Dimers in $\mathbb{Z}^2$

Richard Kenyon
Université de Paris-Sud

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Abstract

Kasteleyn's theorem computes the number of perfect couplings of a planar graphs as a determinant. We extend this theorem to compute the densities of local configurations in a random coupling of a large area in $\mathbb{Z}^2$.

Bibliography

[1] Kenyon (Richard). – Dimères sur un réseau. – Preprint, 1998. Available at http://topo.math.u-psud.fr/~kenyon/preprints.html.