Department of Mathematics, BGU

AGNT

On *Wednesday, March ,6 2024*

At *14:10 – 15:00*

In *101-*

Boris Bychkov (HSE and Hafia)

will talk about

x-y duality in topological recursion, Hurwitz numbers and integrability

Abstract: Topological recursion is a remarkable universal recursive procedure that has been found in many enumerative geometry problems, from combinatorics of maps, to random matrices, Gromov-Witten invariants, Hurwitz numbers, Mirzakhani's hyperbolic volumes of moduli spaces, knot polynomials. A recursion needs an initial data: a spectral curve, and the recursion defines the sequence of invariants of that spectral curve. There is a duality in topological recursion which allows one to obtain closed formulas for the invariants of the recursion and which has implications in free probability theory and integrable hierarchies. In the talk I will survey recent progress in the topic with the examples from Hurwitz numbers theory, Hodge integrals and combinatorics of maps.

The talk is based on the joint works with A. Alexandrov, P. Dunin-Barkowski, M. Kazarian and S. Shadrin.