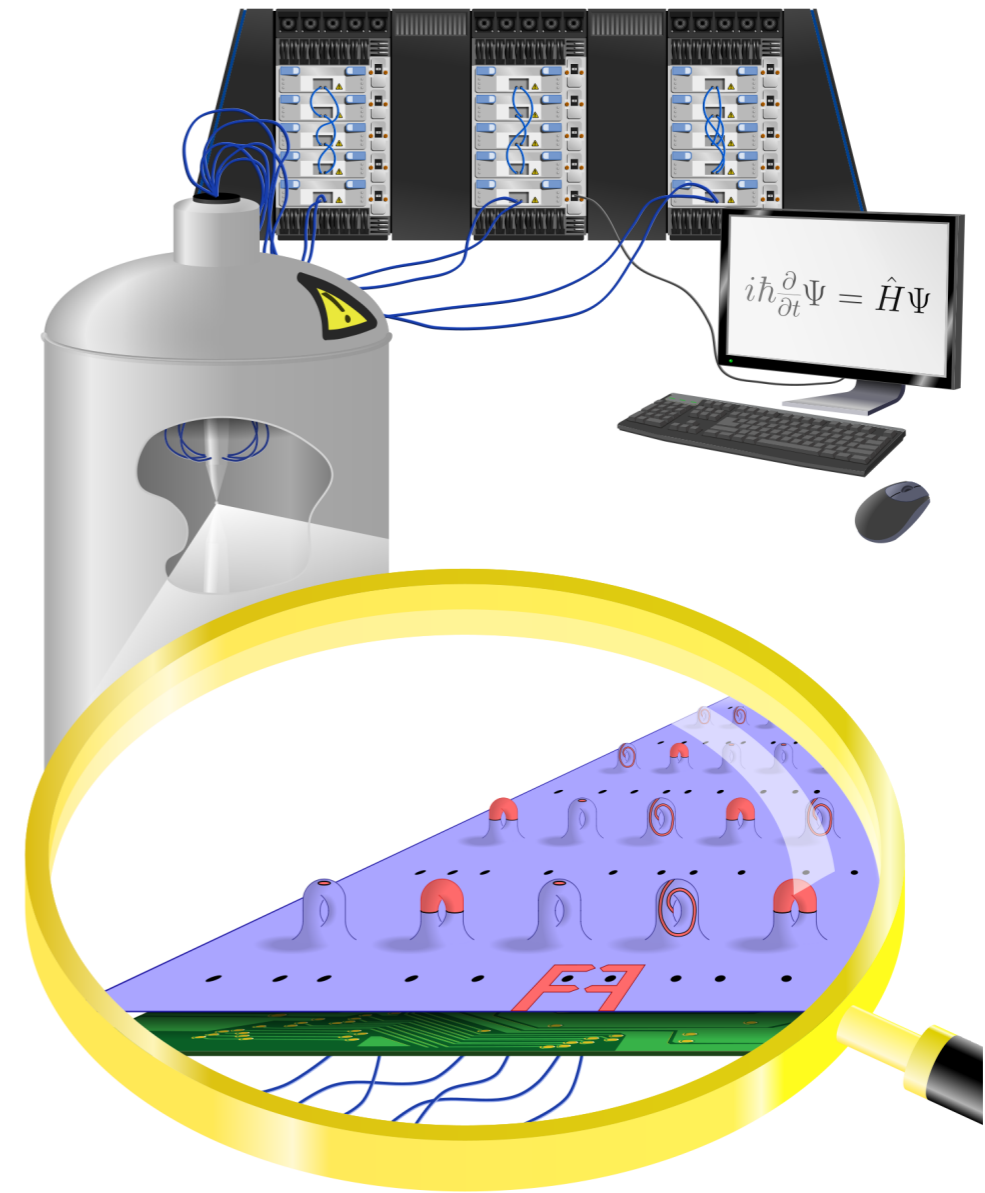
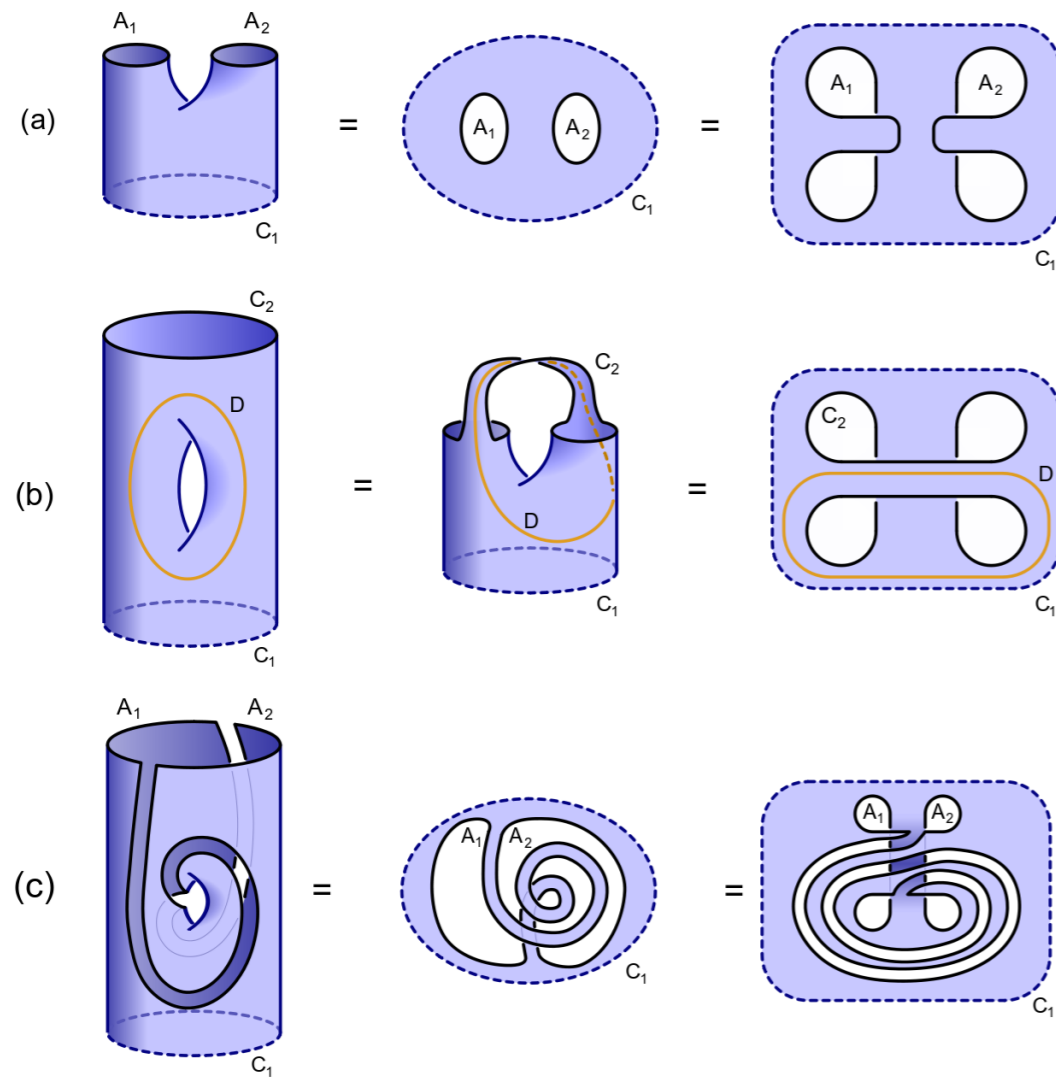


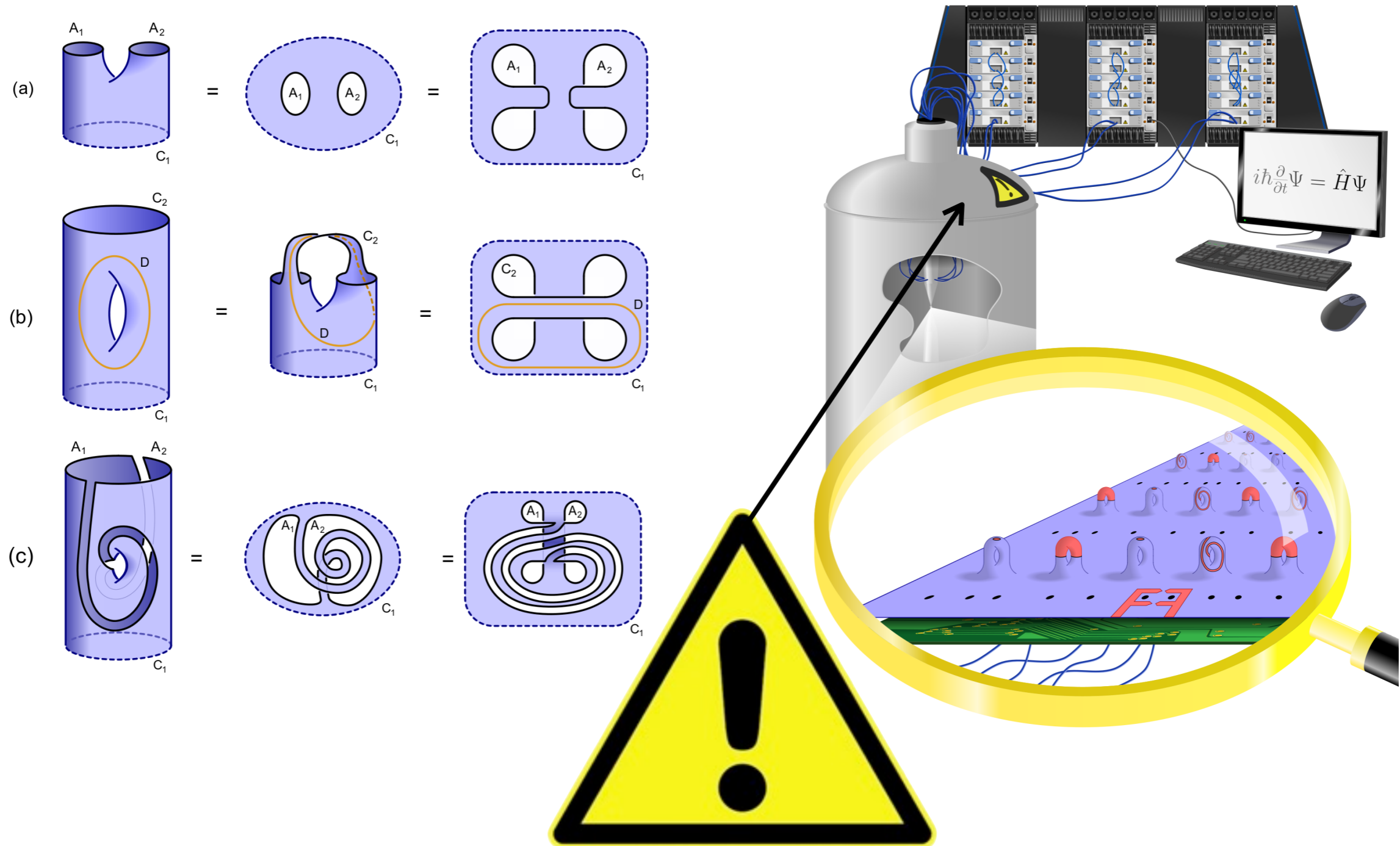
# A Blueprint for a Topologically Fault-tolerant Quantum Computer

Parsa Bonderson,<sup>1</sup> Sankar Das Sarma,<sup>1,2</sup> Michael Freedman,<sup>1</sup> and Chetan Nayak<sup>1,3</sup>



