

RUTGERS UNIVERSITY  
DEPARTMENT OF STATISTICS AND BIOSTATISTICS  
HILL CENTER #501, BUSCH CAMPUS, PISCATAWAY

[www.stat.rutgers.edu](http://www.stat.rutgers.edu)

**Seminar**

**Speaker:** Ildar Ibragimov, Mathematical Institute, Academy of Sciences, St. Petersburg, Russia, (POMI)

**Title:** On the estimation of analytic intensity densities of Poisson processes

**Date:** Monday July 20, 2009

**Time:** 4:00 PM

**Place:** 552 Hill Center

**Abstract**

A Poisson random measure  $X_\epsilon(A)$  (or a Poisson random set  $\Pi_\epsilon$ ) is observed on a subset  $G$  of  $d$ -dimensional Euclidean space. The intensity measure of  $X_\epsilon$  is absolutely continuous with respect to Lebesgue measure and its density function has the form:  $\frac{1}{\epsilon} \theta(x)$ . We suppose that  $\theta$  belongs to a given class of analytic functions. We study the rate of convergence of "good" estimates to  $\theta$  when  $\epsilon$  goes to zero.

In the next problem considered in the talk it is supposed that  $\theta$  belongs to a class of *entire* functions but that observation takes place in a bounded region,  $G$ . The entire function  $\theta$  is fully determined by its values in  $G$ . We study how far from the region of observation,  $G$ , *consistent* estimation of  $\theta$  remains possible.