



## **Physics Colloquium**

**Friday March 29th, 2013  
4:10 - 5:00pm, EPS108**

### **“The Cosmological and Gravitational Consequences of a Parity Violating Universe”**

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#### **Abstract:**

In this colloquium I discuss the possibility that two important paradigms, cosmic inflation and the matter-antimatter asymmetry are connected to each other. In particular I will demonstrate (theoretically) that if our universe underwent a phase of cosmic-inflation where parity is violated in general relativity, it is possible to generate the observed baryon asymmetry necessary for structure formation. This is possible if general relativity is extended to encode parity violation via the Chern-Simons extension, which arises naturally from quantum gravity corrections in general.

<http://www.dartmouth.edu/~physics/people/faculty/alexander.html>  
<http://www.dartmouth.edu/~eejust/>

#### **Host:**

Nico Yunes

**Refreshments 3:45 p.m.  
EPS 2nd Floor Atrium**