

**The Center for Magnetic Recording Research
&
The California Institute of Telecommunications and Information Technology
&
The Information Theory and Applications Center**

present the

6th Annual Shannon Memorial Lecture

Wednesday, April 30, 2008

2:30 PM – Reception at CMRR

4:00 PM – Lecture in Calit2 Auditorium

Guest Speaker



Prof. Sergio Verdú

Department of Electrical Engineering
School of Engineering and Applied Science
Princeton University

will present a lecture entitled

Information Theory and Minimum Mean-Square Estimation

In this talk Prof. Sergio will survey his work on the interactions between information theory and estimation theory. In particular, he will show how to express any information measure as a function of the minimum mean-square error achievable when observing a random variable in Gaussian noise. These relationships lead to surprising applications, including a new universal relationship in continuous-time nonlinear filtering, the optimization of the input power spectrum in DSL lines, and the simplest proof of the entropy-power inequality.

