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Helen K. Lei* (glei@math.ucla.edu), CA, and **L. Chayes** (lchayes@math.ucla.edu), CA. *A Universality Result for Critical 2D Percolation.*

A few years ago, S. Smirnov obtained a conformal invariant (thus establishing Cardy's formula) for site percolation on the triangular lattice. This directly addresses questions related to the existence of continuum limits for 2D percolation, but there has been no definitive statement concerning the universality of this limit: Do different 2D percolation systems have the same continuum limit? We investigate a family of 2D critical percolation models which are based on the triangular lattice bond problem. While the models have local correlations, all bonds separated by a few lattice spacings still act independently. Hence universal equivalence to generic critical 2D percolation is anticipated. We establish a universal result (albeit in this restricted context) by obtaining Cardy's formula for the continuum limit of these systems. (Joint work with L. Chayes.) (Received March 05, 2006)