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Tobias Johnson* (toby@math.washington.edu) and **Soumik Pal**. *Growing random regular graphs and the Gaussian Free Field*.

The spectral properties of Wigner matrices have been the subject of much recent study. The adjacency matrices of random regular graphs are something like Wigner matrices, and comparing the two tests the extent of universality. Alexei Borodin has recently found connections between the eigenvalues of sequences of minors of a Wigner matrix and the Gaussian Free Field. As an analogue, we investigate the eigenvalues of a sequence of growing random regular graphs, and we find similar connections. Along the way, we will paint a nice picture of the combinatorial behavior of our growing random regular graphs. This extends our work on fluctuations of linear eigenvalue statistics for random regular graphs.

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