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**University of Florida  
Mathematics Department  
Sixth Erdos Colloquium**

by

**Stephen Smale\***

University of California, Berkeley

and

Toyota Technical Institute, Chicago

on

***Shannon sampling, learning theory, and  
reconstruction functions from point values***

**Date and Time:** 4:00 - 5:00pm, Monday, March 1, 2004  
**Room:** TUR L011



**OPENING REMARKS**

by

**Neil Sullivan**

**Dean of the College of Liberal Arts  
and Sciences**

**Refreshments:** after the lecture, in Little 339

**Abstract:** Shannon sampling is a special case of the general problem of reconstruction of a function from its values at a discrete set of points. This talk will deal with age-old algorithms for solving this problem and new estimates for their error and efficiency.

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\* Professor Stephen Smale, one of the world's most eminent mathematicians, has made pioneering contributions to both pure and applied mathematics. For his pathbreaking work in topology and dynamical systems he was awarded the Fields Medal in 1966. In the late sixties he moved into applications - modelling physical processes of dynamical systems, the  $n$ -body problem and electric circuit theory, computation questions involving algorithms, among others. For his lifelong contributions he received the National Medal of Science in 1996. He has been professor of mathematics at Berkeley since 1964. He retired from Berkeley in 1995 and was professor at the City University of Hong Kong until his recent move to the Toyota Technical Institute, Chicago.

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