Authorship discrimination was studied by applying the Recognition Taguchi (RT) method to the works of four prominent Japanese writers. The RT method was proposed on the assumption that it would be applied to data of identical dimensions, such as pixel data or time-series data, so other types of data must be normalized. Two new normalization methods, one using the median and range and the other using the median and standard deviation, were proposed and compared with normalization by the standard deviation alone, which had been proposed previously. With any of the three normalization methods RT analysis successfully identified the four writers, but normalization by median and range was shown to be the best of the three methods. The conclusions reached were that the RT method can be used for authorship discrimination, and that when the RT method is applied to data of different dimensions (different units or characteristics), its discriminative capabilities can be improved by applying one of the newly proposed normalization methods.

Key words: literary style, stylometry, authorship discrimination, Taguchi methods, quality engineering, Mahalanobis-Taguchi (MT) system, pattern recognition, RT method (T Method-3), S/N ratio, normalization, dimension