

UNIVERSITY OF NOTRE DAME  
DEPARTMENT OF PHYSICS

# NUCLEAR SEMINAR

Monday, November 14

## *Clustering phenomena in nuclear structure and reactions*

Prof. Alexander Volya  
Florida State University

Clustering is an important part of nuclear many-body dynamics. In this presentation I summarize our progress in studies of nuclear clustering where we use the modern configuration interaction approach combined with ideas and methods from reaction physics. The construction of alpha channels where the intrinsic wave function of the alpha particle is obtained from a no-core shell model calculation is one of our major new developments. Several studies of realistic nuclei addressing the role of different structural components of the alpha particle will be presented.

**4 pm – 5 pm**  
**Nuclear Science**  
**Laboratory**  
**124 Nieuwland**  
**Science Hall**

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All interested  
persons are  
cordially invited  
to attend

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Refreshments will be  
served prior to the  
seminar in room 124