

**BENEMÉRITA UNIVERSIDAD AUTÓNOMA DE PUEBLA**



**INSTITUTO DE FÍSICA  
“Luis Rivera Terrazas”**



**SEMINARIO  
“DR. JESUS REYES CORONA”**

## **“Efficient Static and Dynamic Micromagnetics”**

**PhD. Marco A. Escobar  
University of California San Diego.**

Magnetic nano-structures are vital components of numerous existing and prospective magnetic devices, including hard disk drives, magnetic sensors, memories, microwave generators, and processors. The ability to examine, describe and predict the magnetic behavior and macroscopic properties of nanoscale magnetic systems and nanostructured arrays is essential for improving existing devices, progressing their understanding and enabling new technologies. Efficient micromagnetic methods for the solution of static and dynamic problems are described: Two efficient schemes for micromagnetic energy minimization are presented. The first one is used to find the stable state of a system, and to calculate hysteresis loops. The second one is used to find the minimum energy path between two magnetization states. Large scale micromagnetic simulations are used to study dynamics of the writing and degaussing process in a full scale model of a magnetic write head.

**Auditorio-IFUAP  
Viernes 21 de Noviembre de 2014  
13:00 Hrs.**