

1078-22-165

Isaac Martin Goldbring* (isaac@math.ucla.edu), 520 Portola Plaza Box 95155, Los Angeles, CA 90095-1555. *Nonstandard hulls of locally uniform groups*. Preliminary report.

In this talk, we show how to adapt Luxembourg's construction of the nonstandard hull of a uniform space to the special case of a topological group whose operations are uniformly continuous near the identity. In this case, the nonstandard hull is naturally a local group. We will discuss such topics as how the nonstandard hull depends on the choice of defining pseudometrics, the relation with Pestov's nonstandard hull construction for Banach-Lie groups, and the connection with Enflo's theory of groups uniformly free from small subgroups. (Received December 05, 2011)