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Nicholas Mandler* (nickmandler101@gmail.com), 2737 Clement St, Apt. 3, San Francisco, CA 94121. *Parameterizing the canopy and the boundary of the connectedness locus of the IFS of two distinct affine maps.*

The connectedness locus of an IFS of two affine maps was investigated by Barnsley in the case of a pair of affine maps with identical corresponding linear map components. This talk will convey an escape time algorithm for determining the connectedness locus in the generalized case of distinct affine maps. It will then be demonstrated that this algorithm produces as a byproduct key information for determining the generalized analog to Mandelbrot and Frame's 'Canopy' or 'Shortest Path' in the attractor. The algorithm can also be used to parameterize the boundary of the connectedness locus as well as quickly compute the unstable locus of a topological-set / post-critically-finite set with respect to a parameterized space of systems. (Received September 18, 2019)