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Observation of a Fast Evolution in a Parity-time-symmetric System¹ CHAO ZHENG, LIANG HAO, GUI LU LONG, Tsinghua University —
In the parity-time-symmetric (PT-symmetric) Hamiltonian theory, the optimal evolution time can be reduced drastically and can even be zero. In this letter, we report our experimental simulation of the fast evolution of a PT-symmetric Hamiltonian in a nuclear magnetic resonance quantum system. The experimental results demonstrate that the PT-symmetric Hamiltonian system can indeed evolve much faster than the quantum system, and the evolution time can be arbitrarily close to zero.

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Chao Zheng
Tsinghua University

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