İSTANBUL TEKNİK ÜNİVERSİTESİ

MATEMATİK MÜHENDİSLİĞİ

BÖLÜM SEMİNERİ

Yrd. Doç. Dr. Deniz Karlı
Işık Üniversitesi

Konuşmanın Başlığı: Probabilistic Approach to Analysis of Singular Integral Operators and Multipliers.

Konuşmanın Özeti: In this talk, we introduce a connection between Probability Theory and Potential Theory in a non-classical way. In the classical setup, one can study results of Analysis using Brownian motion, a widely-studied continuous stochastic process, and the power of Martingale Theory. This approach provides alternative ways to discuss singular integral operators and many famous multipliers, such as Mikhlin multipliers. By generalising the process to symmetric stable process, we show that the classical long-standing conditions on the operators can be extended and hence more general classes of multipliers can be defined.

For this purpose, we talk about the construction of the bridge between Probability and Analysis, how we apply this bridge to Potential Theory, and generalisation of some singular integral operators such as Littlewood-Paley operators. Moreover, we discuss a new class of multipliers arrived after the introduction of our new singular integral operators whose boundedness criteria can be interpreted in terms of fractional calculus.

Tarih: 18 Kasım 2016 Cuma

İkram: 14:30-15:00

Seminer: 15:00-16:00

Yer: Matematik Mühendisliği B1-326

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