1135-47-1589 **Evans M. Harrell*** (harrell@mat.gatech.edu), School of Mathematics, Georgia Institute of Technology, Atlanta, GA 30332-0160, and **Anna V. Maltsev** (annavmaltsev@gmail.com), School of Mathematical Sciences, Queen Mary University of London, Mile End Rd, London, E1 4NS, United Kingdom. *Localization of eigenfunctions on quantum graphs.*

I'll discuss ways to construct realistic landscape functions for eigenfunctions ψ of quantum graphs, i.e., metric graphs where a Schrödinger equation operates on the vertices. The term "landscape functions" refers to functions that are easier to calculate than exact eigenfunctions, but which dominate $|\psi|$ in a non-uniform pointwise fashion constraining how ψ can be localized. Our techniques include Sturm-Liouville analysis, a maximum principle, and Agmon's method, and we make connections both to the potential energy function and the topology of the graph.

This is joint work with Anna Maltsev of Queen Mary University. (Received September 23, 2017)