

Loci

Individuals

|   |     |   |   |   |   |   |
|---|-----|---|---|---|---|---|
| 0 | 2   | 2 | 1 | 1 | 0 | 1 |
| 0 | 2   | 1 | 0 | 1 |   |   |
| 2 | ... |   |   |   |   |   |

**X**

$$E[x_{ij}|T] = 2p_i,$$

$$\text{Var}(x_{ij}|T) = 2p_i(1-p_i)(1+f_j),$$

$$\text{Cov}(x_{ij}, x_{ik}|T) = 4p_i(1-p_i)\varphi_{jk},$$

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

$$(1-f_j) = (1-f_j^{L_j})(1-f_{L_j}),$$

$$F_{ST} = \sum_{j=1}^n w_j f_{L_j},$$

$$\hat{p}_i = \frac{1}{2} \sum_{j=1}^n w_j x_{ij},$$

$$\hat{\varphi}_{jk}^{\text{new}} \xrightarrow[m \rightarrow \infty]{\text{a.s.}} \varphi_{jk}.$$

$$E, \text{Var}, \text{Cov}, \text{round}, \text{sgn}, \text{logit}, \xrightarrow[m \rightarrow \infty]{\text{a.s.}}, \xrightarrow[n \rightarrow \infty]{\text{a.s.}},$$

$$\xrightarrow[n, m \rightarrow \infty]{\text{a.s.}}, x_{ij}, \mathbf{x}_i, \mathbf{X}, p_i, \hat{p}_i,$$

$$F_{ST}, F_{IT}, F_{IS}, f_B^A, f_j, f_j^{L_j},$$

$$f_{L_j}, \varphi_{jk}, \Phi, \varphi_{jk}^{L_{jk}}, f_{L_{jk}}, f_{L_j}^{L_{jk}},$$

$$R_{ST}, \phi_{ST}, G_{ST}, G'_{ST},$$

$$\hat{F}_{ST,i}^{\text{sample}}, \hat{F}_{ST}, \hat{F}_{ST}^{\text{indep}}, \hat{F}_{ST}^{\text{WC}},$$

$$\hat{F}_{ST}^{\text{Hudson}}, \hat{F}_{ST}^{\text{HudsonK}}, \hat{\varphi}_{jk}, \hat{f}_j,$$

$$\hat{\varphi}_{jk}^{\text{std}}, \hat{f}_j^{\text{std}}, \hat{f}_j^{\text{stdII}}, \hat{f}_j^{\text{stdIII}},$$

$$\hat{F}_{ST}^{\text{std}}, \hat{F}_{ST}'^{\text{std}}, \hat{F}_{ST}''^{\text{std}}, \hat{\varphi}_{jk}^{\text{new}},$$

$$\hat{\varphi}_{\min}^{\text{new}}, \hat{f}_j^{\text{new}}, \hat{F}_{ST}^{\text{new}},$$

$$\hat{\varphi}_{jk}^{L_{jk}, \text{beagle}}, \hat{f}_j^{L_j, \text{beagle}},$$

$$\overline{p(1-p)}, A_{jk}, \hat{A}_{\min},$$

$$\text{SRMSD}_p, \text{AUC}_{\text{PR}}.$$