ERRATUM

Mirkin's (1990, p. 172) article on bilinear clustering contains a false statement which does not affect any of the results presented in the paper. Specifically, equation (5') is derived from an L_p -generalization of the Pythagorean Theorem, stating the following: for any two finite-dimensional vectors, $\mathbf{x} = (x_i)$ and $\mathbf{y} = (y_i)$, minimizing the $\sum_i |y_i - cx_i|^p$ by real c for an arbitrary $p > 1$ always leads to the following equality (for an optimal c):

$$\sum_i |y_i|^p = |c|^p \sum_i |x_i|^p + \sum_i |y_i - cx_i|^p,$$

which is untrue. For example, for $\mathbf{y} = (2, 2, 4, 7, 8)$ and $\mathbf{x} = (1, 1, 1, 1, 1)$ and $p = 4$, the optimal $c = 4.789381$ and the first, second, and third terms of the equality above are respectively equal to 6785, 2630.798, and 251.603. The sum of the latter two terms ($2630.798 + 251.603 = 2882.401$) is less than the first one (6785), thus providing a counterexample for this case, as well as for the equality in (5') from Mirkin (1990, p. 172).

Reference

MIRKIN, B. G. (1990), "A Sequential Fitting Procedure for Linear Data Analysis Model," *Journal of Classification*, 7, 167-195.