1158-62-212 **Türkü Özlüm Çelik**, **Asgar Jamneshan*** (jasgar@math.ucla.edu), **Guido Montúfar**, **Bernd Sturmfels** and **Lorenzo Venturello**. *Wasserstein Distance to Independence Models.*

An independence model for discrete random variables is a Segre-Veronese variety in a probability simplex. That simplex is a metric space with respect to the Wasserstein distance, a polyhedral norm whose unit ball is dual to the Lipschitz polytope. Given any empirical distribution, we seek to minimize its Wasserstein distance to the model. The solution to this optimization problem is a piecewise algebraic function of the given data. We compute this function explicitly in small instances, and we characterize its combinatorial structure and algebraic degrees in the general case. (Received March 02, 2020)