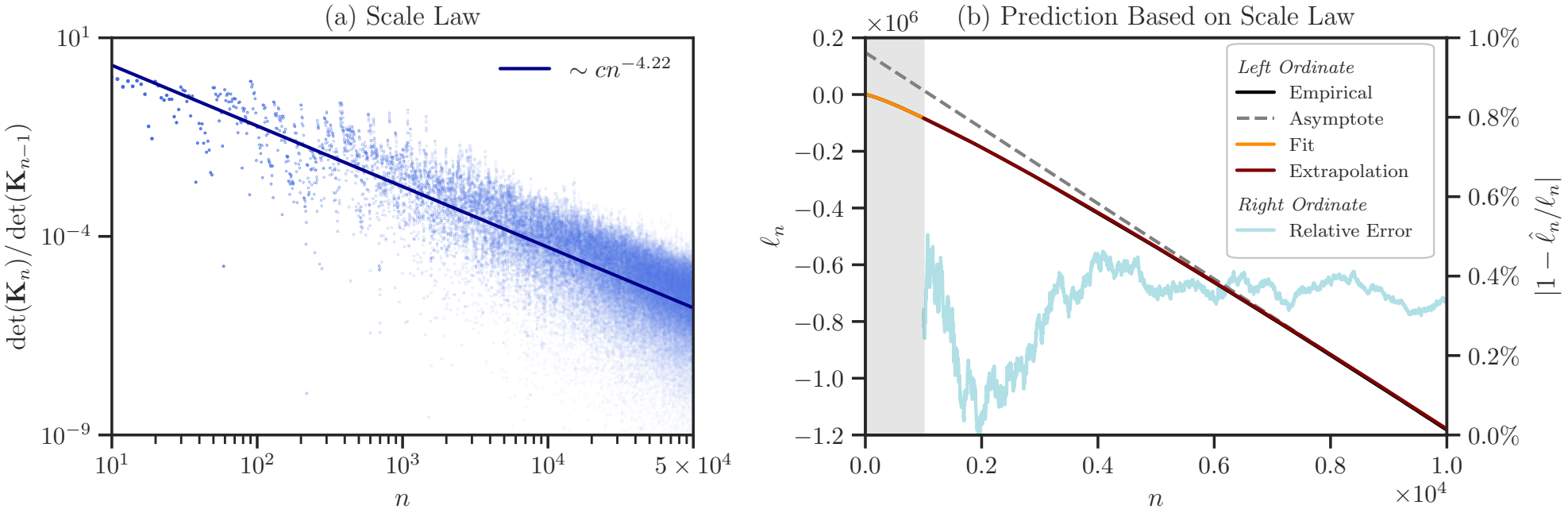

Figure J.3. Application of FLODANCE to a multi-output Gaussian process with a Matérn kernel. We generate $n = 10{,}000$ spatial locations in $\mathbb{R}^2$ and assume a $d = 10$-dimensional output per location, resulting in a covariance matrix of size $m = nd = 100{,}000$. The covariance structure follows a Matérn kernel with smoothness $\nu = 1.5$ and length scale 0.04, combined with a linear model of coregionalization (LMC) for output covariances. (a) Scale law illustrated by the ratio of successive determinants over increasing submatrix sizes. (b) Log-determinant prediction using FLODANCE. The black curve (left axis, largely obscured) is the exact log-determinant ℓ_n computed by MEMDET. FLODANCE is fitted on $[1, n_s = 10^3]$ (yellow) and extrapolated to $[n_s, n = 10^4]$ (red). The blue curve (right axis) shows the relative error of prediction, which remains below 0.4%.