1148-05-200 **Sarah D Brauner*** (braun622@umn.edu), **Forrest Glebe** and **David Perkinson**. *Enumerating Linear Systems on Graphs, Dynkin Diagrams and Beyond.*

The divisor theory of graphs views a finite connected graph G as a discrete version of a Riemann surface. As in the case of Riemann surfaces, we are interested in the complete linear system —D— of a divisor D—the collection of nonnegative divisors linearly equivalent (via the discrete Laplacian) to D. Unlike the case of Riemann surfaces, the complete linear system of a divisor on a graph is always finite. In this talk, I will discuss methods to characterize and count all complete linear systems on G. I will then present a generalization of these results in the context of chip-firing on M-matrices. This is joint work with Forrest Glebe and David Perkinson. (Received February 02, 2019)