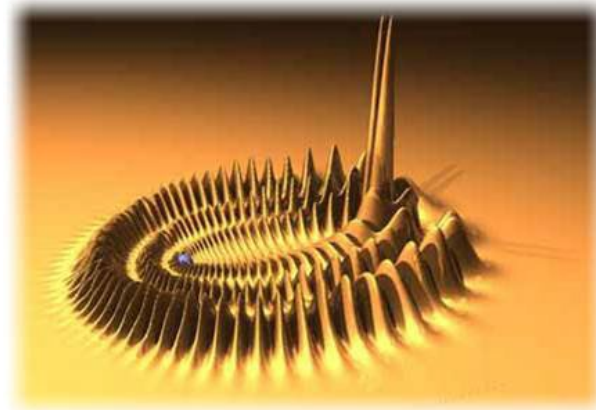


Interactions and Novel forms of Matter in Ultracold Rydberg Gases



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3:00 pm Monday, Nov 21, 2011
Sloan Auditorium, Goergen 101
Refreshments served

This talk will describe studies of the interactions in ultracold Rydberg atom gases including entangling dipole blockade and molecule formation.

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Abstract: Ultracold Rydberg gases are a promising system for exploring entanglement of material particles, other novel states of matter, and many-body physics. These investigations can lead to the development of quantum devices such as single photon sources and quantum gates. A key to understanding ultracold Rydberg gases and making progress in these exciting directions is to understand how Rydberg atoms interact with each other and other atoms. In this talk, we will focus on describing Rydberg atom interactions that lead to dipole blockade as well as experiments on two types of novel molecule formation.

Biography: BS University of Illinois at Urbana Champaign, Ph.D. University of Rochester (Nick Bigelow), Postdoc at the National Research Council in Canada with Albert Stolow (in larger group of Paul Corkum). Professor of Physics and Astronomy at the University of Oklahoma.