Contribution ID: **140** Type: **Parallel**

$(1+1)$-d $U(1)$ Quantum Link Models from Effective Hamiltonians of Dipolar Molecules

Wednesday 19 June 2019 09:00 (20 minutes)

Dipolar molecular platforms provide a possibility of realizing analog quantum simulators for quantum field theories such as quantum link models, a discrete version of lattice field theories in terms of the degrees of freedom for each link variable. We apply the method of effective Hamiltonians to a system of dipolar molecules with electric dipole-dipole interactions with tunable parameters to obtain the $U(1)$ quantum link models in $1+1$ dimensions.

Author: SHEN, Jiayu (University of Illinois at Urbana-Champaign)

Co-authors: Prof. CLARK, Bryan; Prof. DEMARCO, Brian; EL-KHADRA, Aida (UIUC); Prof. GADWAY, Bryce; Mr HIGHMAN, Michael; Mr LUO, Di

Presenter: SHEN, Jiayu (University of Illinois at Urbana-Champaign)

Session Classification: Theoretical Developments

Track Classification: Theoretical Developments