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Eric Katz* (katz.60@gmail.com), 231 West 18th Avenue, Columbus, OH, 43210. *Okounkov bodies and linear systems on graphs.*

Tropical geometry and Okounkov bodies are generalizations of the theory of Newton polytopes in different directions: tropical geometry for higher codimensions; Okounkov bodies for non-toric ambient spaces. In this talk, we will discuss joint work with Stefano Urbinati which finds these two theories converging again. We will discuss the analogue of Okounkov bodies over discrete valuation rings. In the special case of semistable families of curves, the theory of linear systems on graphs makes an appearance. This gives some pointers to a higher dimensional theory of combinatorial linear systems. (Received August 24, 2016)