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Title: On periodically driven quantum systems
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1. Unlike their static counterparts, the bulk topological properties of one-dimensional periodically driven quantum systems are characterized by two (not one) independent invariants. 

Chapter 2

2. The two invariants of a chiral symmetric driven system are the winding numbers on a torus of half the Floquet operator. 

Chapter 3, thesis cover

3. In an open driven quantum system, topological boundary states can actively trap particles from the bulk. 

Chapter 4

4. The magnetic-field dependent relaxation time $\tau_B$ for weak localization in a nanowire with a hexagonal cross-section depends on the width $W$ with a non-integer exponent, $\tau_B \propto W^{-\gamma}$, $\gamma = 3.174 \pm 0.003$, hinting to hidden fractal properties of electron dynamics in that geometry. 

Chapter 6

5. The full density matrix simulation of the Surface-17 quantum error correction code, requiring thousands of CPU hours as reported by Tomita & Svore [PRA 90, 062320 (2014)], can be reproduced in a few hours on a single GPU.

https://github.com/brianzi/quantumsim

6. The computational universality of continuous-time quantum walks [Childs, PRL 102, 180501 (2008)] is of little practical use, because one would need a universal quantum computer to produce the quantum walk in the first place.

7. The construction of “Majorana bound states in non-topological superconductors” described by San Jose et al. [Sci. Rep. 6, 21427 (2016)] relies not only on charge-conjugation symmetry but also on chiral symmetry.

8. The runtime of a sufficiently accurate decoding algorithm based on minimal-weight matching for the surface code [Fowler et al., PRA 86, 042313 (2012)] will be dominated not by the matching subroutine, but by the subroutine for weight calculation, especially for low-distance codes.

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