TECHNION
Israel Institute of Technology

Department of **Mathematics**

TECHNION MATH COLLOQUIUM

"Confined discrete subgroups of semisimple Lie groups."

Speaker: **Arie Levit (Tel Aviv University)**

8.7.24, 15:30, Amado 232

Abstract: The group of isometries of the hyperbolic plane is a simple Lie group. Any discrete (and torsion-free) subgroup of this Lie group corresponds to a hyperbolic surface. More generally, any discrete subgroup of any semisimple Lie group corresponds to a so-called locally symmetric space. We will talk about the geometry of those spaces and of their covers, allowing for deterministic as well as random covers, in a suitable sense. The key notion is confined discrete subgroups, corresponding to manifolds whose injectivity radius is uniformly bounded from above at all points. We present rigidity results for the covers of such manifolds, based on joints works with Ilya Gekhtman, Uri Bader and Tsachik Gelander. Our results can be seen as an extension of the classical Margulis normal subgroup theorem.

"Light refreshments will be served at 15:00 at the faculty lounge on the 8th floor."