

Department of Mathematics, BGU

Colloquium

On *Tuesday, December ,20 2022*

At *14:30 – 15:30*

In *Math 101-*

Guy Salomon (Weizmann Institute)

will talk about

New insights on the Nevo–Zimmer Theorem

Abstract: Let G be a higher-rank Lie group (for example, $SL_n(\mathbb{R})$ for $n > 2$). Nevo and Zimmer's structure theorem describes certain nonsingular actions that naturally arise when studying lattices. This theorem is very powerful and manifests rigidity phenomena. For example, it implies the celebrated Margulis Normal Subgroup Theorem, which classifies all normal subgroups of irreducible lattices of G . The original proof of Nevo–Zimmer Theorem heavily uses the structure of Lie groups.

In this talk, I will present a new theorem on general groups that immediately implies the Nevo–Zimmer Theorem (when restricting to the higher-rank Lie case). I will also explain how the generality of our theorem allows us to adapt it to the setup of normal unital completely positive maps on von Neumann algebras.

The talk is based on joint work with Uri Bader.