Department of Mathematics, BGU

AGNT

On *Wednesday, June ,3 2026*

At *14:10 – 15:10*

In *201*

Roy Magen (Bulgarian Academy of Sciences)

will talk about

Voevodsky's "geometric" criterion for 6-functor formalisms with applications to the stable motivic homotopy theory of complex analytic stacks

Abstract: In this talk I will present some enhancements and generalizations of a criterion for six-functor formalisms first sketched by Voevodsky in .2001 This principle was then implemented by Ayoub in order to show that the stable motivic homotopy theory of quasi-projective schemes has the structure of a six-functor formalism, although it has later been generalized by works of Cisinski, Déglise, Hoyois, Khan, and Ravi, leading to a six-functor formalism of genuine stable motivic homotopy theory on qcqs derived algebraic stacks with separated diagonals and nice stabilizers.

In our framework, we produce six-functor formalism using the cohomological behaviour of smooth maps, closed immersions, and smooth proper maps

(where the relevant cohomological property is expressed by a version of Atiyah duality). This is related to recent results of Dauser-Kuijper and Cnossen-Lenz-Linskens, which enhances work of Mann following Liu-Zheng on the construction of six-functor formalisms using the cohomological behaviour of étale maps and proper maps. Our general results are then used to produce a six-functor formalism of *complex analytic* stable motivic homotopy theory, as well as equivariant analytfiication functors that are compatible with the six operations.