1125-82-594   **Karl E. Liechty*** (`kliechty@depaul.edu`) and **P. M. Bleher**. *Orthogonal polynomials and the six-vertex model.*

The six-vertex model is a two-dimensional exactly solvable model in statistical physics. When equipped with certain boundary conditions, the partition function of this model is expressed exactly in terms of orthogonal polynomials on the real line, and the thermodynamic limit of the partition function is given by asymptotic analysis of the orthogonal polynomials. I'll talk about a decade (plus) old project of computing the asymptotics of the partition function for domain wall boundary conditions, and also more recent work extending these results to other related boundary conditions. (Received September 07, 2016)