

Abstract Submitted  
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**Quantum Effects for Interaction of Electron with coupled magnetic local spin chains** FATIH DOGAN, University of Alberta, Edmonton, AB, Canada, LUCIAN COVACI, University of British Columbia, WONKEE KIM, University of Houston, FRANK MARSIGLIO, University of Alberta — In this talk, we will look at time dependent interaction of an electron with ferromagnetic chain. We will show that ferromagnetic interactions between magnetic spins cause the electron interacting with them to change its energy and depending on the strength of interactions form a bound state. These effects are visible through the resulting state of the electron. Experimental suggestions will be given to observe this quantum behavior.

Fatih Dogan  
University of Alberta, Edmonton, AB, Canada

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