

1116-52-168

Satyan L Devadoss* (satyan.devadoss@williams.edu) and **Samantha Petti**. *A space of phylogenetic networks*. Preliminary report.

A classic problem in computational biology is constructing a phylogenetic tree given a set of distances between species. We consider a *split network*, a generalization of a tree in which multiple parallel edges signify divergence. A geometric space of such networks is introduced, forming a natural extension of the work by Billera, Holmes, and Vogtmann on tree space. We explore geometric and topological properties of this space, and show an unexpected embedding of the real moduli space of curves within it. (Received August 11, 2015)