The scaling limit of $\mathsf{Av}(\alpha \ominus 1)$ is obvious

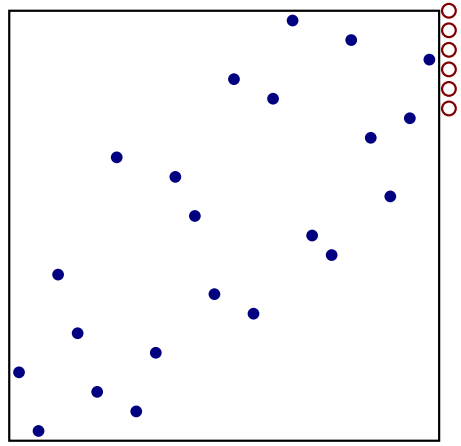
Some PermPAL heatmaps of classes avoiding patterns ending in 1

Conjecture (Bevan, PP2023, Dijon)

If every pattern in B ends in 1, then the scaling limit of $\mathsf{Av}(B)$ is the diagonal permuton ◪.

- Known to be true for $\mathsf{Av}(231)$ and $\mathsf{Av}(321)$.
- Erik Slivken has a proof for $\mathsf{Av}(2431)$ — talk on Friday.

Generating trees and inversions



- Extending to the right, available slots form an interval at the top.
  - Number of slots is outdegree of node in generating tree.
- $\mathbb{E}\big[\text{number of slots}\big] \to \mathrm{gr}(\mathcal{C})$, a constant.
  - If $\omega(n) \gg 1$ then $\lim_{n\to\infty} \mathbb{P}\big[\sigma(n) \geqslant \omega(n) : \sigma \in \mathcal{C}_n\big] = 0$.
- If slots are numbered from 0, the kth slot creates k new inversions.
- The conjecture holds if almost all permutations in the class have a subquadratic number of inversions. [Diaconis & Graham]