

# Non-Equilibrium Dynamics in Complex Networks via Asymmetric Glauber Models

Sergey Vakulenko, Dmitry Grigoriev and Ivan Sudakov

**Abstract.** In statistical mechanics, Glauber dynamics defines a Markov chain governing the time evolution of systems comprising numerous spins, such as the Ising model or spin glasses. These dynamics serve as a foundation for various physical, neural network, and genetic applications. Our primary focus lies in the investigation of Glauber dynamics applied to spin systems with N-spins and non-symmetric interaction. This presents an open problem concerning the description of resulting non-equilibrium steady states (NESS) because asymmetric coupling violates detailed balance. For open systems, the key problem is to find non-equilibrium steady states, in which entropy production and some flows are non-zero, but there is no temporal variation of physical variables.

## Reference

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Sergey Vakulenko  
Institute for Problems in Mechanical Engineering  
Russian Academy of Sciences  
St. Petersburg 199178, Russia  
LETI

Dmitry Grigoriev  
CNRS, Mathématiques  
Université de Lille  
Lille, Hauts-de-France, France

Ivan Sudakov  
School of Mathematics and Statistics  
The Open University  
Milton Keynes MK7 6AA, United Kingdom