

(21)

If $LR(u_k) > 1$ then $u_k = 1$

If $LR(u_k) < 1$ then $u_k = 0$

Definitions

Log Likelihood Ratio

Likelihood ratio is defined as

$$LR(u_k) = \frac{P(u_k = +1 | \bar{y})}{P(u_k = 0 | \bar{y})}$$

Taking its logarithm we define log-likelihood ratio as

$$L(u_k) = \ln \frac{P(u_k = +1 | \bar{y})}{P(u_k = 0 | \bar{y})}$$

$$= \log \frac{P(u_k = +1 | \bar{y})}{P(u_k = 0 | \bar{y})}$$

$$L(u_k) = \log \frac{\sum_{u_{k-2}} \alpha_{k-2}(s') \tau_k(s', s) \beta_k(s)}{\sum_{u_{k-2}} \alpha_{k-2}(s') \tau_k(s', s) \beta_k(s)}$$

