$p(\xi_k)$ with $\alpha=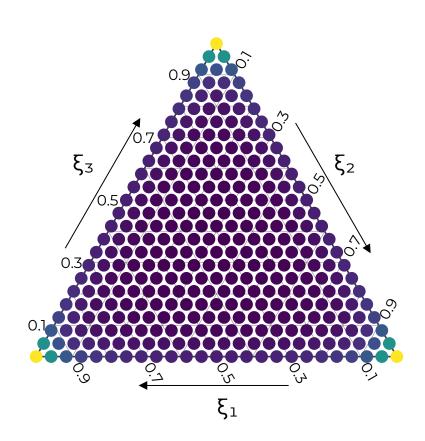[0.1, 0.1, 0.1]$