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Transport Signature of Floquet Majorana Fermions[1] ARIJIT KUNDU, BABAK SERADJEH, Indiana University, Bloomington — It has been recently predicted that a periodically-driven superconducting quantum wire can support unpaired Floquet Majorana fermions (FMFs), steady-state equal mixtures of electrons and holes bound to the ends of the wire. We further study this proposition and elucidate the range of parameters and drives that give rise to FMFs. We also look for possible transport signatures of FMFs within a non-equilibrium Green's function approach. We analyze the conductance profile for different driving schemes and compare the behavior with that of the static system. We comment on possible experimental setups to observe and exploit FMFs in quantum information processing.

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