



第 108 回トポロジカル物質科学セミナー  
Topological Materials Science Seminar (108)

**Topological duality in Floquet and non-Hermitian systems**

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**Time: 13:30-15:00**

**Place: Room A1-17, Faculty of Engineering, Hokkaido University  
(北海道大学 工学部 A 棟 A1-17)**

**Abstract:**

In Floquet systems or periodically driven systems, anomaly does not need to be cancelled [1,2]. For example, Floquet effective Hamiltonian of Thouless pumping can have only one right-going mode in one dimension [1]. Single Weyl dispersion can be constructed in three dimensions [2]. On the other hand, in non-Hermitian systems, anomaly cancellation also needs not to occur [3]. We unify these anomalies and construct an extended Nielsen-Ninomiya theorem for Floquet systems by using this duality.

[1] L. Privitera, A. Russomanno, R. Citro, G.E. Santoro, Phys. Rev. Lett. 120, 106601 (2018).

[2] S. Higashikawa, M. Nakagawa, and M. Ueda, Phys. Rev. Lett. 123, 066403 (2019).

[3] J. Y. Lee, J. Ahn, H. Zhou, A. Vishwanath, arXiv:1906.08782.