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Multiplicative global Springer Theory

Multiplicative affine Springer fibers are group-theoretic analogues of affine Springer fibers. They can be seen as affine Deligne-Lusztig varieties without the Frobenius twist. They were studied by Frenkel and Ngo in 2011 to give a geometric interpretation of orbital integrals of spherical Hecke functions. Since then, there is an on-going program by Bouthier, Chi and Wang to establish their connections to multiplicative Higgs bundles and the multiplicative Hitchin fibration. In this talk, I will introduce parabolic multiplicative affine Springer fibers and use them to develop a multiplicative version of Yun's global Springer theory from 2011.