

## Dualities and Exact Many-Body Scars

*Tuesday, 7 April 2026 14:00 (1 hour)*

I will first discuss new examples of quantum many-body scars in the two-dimensional XY model. I will then discuss a dual  $Z_2$  gauge theory obtained by gauging a global symmetry of the XY model, and discuss corresponding scars therein. This discussion suggests the possibility of systematic exploration of quantum many-body scars in the web of theories related by dualities. The talk is based on the paper arXiv:2505.21921, in collaboration with Yuan Miao, Linhao Li, and Hosho Katsura.

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