Dear Editor

The manuscript introduced a novel approach for offline Arabic signature verification based on multi-classifier fusion for forensic science. The algorithm performance was evaluated on real signatures images from the Department of Forensic Medicine. The reported results are original and of great interest for various security application domains.

So, the main contribution of this work is that several results concerning Arabic offline verification using an algorithm based on a combination of distance classifier and fuzzy classifier (two levels verification) are presented. In this approach, I replace the basic distance–based verification approach (state-of-the art approaches rely on single classifier or multiple distance –based classifiers ) by some adequate multi-levels verification based on fuzzy sets that permits us to relax the additively constraint of distance –based verification. Therefore, dual classifiers are able to handle both random and fuzzy uncertainties existing universally in the signature dataset.

To the best my knowledge there is no work that utilizes dual fuzzy set related classifiers for Arabic offline signature verification. There exist many works that employ single traditional distance classifier or multiple classifier based on Statistical Learning Theory for signature verification not dual classifier approach.

The manuscript is original and unpublished and is not being considered for publication elsewhere. I guarantee that all previously published work cited has been fully acknowledged. To my knowledge there are no issues that would lead to a conflict of interest or disclosure.

I would like to greatly thank the reviewers for their fruitful comments, which help me a lot for improving the manuscript. As you will see, a particular attention has been paid for improving the theoretical background and validating the proposed approach against various kinds of data. I also greatly improved the English usage. I hope that this manuscript will meet the journal requirements and will be accepted for publication. Correspondence should be addressed to Dr. Saad Darwish. Please do not hesitate to contact me if you need further information.