

# Quantum Code Zoo

ZWL\*

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A zoo of quantum code

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## I. INTRODUCTION

## II. QUANTUM CODE ZOO

easy list of quantum code

- fermion codes
- bosonic codes
  - GKP codes
  - cat codes
- CWS
  - Stabilizer codes
    - CSS codes
      - QHP codes

- toric codes
- HQHP codes
  - toric codes in higher-Dimension
    - Quantum bicycle codes
    - Homological product codes
    - Lifted product codes
    - Fiber bundle codes
    - Quantum pin codes
    -
- non-CSS codes
  - rotated surface codes
  - Quantum XYZ product codes
- Subsystem codes
  - Subsystem product codes
    - Subsystem hypergraph product codes
      - Bacon Shor codes
- Concatenated codes
- Shor's codes

## III. GLOSSARY AND REFERENCES

## IV. SIMILAR PROJECTS

Quantum Algorithm Zoo <https://quantumalgorithmzoo.org/>  
Quantum protocol Zoo [https://wiki.veriqloud.fr/index.php?title=Protocol\\_Library](https://wiki.veriqloud.fr/index.php?title=Protocol_Library)

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- [1] J. E. Bourassa, R. N. Alexander, M. Vasmer, A. Patil, I. Tzitrin, T. Matsuura, D. Su, B. Q. Baragiola, S. Guha, G. Dauphinais, *et al.*, Blueprint for a scalable pho-

tonic fault-tolerant quantum computer, arXiv preprint arXiv:2010.02905 (2020).

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