**ABSTRACT**

Sign Language is the only mode of communication for deaf and dumb people to convey their messages. Many difficulties are faced by the hearing impaired people when they come across certain areas like Banking, Hospital and Post Office. Especially, there is no proper communication aid available in post offices to support disabled people. From available literature, it is understood that computational methods have been existing in the area of sign language recognition for hearing impaired people. These recognition system acts as an interpreter to accomplish the conversion of sign language into text or voice. This paper proposes an efficient object tracking method, that improves the performance of the video recognition system, by introducing Variant based Particle Swarm Optimization (VPSO) technique in Kalman Filter (KF) through postal video signs. The experimental results prove that VPSO based Efficient Kalman Filter (EKF) provides results better than a traditional KF.