Skalenkaskaden in komplexen Systemen

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Chemical Master Equation: coarse graining via gradient structures

Project C05

Abstract:

We discuss the reaction kinetics according to a finite set of mass-action type reactions under the additional assumption of detailed balance. This nonlinear ODE system has an entropic gradient structure. A similar gradient structure exists for the associated Chemical Master Equation. Based on this, we discuss coarse graining and hybrid models for the case of large volumes.