

# Theoretical Biology Seminar

## Conditions for multistationarity and Turing instabilities in distributive double phosphorylation

**Carsten Conradi**

HTW Berlin  
Life Science Engineering,  
Germany

13:30 - 15:00, March 19 (Thu), 2026

Room 501, 5th floor, Bldg. #3  
Institute for Life and Medical Sciences,  
Kyoto University

We will discuss two models of distributive double phosphorylation with unknown parameters, an ODE model and a reaction-diffusion model. For the ODE model we derive a polynomial inequality in the parameters that guarantees the existence of three steady states. For the PDE system we have derived a polynomial inequality that guarantees positive eigenvalues in the linearization. This is joint work with Dr. Maya Mincheva in Northern Illinois University.

Language: English

contact: Atsushi Mochizuki  
Laboratory of Mathematical Biology,  
Institute for Life and Medical Sciences,  
Kyoto University  
Email: mochi@infront.kyoto-u.ac.jp  
Tel: 075-751-4612