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On the Continuity of the Centralizer Map of a Locally Compact Group

Let G be a locally compact group. We denote by $SUB(G)$ the hyperspace of closed subgroups of G endowed with the Chabauty topology. In this article we study the continuity of the map $\text{centr}: G \rightarrow SUB(G)$, $g \mapsto \text{centr}(g)$, where $\text{centr}(g)$ is the centralizer of g in G .

Keywords: Locally compact group, profinite group, quasidiscrete group, Frattini subgroup, one-parameter subgroup, Chabauty topology.

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