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**An introduction to non-self-adjoint operators: a case study using a model of twisted bilayer graphene.**

I will use a simple model from physics (Tarnopolsky–Kruchkov–Vishwanath, 2019) to illustrate the wealth of strange phenomena possible for non-self-adjoint (or rather non-normal) operators. The model, which is a simple operator on the torus, explains the origin of “magic angles” in twisted bilayer graphene, a hot topic in physics going by the name of twistrionics: when two sheets of graphene are twisted at a special angle, the material becomes a superconductor. However, my talk will be an elementary blend of spectral theory, semiclassical version of Hörmander’s commutator condition, representation theory of the finite Heisenberg group, and theta functions. Easy to state open problems will also be presented and the results will be illustrated by colorful numerics. Based on joint work with S. Becker, J. Wittsten and M. Embree.