$$\begin{aligned} \mathsf{E}[x_{ij}|T] &= 2p_i^T, \\ \mathsf{Var}(x_{ij}|T) &= 2p_i^T \left(1 - p_i^T\right) (1 + f_j^T), \\ \mathsf{Cov}(x_{ij}, x_{ik}|T) &= 4p_i^T \left(1 - p_i^T\right) \varphi_{ik}^T, \end{aligned}$$

 $(1 - F_{IT}) = (1 - F_{IS})(1 - F_{ST}).$ 

 $\left(1-f_{j}^{T}\right)=\left(1-f_{j}^{L_{j}}\right)\left(1-f_{L_{i}}^{T}\right),$ 

$$egin{aligned} F_{\mathsf{ST}} &= \sum_{j=1}^n w_j f_{L_j}^{T}, \ \hat{
ho}_i^{T} &= rac{1}{2} \sum_{j=1}^n w_j x_{ij}, \ \hat{arphi}_{jk}^{T,\mathsf{new}} & \stackrel{\mathsf{a.s.}}{\longrightarrow} arphi_{jk}^{T}. \end{aligned}$$

E, Var, Cov, round, sgn, logit,  $\xrightarrow[m\to\infty]{\text{a.s.}}$ ,  $\xrightarrow[n\to\infty]{}$ ,  $\xrightarrow[n,m\to\infty]{\text{a.s.}}$ ,  $x_{ij}$ ,  $p_i^T$ ,  $\hat{p}_i^T$ ,  $F_{ST}$ ,  $F_{IT}$ ,  $F_{IS}$ ,  $f_{B}^{A}$ ,  $f_{i}^{T}$ ,  $f_{i}^{L_{j}}$ ,  $f_{L_{i}}^{T}$ ,  $\varphi_{ik}^T$ ,  $\varphi_{ik}^{L_{jk}}$ ,  $f_{L_{ik}}^T$ ,  $f_{L_i}^{L_{jk}}$ ,  $R_{ST}$ ,  $\phi_{ST}$ ,  $G_{ST}$ ,  $G'_{ST}$ ,  $\hat{F}_{ST}^{sample}$ ,  $\hat{F}_{ST}$ ,  $\hat{F}_{ST}^{indep}$ ,  $\hat{F}_{ST}^{WC}$ ,  $\hat{F}_{ST}^{Hudson}$  $\hat{F}_{ST}^{HudsonK}$ ,  $\hat{\varphi}_{ik}^{T}$ ,  $\hat{f}_{i}^{T}$ ,  $\hat{\varphi}_{ik}^{T,std}$ ,  $\hat{f}_i^{T,\text{std}}, \hat{f}_i^{T,\text{stdII}}, \hat{f}_i^{T,\text{stdIII}},$  $\hat{F}_{\mathrm{ST}}^{\mathrm{std}}$ ,  $\hat{F}_{\mathrm{ST}}^{\prime}$ ,  $\hat{F}_{\mathrm{ST}}^{\prime\prime}$ ,  $\hat{\varphi}_{ik}^{T,\mathrm{new}}$ ,  $\hat{\varphi}_{\min}^{T,\text{new}}$ ,  $\hat{f}_{i}^{T,\text{new}}$ ,  $\hat{F}_{\text{ST}}^{\text{new}}$ ,  $\hat{\varphi}_{jk}^{L_{jk}, \text{beagle}}, \hat{f}_i^{L_j, \text{beagle}}$  $\overline{p(1-p)}'$ ,  $A_{ik}$ ,  $\hat{A}_{min}$ .