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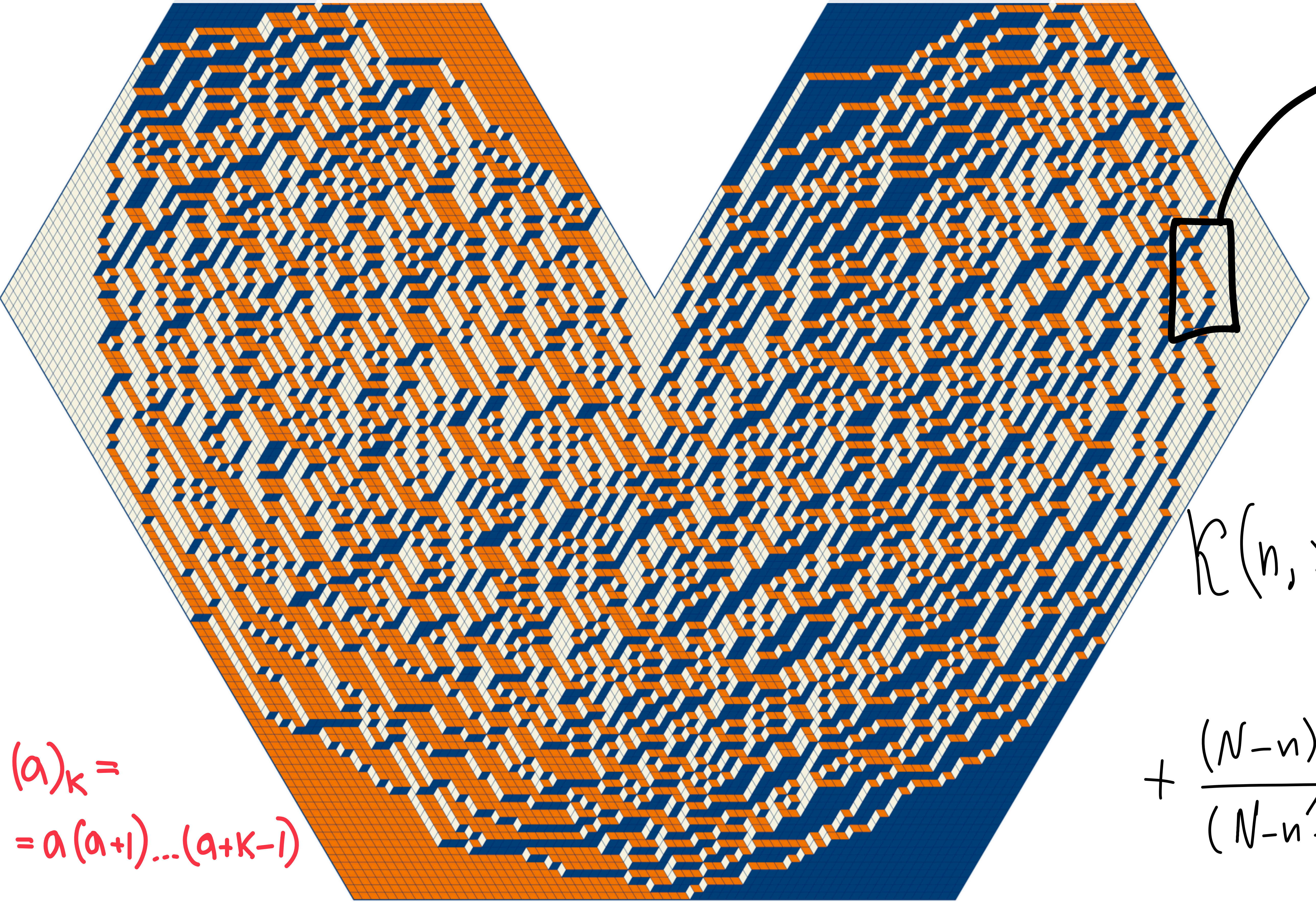
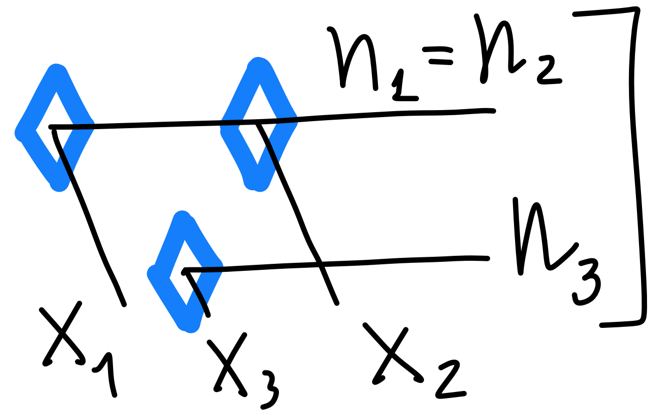
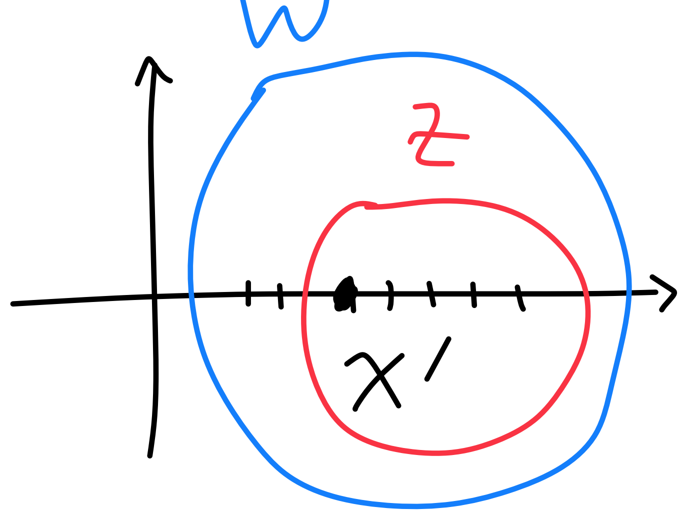


$$\mathrm{Prob}\Big[$$



$$\Big] = \det\left[K(n_i,x_i;n_j,x_j)\right]_{3\times 3}$$

(and for all $3=m$)



$$K(n,x;n',x') = -\mathbb{1}_{n'<n,\, x'\le x}\,\frac{(x-x+1)_{n-n'-1}}{(n-n'-1)!}$$

$$+\frac{(N-n)!}{(N-n'-1)!}\,\frac{1}{(2\pi i)^2}\oint\oint \frac{(z-x'+1)_{N-n'-1}}{(w-x)_{N-n+1}}\cdot\frac{dz\,dw}{w-z}\cdot\prod_{r=1}^{N}\frac{w-\alpha_r}{z-\alpha_r}$$

$(a)_k =$
$= a(a+1)\ldots(a+k-1)$

Keywords

- **Dimer models / random ◊ tilings / determinantal processes**

- **Symmetric functions: Schur / Macdonald / Hall-Littlewood polynomials; their spin deformations; Whittaker functions**

- **Robinson-Schensted-Knuth (RSK) correspondences, 🎲 randomized bijections a la RSK; bijections ➡️ particle systems**

- **Integrable stochastic particle systems with many parameters: noncolliding walks, random polymers, ASEP,**

- **Stochastic vertex models, ⤭ Yang-Baxter equation**