

Poincaré, modified logarithmic Sobolev and isoperimetric inequalities for Markov chains with non-negative Ricci curvature

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Overview of the talk

Main result: *high-level sentence* for the zero-range process

The zero-range process

Interpretation of the result *or other high-level sentence*

From geometry to inequalities

Setup

Ricci for discrete processes

Modified Logarithmic Sobolev inequality for discrete processes
with non-neg Ricci

Further inequalities

Poincaré inequality and the spectral gap

Isoperimetric inequality and Cheeger constant

Other applications

The zero-range process

Main result and interpretation

Setup

Distance \mathcal{W}

Defining Ricci

Ricci for the zero-range process

The Modified Log-Sobolev inequality

Modified Log-Sobolev inequality for the zero-range process

Poincaré inequality

Isoperimetric inequality

example 1

example 2