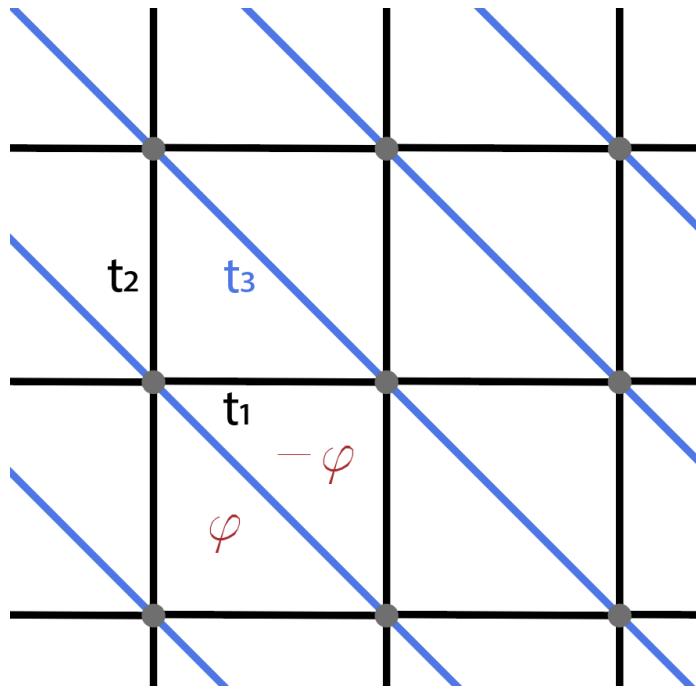
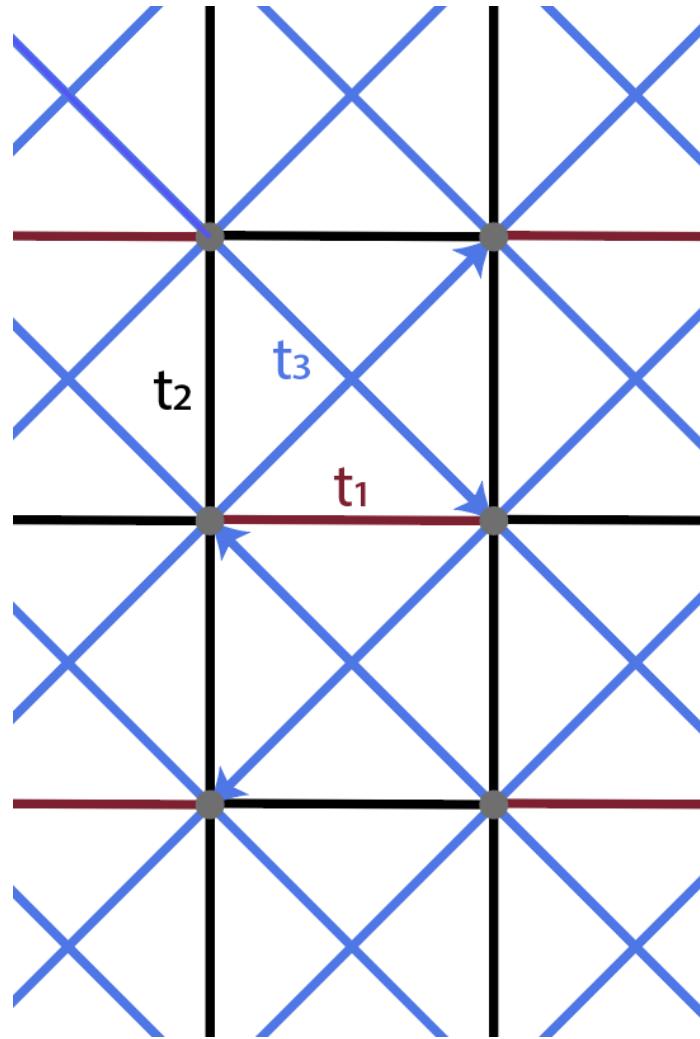


