1145-05-1794   **Michael C. Strayer*** (`mcs80@live.unc.edu`). *Minuscule Kac-Moody settings unified by new poset coloring properties.*

R.M. Green axiomatically defined full heap posets and used them to build elegant minuscule-like doubly infinite representations of many affine Kac-Moody algebras. Two other classes of colored posets, namely minuscule and d-complete posets, have also been used in many applications to Lie theory. For instance, the d-complete posets correspond to "dominant λ-minuscule" elements of Kac-Moody Weyl groups. We present new poset coloring properties that unify the above three classes of colored posets. They can be used to characterize various Kac-Moody (sub)algebra representations. These include the full heap representations of Green, the minuscule representations of semisimple Lie algebras, and the Demazure modules of dominant minuscule Weyl group elements. We give the Dynkin diagram-indexed classifications of the colored posets that satisfy the two most important sets of these properties. (Received September 24, 2018)