## PHYS 598 GTC: Final Presentation Topic Ideas

Below you will find several potential ideas for topics for your final presentations. Please let me know via email by next week, April 6 2023, which topic you would like to do your presentation on. After you have let me know your choice I can help guide you with some references to get you started. If you have an idea not on this list, send me an email and we can discuss it as well.

- 1. Magnetic Space Groups
- 2. Numerical Methods for Maximally Localized Wannier Functions
- 3. Symmetry-Based Indicators
- 4. Magnetic Translation Symmetry
- 5. Berry Phases and Linear Response
- 6. Metric and Geometry in Band Theory
- 7. Topological Crystalline Insulators
- 8. Real Space Invariants
- 9. Spacetime symmetries and Open Quantum Systems