



DFG FOR 5522

FOR 5522 Collaboration Meeting on

Quantum Circuits



UNIVERSITÄT
GÖTTINGEN

January 29/ 30, 2025, Alfred-Hessel Saal, Pauliner Kirche, Göttingen
Papendiek 14 37073 Göttingen

Scientific Organizers: F. Heidrich-Meisner, Göttingen, T. Prosen. Ljubljana

Wednesday, January 29, 2025

Time	
2:15pm	Welcome F. Heidrich-Meisner
2:30pm	Invited Talk: <i>Quantum circuits models for full eigenstate thermalization</i> Pieter Claeys, MPI PKS
3:30pm	Coffee Break
4pm	Invited talk: <i>Physical theory of two-stage relaxation: Purity and OTOC</i> Cheryne Jonay, University of Ljubljana
5pm	Break
5:20pm	Teaser talks (4+4 mins): 1) Anastasia Enckell, Göttingen: <i>Simulating the time evolution of the Gross-Neveu model using a quantum circuit</i> 2) Marcel Cech, Tübingen: <i>Dynamical phases in monitored kinetically constrained quantum dynamics</i> 3) Kadir Ceven, Göttingen: <i>Thouless time in a spin-1/2 XX ladder</i> 4) Taisanul Haque, Göttingen: <i>Entanglement, Quantum Energy Teleportation and Beyond</i> 5) Heiko Menzler, Göttingen: <i>Tuning of slow dynamics in quantum East Hamiltonians motivated by Graph theory</i> 6) Haixin Qiu, Göttingen: <i>Floquet drives in dipolar spin ensembles</i> 7) Arturo Perez Romero, Göttingen: <i>Comprehensive analysis of electronic relaxation in 1d KLM</i> 8) Emil Reiter, Göttingen: <i>Constrained dynamics in synthetic dimensions</i>
6:25pm	Discussion
7pm	Dinner at Restaurant Apex

Thursday, January 30, 2025

Time	
9am	Invited Talk: <i>Ergodicity breaking transition in East Circuits: From dynamical localization to quantum Ruelle resonances</i> Tomaz Prosen, University of Ljubljana
10am	<i>Dynamics of the stochastic Floquet-East model</i> Cecilia de Fazio, Tübingen
10:30	Coffee Break
11am	<i>Non-linear classification capability of quantum neural networks due to quantum metastability</i> Mario Boneberg, Tübingen
11:30am	Invited talk: <i>Entanglement transitions of free fermions in unitary circuit games</i> Raul Morral Yepes, TUM
12:30pm	Lunch & Discussion
2:30pm	End of event