# CONCLUSION

In this paper, we proposed an adaptive hierarchical cyber attack localization approach for active distribution systems. Electric waveform signals obtained by WMU sensors are used to capture the abnormal features, which would be otherwise ignored. To improve the efficiency, we propose a modified spectral clustering method to first partition the whole large network into smaller ‘coarse’ sub-regions. Next, the accurate ‘fine’ cyber attack location can be determined by calculating and analyzing Impact Score of each sensor in the potential sub-region. Furthermore, we compare our method with other methods in each step in cyber attack detection, sub-graph clustering, and localization, respectively. The results from two representative distribution grids show that our method shows promising performances.