

Department of Mathematics, BGU

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# Colloquium

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*On Tuesday, April 26, 2022*

*At 14:30 – 15:30*

*In Math -101*

MAXIM GUREVICH (TECHNION)

will talk about

## **In between finite and $p$ -adic groups - the case of permutations**

ABSTRACT: Using the Bruhat decomposition, a general linear group over a  $p$ -adic field may be thought of as a “quantum affine” version of a finite group of permutations. I would like to discuss some analogies and explore the implications of this point view on the spectral properties of the two groups. For one, restriction of an irreducible smooth representation to its finite counterpart gives the correct notion of the wavefront set - an invariant of arithmetic significance which is often approached using microlocal analysis. From another perspective, the class of cyclotomic Hecke algebras is a natural interpolation between the finite and  $p$ -adic groups. I will show how the class of RSK representations (developed with Erez Lapid) serves as a bridge between the Langlands classification for the  $p$ -adic group and the classical Specht construction of the finite domain.