

STANFORD PROBABILITY SEMINAR

Richard Kenyon, UBC

Wednesday, 18 January 2006 (Note the date change)

4:15pm (Refreshments at 4pm in the 1st Floor Lounge)

Sequoia Hall, Room 200

Crossing Probabilities in Spanning Trees

Abstract. This is joint work with David Wilson. Given a planar graph with selected vertices on its outer face (which we refer to as terminals), an essential spanning forest is a spanning forest in which every component contains at least one of the terminals. We show how to compute, for a randomly chosen essential spanning forest, the probability of any given topology of connections between the terminals. These probabilities are rational functions of the pairwise resistances between the terminals, and, when appropriately normalized, actually polynomials in these resistances.