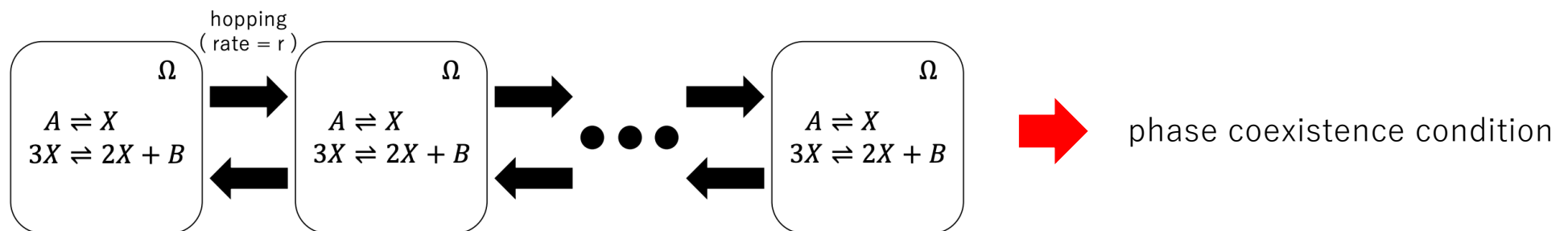


Phase coexistence in a weakly stochastic reaction-diffusion system

Yusuke Yanagisawa and Shin-ichi Sasa (*Dept. of Phys., Kyoto Univ.*)

Ref) arXiv.2403.19198

- **Research topic** : Phase coexistence in a reaction-diffusion system
 - ✓ Macroscopic system → deterministic and continuum description
 - ✓ Mesoscopic system → fluctuation effect
- **Model** : A stochastic reaction-diffusion system
 - ✓ coupled reaction vessels
 - ✓ bistable chemical reaction



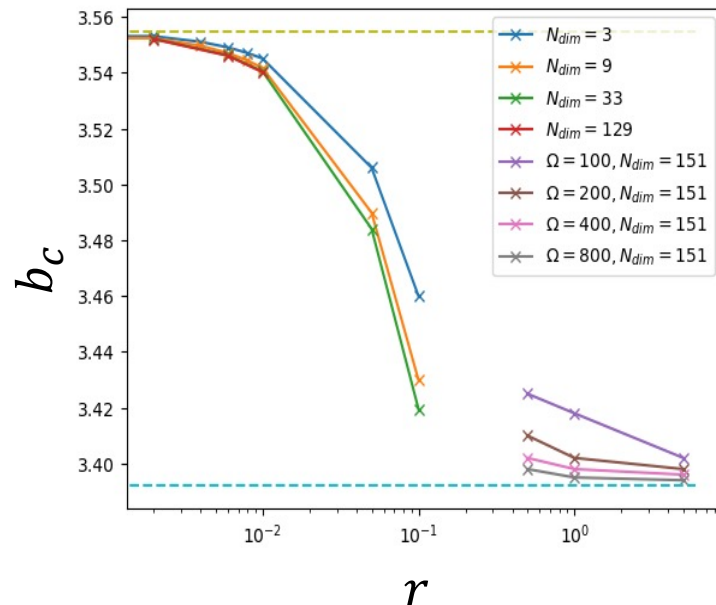
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➤ Results

Phase coexistence condition



Phase coexistence condition for different regimes

- ✓ High-hopping-rate regime :
equivalent to the reaction-diffusion equation
- ✓ Low-hopping-rate regime :
NOT equivalent to the reaction-diffusion equation

Details will be explained in the poster !