

AIAS FELLOWS' SEMINAR

David Petrosyan, AIAS Fellow

Quantum Emulators - Simulating few- and many-body physics with Rydberg atoms

ABSTRACT

Atoms in high-lying Rydberg states exhibit many remarkable features, including long lifetimes and giant polarizability resulting in strong, long-range interactions. Such systems are uniquely suited for simulating few- and many-body physics and for realizing quantum computers. After a brief outline of the Rydberg atom physics, I will describe several schemes for quantum simulations and information processing with laser controlled atoms. 04 MAY 2015 TIME: 14:15 AARHUS INSTITUTE OF ADVANCED STUDIES BUILDING 1630 –1632 FELLOWS' AUDITORIUM





