**Statement of Research Interests**

Videos are easily edited and shared on the internet. Determining video authenticity has become a challenging task in video forgery detection and localisation systems. Therefore, during my Ph.D., I developed an intelligent passive object-based video authentication application in complex colour videos which captured with a moving camera and a dynamic texture.

The proposed application has three phases are:

1. The keyframe extraction phase: three full automatic algorithms were proposed which are able to extract the most important video frames that contain critical motion of objects by estimating objects’ velocities based on accumulative optical flow, the algorithms are:
   1. The Accumulative Optical Flow with Self-adaptive Threshold Algorithm (AOF\_ST) (Scopus).
   2. The Action Keyframes Extraction Algorithm (AKF) (Scopus).
   3. Then, enhance the AKF algorithm in the Improved AKF algorithm (Scopus).
2. The feature extraction and forged keyframes localisation phase: seven statistical texture descriptors were proposed. Later, these descriptors were implemented individually on a novel Action Passive Object-based Forged Keyframes Localisation Algorithm (APOKL). APOKL classified the keyframes as original or forged using Machine Learning (Support Vector Machine).
3. The video authentication phase: a novel Action Passive Object-based Video Authentication algorithm (APOVA) was developed with a set of conditional rules and used to authenticate the videos as original or forged based on the APOKL classification results. The algorithms related to point 2 and 3 are under the manuscript writing process.

The findings from this research work confirmed that APOVA based on the Improved AKF and APOKL with the best-proposed descriptor is a suitable algorithm for complex colour video authentication, especially for passive object-based video forgery systems. The experimental results showed that APOVA obtained the best results in accuracy and ranking as well as achieving the best performance in forged keyframes localisation with F0.5\_score = 0.960 and video authentication with F0.5\_score = 0.994. In addition, APOVA application was tested to measure user acceptance. Three digital forensics experts from Cyber Security Malaysia had analysed and given an average acceptance score of 4 out of 5 on the Likert scale.

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On the other hand, I was a research assistant (RA) on the project no. NPRP10-0125-170250. Recently, I gained a fund from the Jordan Scientific Research Support Fund (SRSF) in the field of cyber information security. My research interests are video summarization and video authentication, cloud computing, visual informatics encryption and transmission over secured protocols, and Metaverse environment security. For future work, I have the ability to teach any subject or work on any project especially which related to my researches.

With best regards,

Manar Mizher

[mmizher@aau.edu.jo](mailto:manar_mizher@yahoo.com)