

Bohr compactification of discrete groups and Schur ultrafilters

SERHII BARDYLA*

University of Vienna
sbardyla@gmail.com

We discuss a relation between Schur ultrafilters, Bohr compactification of discrete groups and CHART groups. In particular, for each discrete group G we represent its Bohr compactification $\mathbf{b}G$ as a quotient of the Čech-Stone compactification βG , which is considered as a right topological semigroup. Principal role in this representation play Schur ultrafilters, which are a generalization of idempotent ultrafilters. Also, the aforementioned description of Bohr compactification allows us to characterize CHART topological groups. Namely, a CHART group G is a topological group if and only if each Schur ultrafilter on G converges to the unit of G .

*This is joint work with Pavol Zlatoš (Comenius University, Bratislava).