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One Dimensional Physics in Bilayer Graphene MATTHEW KILLI, University of Toronto, TZU-CHIEH WEI, IAN AFFLECK, University of British Columbia, ARUN PARAMEKANTI, University of Toronto — Bilayer graphene is an interesting material with many novel features. In the absence of a gate voltage, it exhibits quadratic band touching that is unstable to various forms of symmetry breaking. In the presence of a bias induced by a gate voltage, it behaves as a gapped semiconductor with a tunable gap. We discuss one dimensional edge modes and interaction effects in bilayer graphene.

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