Robust and Adaptive Distribution System State Estimation (DSSE)

- Multiple robust measurement residual-based effective topology change detection.
- Fully leverage all available system model and constraints, especially zero injections and historical data for enhancing robustness against bad data and low measurement redundancy.

Input	Topology Change Detection	Rob	ust DSSE and Bad Data Detection
Real-time measurements Network parameters	Multiple measurement scan- based topology detection • For the <i>i</i> -th line, the index is: $\lambda_i = \frac{\lambda_i^0 \text{ Lagrange multipliers}}{\sqrt{\Lambda_{ii}} \text{ Element in the covariance matrix of } \lambda^0}$ Update topolo	Updated	7ero-injections
Topology information		topology	
Available historical dataset	in the presence of topology change.		