

**PHYSICS COLLOQUIUM**, partially funded by the GSFEI

**Nima Arkani-Hamed**  
Harvard University

**“GRAVITY IN THE HIGGS PHASE AND COSMIC ACCELERATION”**

**Monday, April 26, 2004**

4:00 P.M., Ronald Geballe Auditorium, A-102, PAA  
Reception at 3:45 P.M. in the lobby

**Abstract:** I will describe a new possible phase for gravity in the universe, analagous to the Higgs phase for the weak interactions or superconductivity for electromagnetism. The low-energy description of this phase involves a new kind of dynamical fluid filling the universe, which does not dilute as the universe expands. This “gravitational aether” can provide an alternative to a cosmological constant for explaining accelerating phases in cosmology, both in the present epoch as well as in an early inflationary phase, and leads to a number of distinctive predictions that will confront experiment in the near future.

**Tuesday, April 27, 2004**

Particle Theory Seminar  
2:30 PM Rm.C-421 PAT

Ann Nelson, UW Physics  
“NEUTRINO OSCILLATIONS AS A PROBE OF THE DARK FORCE”

Condensed Matter Seminar  
4:00 PM, C-421 PAT

Marcel den Nijs, UW Physics  
“TRAFFIC JAMS, PAPER COMBUSTION, AND POLYMER LOCALIZATION”

Science Forum Lecture  
7:00 PM, Rm. 130, Kane Hall

Alan Weiner, Professor & Chair, Biochemistry, UW Medicine  
“BIOLOGY IS NANOTECHNOLOGY: HOW OUR CELLS WRITE, READ, COPY, AND STORE”

**Wednesday, April 28, 2004**

Special INT Seminar  
2:30 PM, Rm. C-421 PAT

Leopoldo Pando Zayas, University of Michigan  
“ASPECTS OF HADRONIC PHYSICS IN THE GAUGE /GRAVITY CORRESPONDENCE”

**Thursday, April 29, 2004**

Astronomy Colloquium  
4:00 PM, Ronald Geballe Auditorium  
A-102, PAA

Dr. Don Brownlee, UW Astronomy Department  
TBA

**Friday, April 30, 2004**

General Exam  
3:30 PM, Rm. A-110, PAA

Kristine Washburn, UW Astronomy  
“NEUTRINO ASTRONOMY”

Lecture Series  
7:00 PM, Ronald Geballe Auditorium  
A-102, PAA

Vladimir Chaloupka, UW Physics  
“ART OF FUGUE”

**SEMINARS**  
**April 26-30, 2004**