**ABSTRACT**

Pattern classification technique is used for writer identification task in Tamil handwriting document images. Tamil is a classical language in India especially to south Indian people. Compared to other languages, this language has more distinctive features like style, strokes, loops, crossings and junctions. Handwritings written in Tamil language are collected and used as input images. The input images are scanned, analyzed and their describing features are defined. They are classified using supervised learning algorithms like support vector machine (SVM), extreme machine learning (ELM) and back propagation algorithm (BPA). Comparative results of these algorithms are analyzed and shown that ELM outperforms with 100% accuracy.