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Short title: Gidas-Ni-Nirenberg results for finite difference equations: estimates of approximate symmetry.

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Review text:

The paper is inspired by the GNN theorem stating that in an n-dimensional ball, all the solutions u of the f-inhomogeneous Laplace equation (with Dirichlet boundary conditions) are radially symmetric for all the reasonable f. The text pays attention to the similar (approximate) inheritance of the symmetry for the discretized versions of the same equation (using cubic mesh of size h). The authors start from the reminder of an elementary $n = 1$ counterexample (one can only expect an approximate inheritance of the symmetry) and they offer some precise results contrasting the defects $O(h)$ and $O(1/|\log h|)$ of symmetry at $n = 1$ and $n > 1$.