

TEL: 225-578-2261
FAX: 225-578-5855
<http://www.phys.lsu.edu>

202 NICHOLSON HALL
Louisiana State University
Baton Rouge, Louisiana 70803-4001

WEEKLY CALENDAR

September 23 - 27, 2013

DEPARTMENTAL COLLOQUIUM

"Quantizing Gravity: Atoms of Geometry and Possible links to Observation"

3:30 PM September 26, 2013
109 Nicholson Hall

Seth Major

Hamilton College

Host: Jorge Pullin

• *Refreshments served at 3:10 PM in 232 (Library) Nicholson Hall* •

Loop quantum gravity, an approach to quantizing Einstein's theory of general relativity, offers some new insights on the possible nature of space-time on the smallest possible scales. These insights include quantization of familiar geometric quantities such as area, length, and angle, and a model of an atom of quantum geometry. After reviewing these results I address ways in which our theory of quantum geometry might have observational consequences and propose that in the not too distant future quantum gravity may enjoy contact with observation and, perhaps, experiment.

PUBLICATIONS:

1. "Construction of spaces of kinematic quantum states for field theories via projective techniques," **Andrzej Okolow**, Class. Quantum Grav. 30 (2013) 195003 (32 pp).