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Bolor Turmunkh* (turmunk2@illinois.edu). *Path model for Whittaker vectors of semi-simple Lie algebras.*

Whittaker vectors were defined by Kostant for semi-simple Lie algebras. Matrix elements between Whittaker vectors give rise to Whittaker functions, which hold an important place in the theory of special functions, integrable systems, field theories and the AGT conjecture. While Whittaker functions have been studied extensively, relatively little is known about Whittaker vectors. In this talk, I will give an explicit description of Whittaker vectors of all semi-simple Lie

algebras via a path model. One can recover properties of the Whittaker function from the path model as well. This is joint work with R. Kedem and P. Di Francesco. (Received January 18, 2016)