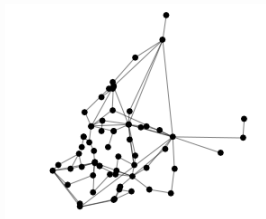


# Counting-Based Reliability Estimation for Power-Transmission Grids

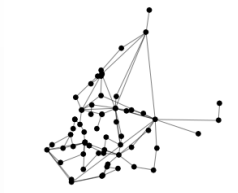
Leonardo Duenas-Osorio, Kuldeep S. Meel, Roger Paredes, and Moshe Y. Vardi



Plantersville, SC

- $G = (V, E)$ ; source:  $s$
- Failure probability  $g : E \rightarrow [0, 1]$
- Compute  $\Pr[t \text{ is disconnected from } s]$

# RelNet: Reliability Estimator for Networks



Plantersville, SC

- $\Pr[t \text{ is disconnected}] = |\text{Sol}(\exists X \phi(X, Y))|$
- ApproxMC is used to compute the projected count

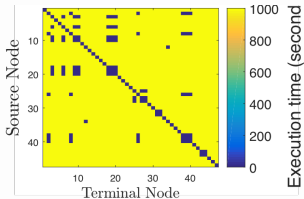


Figure: Performance of RDA

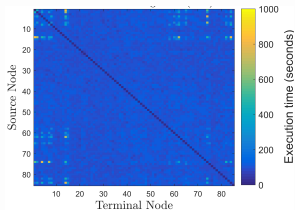


Figure: Performance of RelNet