



第 109 回トポロジカル物質科学セミナー  
Topological Materials Science Seminar (109)

**Hamiltonian time crystals**

**Antti Niemi**

*Nordic Institute for Theoretical Physics*

**Date: November 28 (Thursday), 2019**

**Time: 13:00-14:00**

**Place: Seminar Room K202, Main Building, Yukawa Institute**

Abstract:

Time crystal is presumed to be a state of matter that cannot be isolated from its environment.

A time crystal is supposed to be an open, non-equilibrium system.

In this talk we show that there are also energy conserving, autonomous time crystals. For this we construct examples of Hamiltonian systems that are time crystals, and we propose their actual material realizations.