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Study of quantum transport in a magnetic wire[1] SANKALPA GHOSH[2], PUJA MONDOL, ANKIP KUMAR, Physics Department, Indian Institute of Technology, Delhi, ALAIN NOGARET[3], Department of Physics, University of Bath, Bath BA2 7AY, UK, HARVEY BEERE, DAVID RITCHIE, Cavendish Laboratory, University of Cambridge, CB3 0HE, UK — Spatially varying magnetic fields lead to some very interesting physics for two dimensional electron gas. In this work we present some recent results based on the experimental observation of edge states confined by magnetic potentials and their dependence on the strength of the magnetic field strength as well as electrostatic gate voltage By numercially integrating Schroedinger Equation we explain the behavior of such magneto-electric edge states in such two dimensional electron gas.

[1]UGC UKIERI Thematic Partnership
[2]Principal Indian Investigator
[3]Principal UK Investigator

sankalpa ghosh
Physics Department, Indian Institute of Technology, Delhi

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