1154-05-1058 **Michael C. Strayer*** (mstrayer@hsc.edu). *Classifications of minuscule Kac–Moody representations built from colored posets.*

The finite colored "minuscule" and "d-complete" posets of R.A. Proctor, the finite "dominant minuscule heaps" of J.R. Stembridge, and the infinite "full heaps" of R.M. Green are classes of colored posets that have been used in various combinatorial, representation theoretic, and geometric settings. For example, the minuscule posets were used by Thomas and Yong to compute the cohomology of minuscule flag varieties, and Green's Cambridge monograph *Combinatorics of Minuscule Representations* contains several applications of full heaps to representation theory and geometry. The posets in these classes each correspond to a Dynkin diagram and can be used to build "minuscule" representations of the corresponding Kac–Moody algebra or Borel subalgebra. We present new sets of cardinality-independent poset coloring axioms that characterize when such representations can be built. Consequently, these axioms unify the above settings; they also provide the first definition of infinite colored d-complete posets. We give the classifications of the resulting new classes of posets, which includes those of Proctor, Stembridge, and Green as special cases. Our classifications produce a complete list of the minuscule representations that can be built from colored posets. (Received September 12, 2019)