Edward Waymire Oregon State Tree Polymers: Some Recent Results and Problems

Tree polymers are simplifications of 1+1 dimensional lattice polymers made up of polygonal paths of a (nonrecombining) binary tree having random path probabilities. As in the case of lattice polymers, the path probabilities are (normalized) products of i.i.d. positive random weights. The a.s. probability laws of these paths are of interest under weak and strong types of disorder. The case of no disorder provides a benchmark since the polymers are simple symmetric random walk paths where all of the probability laws are known. We will discuss some recent results, speculation and open problems for this class of models. This is largely based on joint work with Stan Williams.