EULER CHARACTERISTICS FOR GAUSSIAN FIELDS ON MANIFOLDS

Professor ROBERT J. ADLER
Faculty of Industrial Engineering and Management
Technion, Haifa, ISRAEL, 32000

Abstract

I will start by briefly discussing some statistical problems related to mapping the brain, both the cerebrum (a 3-dimensional object) and the cerebral cortex, or "brain surface" (a 2-dimensional manifold in 3-dimensional space).

This problem has motivated recent deep results of Jonathan Taylor describing the random geometry of Gaussian random fields on abstract manifolds, which I will describe, relate back to the original problem, and also relate to the so-called "tube method" for estimating the distribution of the supremum of a Gaussian process.

[** This work is joint with Jonathan Taylor. Details can be found in ie.technion.ac.il/Adler.phtml]**

Please visit:
for more details about Sydney University Statistics Seminar Series (including the site map and past/future seminars).