

第166回

附属社会創造数学センター主催
学術変革領域研究(A)「マルチモーダルECM」共催

HMMCセミナー

Date : 2026年3月13日(金) 16:30~18:00

Speaker : 神元 さよみ (Sayomi Kamimoto)
Howard University, (Washington DC, USA)

Style: 対面とのオンラインのハイブリット開催 オンラインのみ要事前登録
オンラインの参加申し込みは下記URLからお願いします。
https://zoom.us/meeting/register/SIXM8T6sQ9Kn6feL3tJ_4Q#/registration

Place : 北海道大学 電子科学研究所
中央キャンパス総合研究棟2号館5階 講義室

Title : Structural Necessity of Symmetry Breaking in Stable
Collective Dynamics

Abstract : Many biological and artificial collectives exhibit persistent organization without settling into a static state. Roles, ordering, or relative structure persist as dynamically regulated relations generated by the system's internal evolution. Such behavior is not describable within existing stability notions, which preserve relations only through stabilization of states, orbits, or invariant sets, as in flocking, formation control, consensus, synchronization, and pattern formation. Nonstatic homeostasis instead concerns the stability of relations among state variables in the absence of invariant reference dynamics, identifying symmetry breaking as a structural necessity rather than as a byproduct of instability.