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Towards determining the (2+1)-dimensional Quantum Electrodynamics running coupling with Monte Carlo and quantum computing methods

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We investigate the step scaling approach in compact pure U(1) lattice gauge theory in 2+1 dimensions combining Monte Carlo and quantum computing methods. We present results for the step scaling deep into the small gauge coupling region and discuss the non-perturbative matching between Monte Carlo and quantum computing simulations.

Primary authors: CRIPPA, Arianna (DESY); URBACH, Carsten (University of Bonn); GROSS, Christiane (HISKP, Bonn University); JANSEN, Karl (DESY); FUNCKE, Lena (University of Bonn); STORNATI, Paolo (ICFO, Barcelona); ROMITI, Simone (University of Bern); Dr KÜHN, Stefan (DESY)

Presenter: URBACH, Carsten (University of Bonn)

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