明治大学先端数理科学インスティテュート

MIMS現象数理カフェセミナー

日時：2021年1月20日(水) (13:30 – 14:10)

場所：今年度はZoomでのリモート開催となります

Motion of spot on the curved surface

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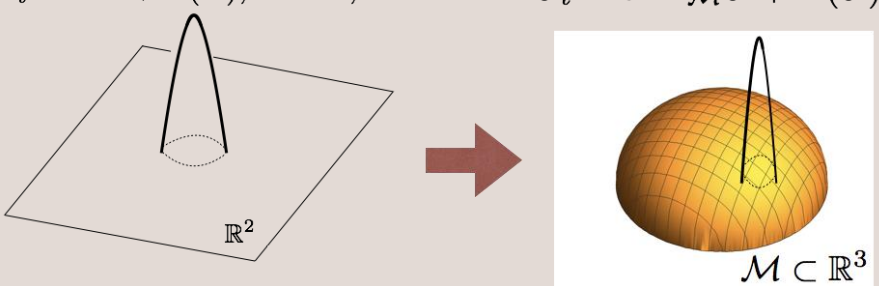
Abstract： Reaction-Diffusion system (RDS) is expected to explain the pattern formation of chemical reactions, for example, animal epidermis pattern. In particular, localized spot solutions for RDS are fundamental solutions which are explaining the such phenomena. Arai et al. reported localized phenomena of chemical substance and motion of it on the cell membrane. It is one of our motivation, that is, we want to understand mathematical mechanism of motion of spot on the curved surface. In this talk, we will show that the motion of spot on the two-dimensional curved surface is determined by the dynamics on the center manifold.

$U_t = \Delta U + F(U), \mathbf{x} \in \mathbb{R}^2, t > 0$ $\quad$ $U_t = \delta^2 \Delta_{\mathcal{M}} U + F(U),$



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