

第3回 Weiwei Ding 氏

- 講演者 : **Weiwei Ding** 氏 (明治大学)
- 題目 : Bistable traveling wave for reaction-diffusion equations in a periodic habitat
- 日時 : 2019年 1月 23日 (水) 15:30 – 17:30
- 場所 : 野田キャンパス 4号館3階 数学科セミナー室
- 「解析学とその周辺@野田」

[analsemi, 2018](#)

abstract

In this talk, I will discuss the existence and qualitative properties of traveling waves for spatially periodic reaction-diffusion equations with bistable nonlinearities. The spreading theory of such equations in spatially homogeneous media is well established by Fife-McLeod (1977). However, the presence of spatial periodicity makes the problem of the existence of traveling waves rather subtle. I will focus especially on the influence of the spatial period, and discuss several existence results when the spatial period is small or large. I will also characterize the sign of the front speeds and talk about the global exponential stability and uniqueness of traveling waves. Finally, I will provide an example for the non-existence of traveling wave with nonzero speed. This talk is based on a joint work with François Hamel and Xiao-Qiang Zhao.

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