



**Conference on Many-Body-Localization:  
Advances in the Theory and Experimental Progress  
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**Localization in Periodically Driven Systems: Chiral Floquet Insulators and Time Crystals**

Many-body localization in periodically driven systems enables new phases of matter unique to non-equilibrium setting. In this talk, I will discuss the stability and physical properties of a chiral Floquet insulator -- a phase which is localized in the bulk, but is characterized by quantized magnetization and protected edge states.

Further, I will turn to the recent experiments which observed signatures of Floquet time crystals in ensembles of NV-centers in diamond. I will argue that the dipolar nature of interactions leads to critical dynamics, which makes time crystalline order metastable, but long-lived. A theory explaining experimental observations will be presented.

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