

Department of Mathematics, BGU

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## Colloquium

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*On Tuesday, November ,16 2021*

*At 14:30 – 15:30*

*In Math 101-*

Yaniv Ganor (Technion)

will talk about

### **Big Fiber Theorems and Ideal-Valued Measures in Symplectic Topology**

Abstract: In various areas of mathematics there exist “big fiber theorems”, these are theorems of the following type: “For any map in a certain class, there exists a ‘big’ fiber”, where the class of maps and the notion of size changes from case to case.

We will discuss three examples of such theorems, coming from combinatorics, topology and symplectic topology from a unified viewpoint provided by Gromov’s notion of ideal-valued measures.

We adapt the latter notion to the realm of symplectic topology, using an enhancement of a certain cohomology theory on symplectic manifolds introduced by Varolgunes, allowing us to prove symplectic analogues for the first two theorems, yielding new symplectic rigidity results.

Necessary preliminaries will be explained. The talk is based on a joint work with Adi Dickstein, Leonid Polterovich and Frol Zapolsky.