



Floquet phases of matter: time crystals and beyond

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Periodically driven (Floquet) systems can display entirely new many-body phases of matter that have no analog in stationary systems. One such phase is the Floquet time crystal, which spontaneously breaks a discrete time translation symmetry. In this talk, I will survey the physics of these new phases of matter. I explain how they can be stabilized either through strong quenched disorder (many-body localization), or alternatively in clean systems in a "prethermal" regime which persists until a time that is exponentially long in a small parameter.

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Dr. Dominic Else obtain his Phd degree from University of California at Santa Barbara(UCSB) in 2018, supervised by Prof. Chetan Nayak. Now, he is moving to Massachusetts Institute of Technology (MIT) as a postdoctoral fellow. Dr. Else focus on general theoretical framework to classify topological phases. In particular, his works on time spontaneous symmetry breaking(TTSB) and pre-thermalization phenomenon have attracted lots of attentions recently.