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Pramod N Achar and **Maitreyee C Kulkarni*** (mkulka2@ias.edu), 1 Einstein Dr, Princeton, NJ 08540, and **Jacob P Matherne**. *A combinatorial Fourier transform for quiver representation varieties in type A.*

For a given dimension vector d , we consider the space of representations of the linearly- oriented type A quiver. A product of general linear groups acts on this space, and the orbits are isomorphism classes of representations with dimension vector d . In this setting, we introduce a combinatorial algorithm to describe the Fourier–Sato transform; this algorithm matches up orbits for the type A quiver with orbits for its reversed quiver in an interesting way. The combinatorial Fourier–Sato algorithm and its inverse both give the same map as the Knight–Zelevinsky multisegment duality. The only proof we know that these three algorithms are the same is purely geometric. This is joint work with Pramod Achar and Jacob Matherne. (Received January 28, 2019)