**Abstract**

Recognition of handwritten mathematical expressions is helpful in writing technical documents as well as useful in converting handwritten documents with mathematical equations into electronic format. Symbol recognition in mathematical expressions is a complex task due to large character set and writer variability in size and style of symbols. In this work, mathematical expression recognition task carried out in different phases which include data collection, preprocessing, segmentation, feature extraction, symbol classification as well as mathematical expression. A set of 50 simple algebraic expressions written by 10 writers, each equation with 10 to 15 symbols converting 23 unique symbols are collected. The expressions are scanned and converted into image files. The images are preprocessed to remove noises, normalize the size and enhance. The symbols in each equation is segmented and features like, zonal, structural, skeleton based, directional are extracted. Multilayer Perceptron (MLP) and Support Vector Machine (SVM) classifiers are used to classify the symbols. The accuracy of symbol classification and whole algebraic expression recognition is analyzed. An interface to automatic mathematical expression recognition is developed with effective classifier.