Transport studies of a superconductor- InAs/GaSb bilayer jun-
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tories — We fabricated a superconductor- semiconductor junction, by depositing a
superconducting Ta film onto a band inverted InAs/GaSb bilayer. In this talk, we
focus on electrical transport studies of this junction as a function of magnetic fields.
At Zero magnetic field, the tunneling results show a zero bias conductance peak and
this conductance peak survives in a field even up to 2 T. With further increasing
magnetic field, the conductance peak eventually becomes a dip above 4 T. Finally,
by tuning the front gate, we were able to measure the tunneling conductance when
the InAs/GaSb bilayer is in the charge neutrality regime.