

From Time Crystals to Time-tronics

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Similarly to ordinary space crystals, crystal structures can also form spontaneously in time. It turns out that the condensed matter phases, such as the Anderson and many-body localization, topological phases, Mott insulator and superfluid phases, can also be observed in the time domain. In the course of the lecture, I will introduce the concept of time crystals, show how various behaviors resembling condensed matter can be realized in the time domain and outline the direction to time-tronics, *i.e.* the use of time crystalline structures in practical applications.

References

- [1] Sacha K., Time Crystals, Springer International Publishing, Cham 2020.