

Department of Mathematics, BGU

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# PRO (Presenting Results of Others) Seminar

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*On Thursday, June ,4 2026*

*At 10:00 – 11:00*

*In 101-*

Amit Levinson-Sela

will talk about

## **Groups acting on trees with Tits' independence property (P) (By Colin D. Reid & Simon M. Smith)**

Abstract: Tits' independence property (P) and geometric density are two properties a group action on a tree can have; Tits showed that the combination of these properties yields interesting simple groups. However, constructing and detecting these properties remained unclear. Burger and Mozes's introduction of universal groups gave one rich "local-to-global" way to construct groups with (P) by defining their action locally around each vertex. I will present a paper by Colin Reid and Simon Smith which defines local action diagrams, greatly generalizing the Burger-Mozes construction. Local action diagrams turn out to completely classify groups with property (P), as well as to be able to detect geometric density and other global properties of group actions on trees.

Link to the paper: <https://link.springer.com/article/10.1007/s00208-026-03412-w>