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Alessio Caminata, Noah Giansiracusa, Han-Bom Moon* (hmoon8@fordham.edu) and **Luca Schaffler**. *Point configurations, phylogenetic trees, and dissimilarity maps.*

In 2004 Pachter and Speyer introduced the dissimilarity maps for phylogenetic trees and asked two important questions about their relationship with tropical Grassmannian. Multiple authors answered affirmatively the first of these questions, showing that dissimilarity vectors lie on the tropical Grassmannian, but the second question, whether the set of dissimilarity vectors forms a tropical subvariety, remained open. In this talk, we present a weighted variant of the dissimilarity map and show that weighted dissimilarity vectors form a tropical subvariety of the tropical Grassmannian in exactly the way that Pachter-Speyer envisioned. This tropical variety has a geometric interpretation in terms of point configurations on rational normal curves. This is joint work with Alessio Caminata, Noah Giansiracusa, and Luca Schaffler. (Received January 06, 2021)