



# HACETTEPE ÜNİVERSİTESİ

## MATEMATİK BÖLÜMÜ



# GENEL SEMİNER



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15.00



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## Ümit Işlak

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### Limit Theorems and Distributional Approximations in Combinatorial Optimization

In this talk, I will mainly discuss probabilistic approaches to measuring similarity in discrete structures such as words, permutations and time series. Starting from a few basic motivating problems, I will introduce several distributional and asymptotic tools used to study their limiting behavior. I will then present results on subsequence problems, highlighting connections to the Tracy–Widom law and related limit distributions. The talk will also touch on applications to random words and time series forecasting. I will conclude with a few open questions and current research directions.



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