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Abstract for an Invited Paper for the MAR16 Meeting of the American Physical Society

Stability, topology, holography: The many facets of quantum error correction JOHN PRESKILL, Caltech

Quantum error correction is a surprising and far-reaching concept, with many implications for science and technology. The theory of quantum error-correcting codes has bolstered our confidence that quantum computing is scalable, deepened our understanding of topological phases of matter, and spawned novel insights into the quantum structure of spacetime.