

Let f_1, \dots, f_k be the discrete sequence of frequencies

$$P(l, u) = \frac{1}{M} \sum_{i=1}^M \left[\frac{1}{c_k - c_1} \sum_{j=c_1}^{c_k} S_{ij} \right] = \frac{1}{M(c_k - c_1)} \sum_{i=1}^M \sum_{j=c_1}^{c_k} S_{ij}$$