



Contribution ID: 43

Type: **Focus session invited talk**

Quantum Many-Body Correlation from Controlled Dynamics

Monday 1 December 2025 11:30 (30 minutes)

I will discuss how to utilize highly controllable quantum dynamics to study correlations in quantum many-body systems, particularly the strong correlations of quantum critical states. I will discuss two theories of non-hermitian linear response and the finite-size scaling theory of the Kibble-Zurek dynamics, and I will talk about their recent experimental realizations in cold atom systems.

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Session Classification: Focus Session: Ultra-cold atoms and quantum technology

Track Classification: Focus sessions: Ultracold Atoms and Quantum Technology