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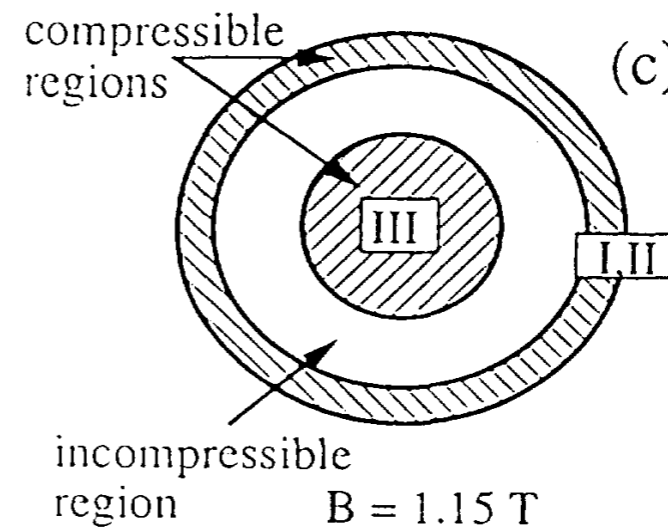
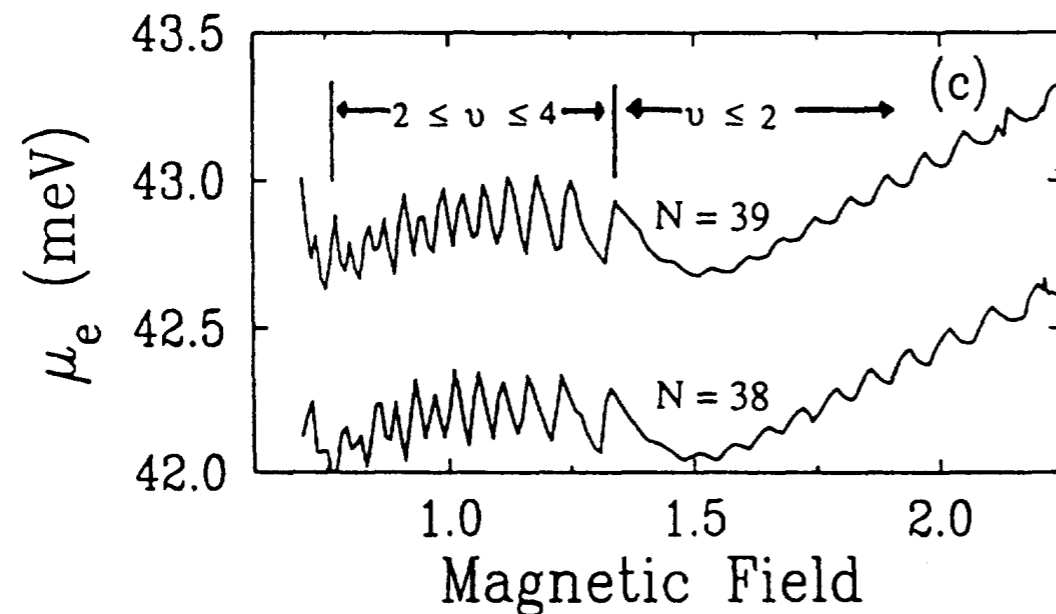
## Self-consistent addition spectrum of a Coulomb island in the quantum Hall regime

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Coulomb interactions are shown to influence the addition spectrum of a small electron gas in the quantum Hall regime in ways that cannot be described by a classical charging energy. The interaction energy between electrons is observed to depend upon Landau-level index, and the evolution of the addition spectrum with magnetic field is found to depend strongly on Coulomb interactions. A self-consistent model of the island is introduced that can account for these results.







# PAUL McEUEN

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