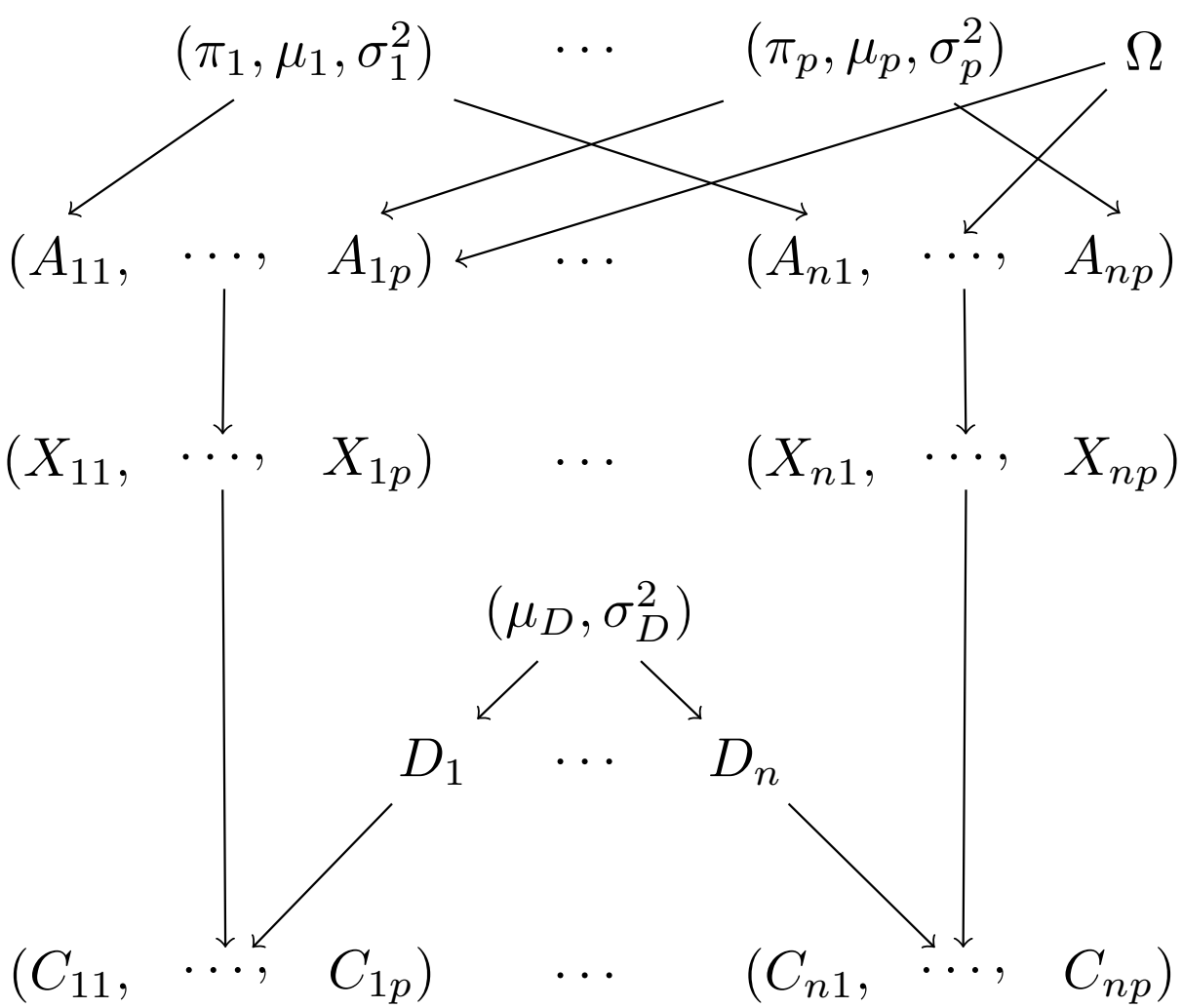

- $(\pi_j, \mu_j, \sigma_j^2)$: absence probability, mean of log non-zero abundance, and variance of feature j
- Ω: correlation structure between features
- $A_{ij} \sim \text{ZILogN}(\pi_j, \mu_j, \sigma_j^2)$: absolute abundance of feature j in sample i
- $(F_{A_1}(A_1), \ldots, F_{A_p}(A_p)) \sim \text{NCopula}(\Omega)$ jointly
- $X_{ij} (= \frac{A_{ij}}{\sum_j A_{ij}})$: relative abundance of feature j in sample i
- $D_i \sim \text{LogN}(\mu_D, \sigma_D^2)$: sequencing depth of sample i
- $(C_{i1}, \ldots, C_{ip}) \sim \text{Multinom}(D_i, X_{i1}, \ldots, X_{ip})$: read counts of sample i