



The University of Chicago
Department of Statistics
Bahadur Memorial Lectures

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Counting Leaves on a Tree and Neurons in the Brain

**FRIDAY, May 17, 2002, at 4:00 PM at
133 Eckhart Hall, 5734 S. University Avenue**

Refreshments will be served in Eckhart 110.

ABSTRACT

A human brain contains about 10^{10} neurons. There is heated controversy about this number, about how to determine it, and about whether it decreases inexorably with age or disease. The science of stereology makes it possible to “count” numbers of cells and to obtain statistical estimates of other quantities like volume, surface area and length of structures. Stereology is in fact an application of very simple classical principles of survey sampling. The talk presents some examples starting with a technique described in the 4th century Hindu epic, the Mahabharata.