

# **Special Nuclear Seminar**

March 25<sup>th</sup> @ 4:00 PM in RM 220

*Cold and Ultra-Cold neutron  
studies at IUCF*

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*Indiana University/IUCF*

The Low Energy Neutron Source at Indiana University is a University-based long-pulsed source that makes use of a coupled solid methane moderator operating at temperatures below 10K. I will present recent results in which the moderator performance is compared to the predictions from our recently developed model for methane dynamics in the low temperature (Phase II). I will also present the study of UCN production in solid oxygen involving magnon (spin wave) exchanges which is fundamentally different from the well-known phonon mechanism in solid deuterium.