

International Collaborations in Nuclear Theory: Theory for open-shell nuclei near the limits of stability

Scott K. Bogner (NSCL/Michigan State University), **Morten Hjorth-Jensen** (NSCL/Michigan State University) and **Jason D. Holt** (TRIUMF)

May 11-29, 2015, Michigan State University and FRIB/NSCL

Venue: Lecture Hall at the National Superconducting Cyclotron Laboratory/Nuclear Theory Conference Room

We meet all at the **Theory Trailer** (Trailer nr. 7) on the eastern side of the [National Superconducting Cyclotron Laboratory](#) (640 South Shaw Lane on the MSU campus). We meet at 8.30am at the **Theory Trailer** for registration. Coffee plus light refreshments are served. Thereafter we walk over to the NSCL Lecture Hall. The third week all talks will be in Nuclear Theory Conference Room in the theory trailer. Lectures start at 9am all days. The Theory Trailer is located close the construction site of the new NSCL/FRIB building (you will see a series of trailers). The Theory Trailer is the one closest to the [Wharton Center for performing arts at MSU](#) and Bogue street. From the Town Place hotel it is a walk of at most 20-25 min.

Recording of lectures and live streaming

For those of you who cannot attend the lectures, these are streamed live (access only for people at the NCSL). The link to the website is <https://arachnid.nsl.mscl.msu.edu/video/icnt/>

Program first week May 11-15 2015, Lecture hall NSCL

| Time | Monday |
|-----------------|---|
| 9am-10am | Andreas Ekstrom (ORNL/UTK) Constraining the Description of the Nuclear Interaction Clustering, Shapes |
| 10.0am-10.30am | Coffee break |
| 10.30am-11.30am | Heiko Hergert (MSU) Effective interactions and operators from IM-SRG |
| 11.30am-2pm | Lunch |
| 2pm-3.30pm | Discussions |
| 3.30pm-4pm | Coffee break |
| 4pm-6pm | Discussions |

Program second week May 18-22 2015, Lecture Hall NSCL

| Time | Monday |
|-----------------|---|
| 9am-10am | Jimmy Rotureau (ORNL/MSU) Towards optical potentials from coupled cluster theory |
| 10am-11am | George Papadimitriou (ISU) Structure and Reactions of nuclei using complex energy formalisms Struct |
| 11am-11.30am | Coffee break |
| 11.30am-12.30pm | Alexander Volya (FSU) Shell-model approach to nuclear clustering Re |
| 12.30pm-2pm | Lunch |
| 2pm-3.30pm | Discussions |
| 3.30pm-4pm | Coffee break |
| 4pm-6pm | Discussions |

Program third week May 25-29 2015, Conference Room Theory Trailer

| Time | Monday |
|-----------------|---|
| 9am-10am | Luigi Coraggio (INFN, Naples) A new double-step procedure for the derivation of effective shell-m |
| 10am-10.30am | Coffee break |
| 10.30am-11.30am | Toshio Suzuki (Tokyo) Evaluation of nuclear weak rates relevant to astrophysical |
| 11.30am-2pm | Lunch |
| 2pm-3.30pm | Houda Naidja (Strasbourg) New Advances in the Shell Model Calculations: Applications around doubly |
| 3.30pm-4pm | Coffee break |
| 4pm-6pm | Discussions |