1 Lattice



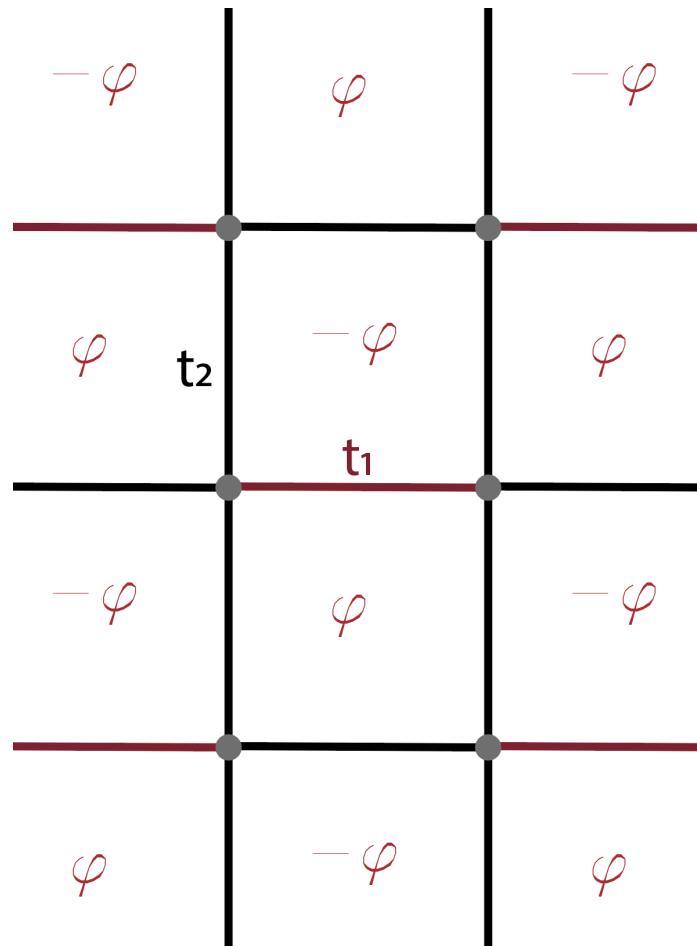
- Consider this lattice in 2D momentum space
- $t_1 = t_2 = 1$ and t_3 varies from 0 to 2
- The staggered flux φ varies from 0 to 2π
- Examine the density of states, band structure and Berry phase/curvature

2 Lattice



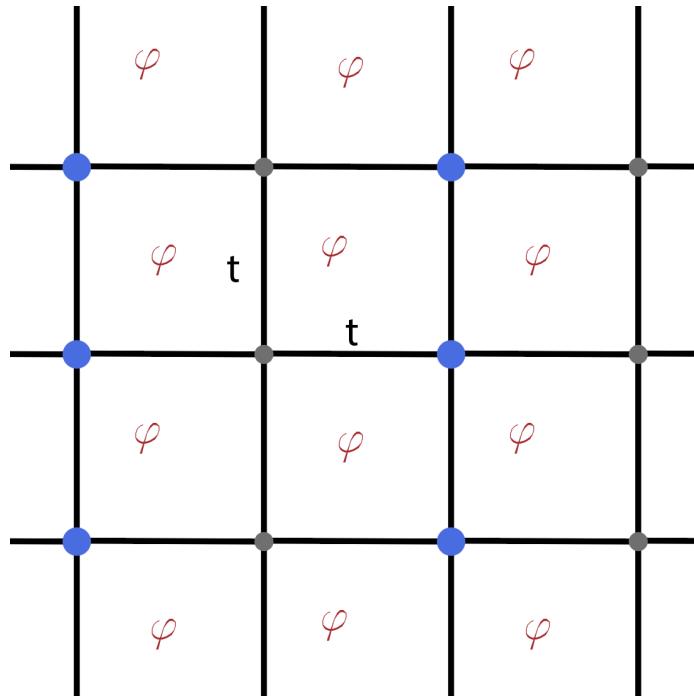
- Consider this lattice in 2D momentum space
- t_3 is purely imaginary with the phase defined along the arrow direction
- $t_2 = 1$, t_1 varies from 0 to 2 and the magnitude of t_3 varies from 0 to 0.1.
- Examine the density of states, band structure and Berry phase/curvature

3 Lattice



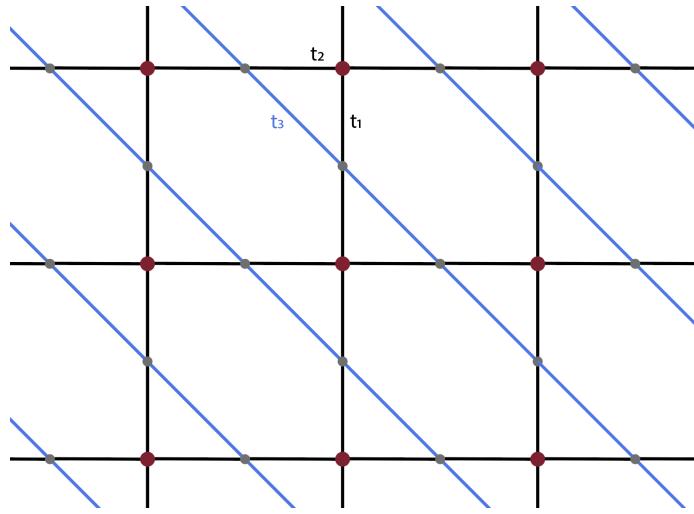
- Consider this lattice in 2D momentum space
- $t_2 = 1$ and t_1 varies from 0 to 2
- The staggered flux φ varies from 0 to 2π
- Examine the density of states, band structure and Berry phase/curvature

4 Lattice



- Consider this lattice in 2D momentum space
- $t = 1$ and the flux $\varphi = \pi/2$ - choose the unit cell accordingly
- The blue (larger) sites have an energy offset Δ compared to the grey (smaller) sites, which varies from 0 to 10.
- Examine the density of states, band structure and Berry phase/curvature

5 Lattice



- Consider this lattice in 2D momentum space
- $t_1 = t_2 = 1$ and t_3 varies from 0 to 3
- The red (larger) sites have an energy offset Δ compared to the grey (smaller) sites, which varies from 0 to 20.
- Examine the density of states, band structure and Berry phase/curvature