



THE UNIVERSITY OF CHICAGO

Departments of Computer Science, Mathematics, Statistics, and the Computation Institute

SCIENTIFIC AND STATISTICAL COMPUTING SEMINAR Special Seminar

BORIS KASHIN

Steklov Institute of Mathematics,
Russian Academy of Sciences,
and Moscow State University

Dirichlet Polynomials in Connection with Φ -widths and Compressed Sensing

TUESDAY, April 2, 2013, at 4:00 PM

Ryerson 251, 1100 E. 58th Street

ABSTRACT

Let $\Phi = \{\varphi_i\}$ be a system of elements of Banach space X . We define Φ -width of order N of the set $A \subset X$ as a value of the optimal approximation (with respect to norm in X) of the set A by the subspace generated by N arbitrary elements of the system Φ . This notion in the case when Φ is a trigonometric system was introduced in the 1974 by R. Ismagilov. The talk is devoted to the Φ -width estimates, their connections with “compressed sensing” and their application to the investigations of polynomials with respect to the system $\{n^{it}\}_{n=1}^{\infty}$.

Organizers:

Lek-Heng Lim, Department of Statistics, lekheng@galton.uchicago.edu,

Ridgway Scott, Departments of Computer Science and Mathematics, ridg@cs.uchicago.edu,

Jonathan Weare, Department of Mathematics and the Computation Institute, weare@math.uchicago.edu.

SSC Seminar URL: http://www.stat.uchicago.edu/seminars/SSC_seminars.shtml

If you wish to subscribe to our email list, please visit the following website:

<https://lists.uchicago.edu/web/arc/statseminars>.