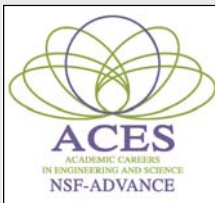




**Dr. Ana Achúcarro**

**Professor of  
Astroparticle Physics  
and Quantum Field  
Theory**

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University of Leiden,  
Netherlands*



## **NSF-ADVANCE Distinguished Lecture**

*Sponsored by Academic Careers in Engineering and Science (ACES)  
And the Department of Physics*

### **The Virtues of Defects: Bridging the Gap between the Cosmos and the Laboratory**

Wednesday, November 3, 2004, 4:00 PM

Rockefeller 301

Reception immediately following.

Hovorka Atrium

*Astronomical measurements point to a composition of the early Universe for which physicists have no satisfactory explanation to date. In spite of much progress the problem of identifying the microscopic properties of the early Universe remains a challenge. We will discuss some new research directions including Laboratory Cosmology, which attempt to exploit the analogies between certain condensed matter systems and the early Universe to mimic cosmological phenomena in the lab.*

Professor Achúcarro works in the fields of cosmology and particle physics. Her research interests include the physics of topological defects and extended objects (monopoles, vortices, domain walls, strings, branes) in a wide, interdisciplinary context, ranging from condensed matter systems (laboratory cosmology) to superstrings.

*With generous support from the National Science Foundation ADVANCE award, the ACES program at Case Western Reserve University seeks to contribute to the development of a national science and engineering workforce that includes the full participation women at all levels of faculty and academic leadership.*

*Website: [www.cwru.edu/admin/aces/index.html](http://www.cwru.edu/admin/aces/index.html) Email: [NSF\\_ACES@case.edu](mailto:NSF_ACES@case.edu)*