

Ground state construction of Bilayer Graphene

Ian Jauslin

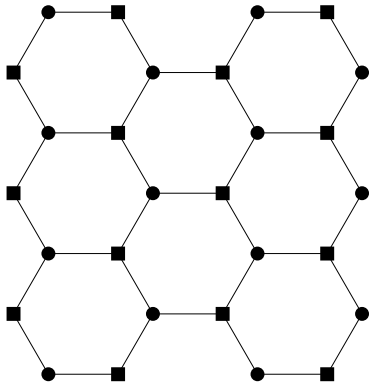
joint with Alessandro Giuliani

arXiv:1507.06024

<http://ian.jauslin.org>

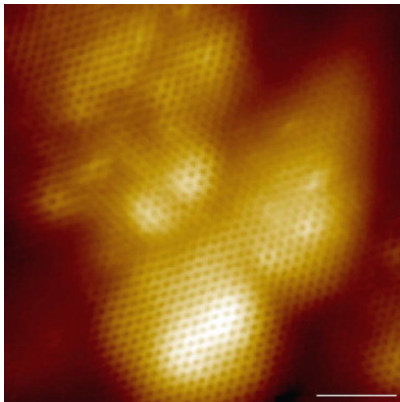
Monolayer graphene

- 2D crystal of carbon atoms on a honeycomb lattice.

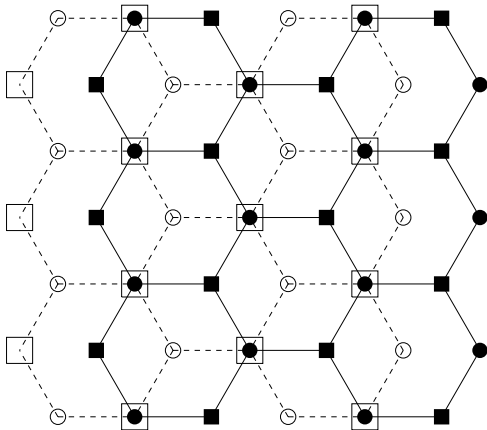


Monolayer graphene

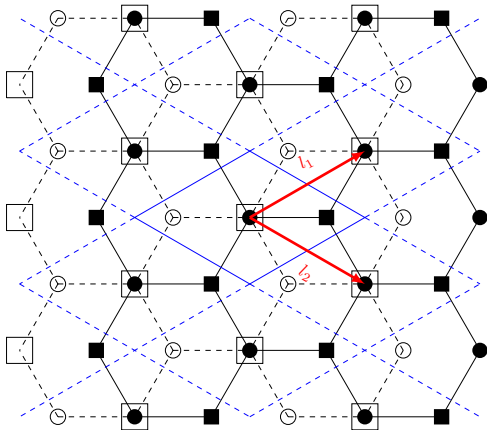
- Scanning Tunneling Microscopy [Deshpande et al, 2009]



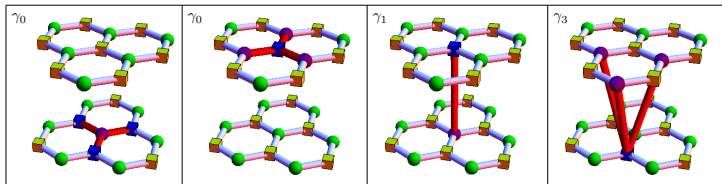
Bilayer graphene



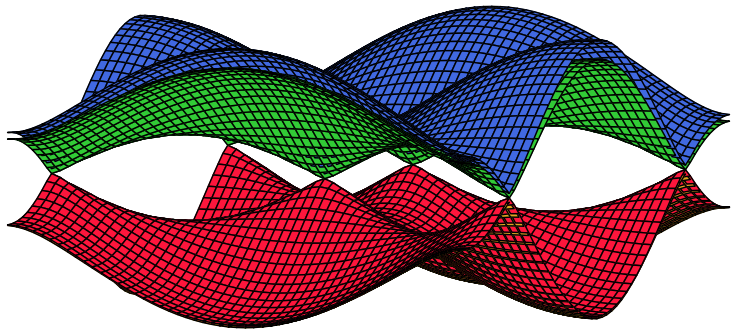
Bilayer graphene



Non-interacting Hamiltonian

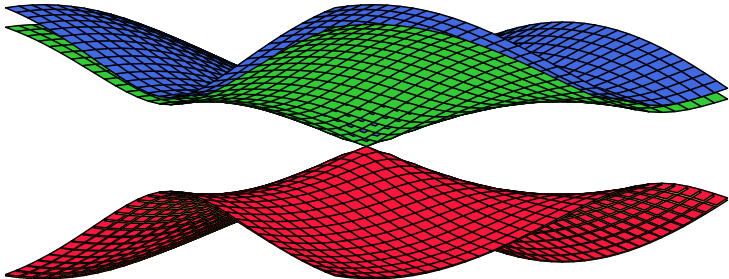


Non-interacting Hamiltonian



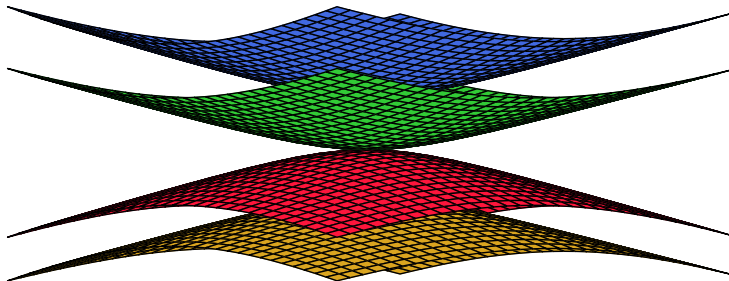
Non-interacting Hamiltonian

- $|k| \gg \epsilon$



Non-interacting Hamiltonian

- $\epsilon^2 \ll |k| \ll \epsilon$



Non-interacting Hamiltonian

- $|k| \ll \epsilon^2$

