

Abstract Submitted
for the MAR15 Meeting of
The American Physical Society

Floquet Majorana Modes in Graphene Quantum Dots YANTAO

LI, Sun Yat-sen Univ. & Indiana Univ - Bloomington, ARIJIT KUNDU, BABAK SERADJEH, Indiana Univ - Bloomington — We propose a possible way to realize Floquet Majorana fermions in graphene quantum dots connected by a superconducting island. The effective crossed Andreev reflection and hopping amplitudes between the dots are calculated as a function of system parameters. It is shown that the spin degeneracy is broken when the dots are driven out of phase. This all-electric, highly tunable device could be a realistic platform for uncovering dynamically generated Majorana fermions in graphene system.

Yantao Li
Sun Yat-sen Univ. & Indiana Univ - Bloomington

Date submitted: 13 Nov 2014

Electronic form version 1.4