



The 48th Biomechanics Seminar

2024 年 12 月 16 日（月）13:00 - 14:30

京都大学 医生物学研究所

南部総合研究1号館・医研1号館 1階 共同セミナー室3

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演 題 : **Fascinating flows and emergent mechanics in simple marine animals**

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要 旨 : Animals are characterized by their movement, and their tissues are continuously subjected to dynamic force loading. Tissue mechanics determines the ecological niches that can be endured by a living organism. In the first part of my talk, I will present our surprising discovery of motility- induced tissue fractures and healing in a simple, early divergent marine animal - the *Trichoplax adhaerens*. I will demonstrate how fracture mechanics governs dramatic shape changes and asexual reproduction in this animal. In the second part of my talk, I will focus on the role of fluid mechanics in marine invertebrates. In starfish larvae, we discovered that ciliary arrays give rise to a beautiful pattern of slowly evolving vortices which determine a physical tradeoff between feeding and swimming.

講演言語 : 英語

主催 : 一般社団法人 日本機械学会 バイオエンジニアリング部門

共催 : 京都大学 医生物学研究所 バイオメカニクス分野

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