

Expanded regimes of area law for lattice Yang-Mills theories

Thursday, July 31, 2025 3:00 PM (1 hour)

I will discuss a recent result which extends the parameter regimes for which Wilson's area law is proven for pure $U(N)$ lattice Yang-Mills theories, in particular when N is large. This improves on a classical result of Osterwalder-Seiler from 1978. To do so, we view the master loop equation as a linear inhomogeneous equation for Wilson string expectations, and then prove an a priori bound for solutions to the equation. Joint work with Ron Nissim and Scott Sheffield.

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