Kitaev model with quantum dot chains II: zero bias peaks HAO WU, ZHAOEN SU, University of Pittsburgh, MORA HOCEVAR, Universite Grenoble Alpes; CNRS, Institut Neel, DIANA CAR, Eindhoven University of Technology, SEBASTIEN PLISSARD, LAAS CNRS, Universite de Toulouse, ERIK BAKKERS, Eindhoven University of Technology; Delft University of Technology, SERGEY FROLOV, University of Pittsburgh — We have implemented a triple dot chain in an InSb nanowire, with each dot strongly coupled to a separate superconducting NbTiN lead thus defining a three-terminal device. We use magnetic fields which are parallel to the nanowire axis to study the field dependence of the Andreev bound state resonances in electrical transport measurements. We observe zero bias peaks that appear at finite fields, as well as split peaks. By passing currents between different pairs of electrodes, we identify which dots in the chains host the observed resonances. We explore the resonances in the context of Majorana bound states, as well as considering supercurrents and trivial Andreev bound states.

Hao Wu
University of Pittsburgh

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