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Ben Brubaker*, 206 Church St. SE, Minneapolis, MN 55455. *Automorphic forms and statistical mechanics.*

Automorphic L-functions result from applying linear functionals to nice functions in an automorphic representation – generalizing the idea of taking Fourier coefficients of modular forms in the classical case.

I'll explain how the local output of one such functional for $GL(n)$ is expressible in terms of the six vertex model from statistical mechanics, and how one can attempt to generalize this result to other classical groups.

This is based on joint work with A. Schultz, building on earlier work with D. Bump and S. Friedberg. (Received July 29, 2014)