

## **The Power Domination Toolbox**

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Phasor Measurement Units (PMUs) are placed at strategic vertices in an electrical power network to monitor the flow of power. Determining the minimum number and optimal placement of PMUs is modeled by the graph theoretic process called Power Domination. The Power Domination Toolbox (PDT) efficiently identifies a minimum number of PMU locations that monitor the entire network. The PDT leverages graph theoretic literature to reduce the complexity of determining optimal PMU placements by: reducing the order of the graph (contraction), leveraging zero forcing forts, sorting the remaining solution space, and parallel computing. The PDT will be demonstrated and attendees with laptop computers may receive assistance in installing and using it on their machines.

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