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Chuan Liu* (liuc1@ohio.edu), Department of Mathematics, 1425 Newark Rd, Zanesville, OH 43701. *Generalized metric space properties in topology algebra.*

In this talk, we survey some recent results of generalized metric space properties on topological groups; paratopological groups and semitopological groups. We also discuss how the generalized metric space properties on remainders of Hausdorff compactification of a topological (paratopological, semitopological) group G affect the metrizability of G . Finally, we generalize several classic theorems of free topological groups on metrizable spaces to generalized metric spaces. Some questions are posed. (Received August 10, 2012)