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Christopher Manon* (christopher.manon@uky.edu). *Introduction to Spherical Tropicalization.*

Tropicalization is a powerful tool for linking algebraic geometry and combinatorics. Questions about moduli problems, intersection theory, and degenerations can be translated into questions about polyhedral objects, while at the same time discrete objects can be linked to underlying geometry which allows them to be softened or deformed. The structure of a torus as an algebraic group underlies basic constructions in tropical geometry, which suggests corresponding constructions for more complicated groups should be possible. I will give an introduction to one such generalization, where the algebraic torus is replaced by a homogeneous spherical variety of a connected reductive group. I'll introduce the fundamental theorem of tropical geometry in this context, and show how several representation theoretic objects can be viewed as spherical tropical varieties. (Received February 09, 2018)