ANN Regression For Power System Load Flow. RMSE Versus Number of Houses le-2 Samples: 1100 Samples: 1400 0.8 Samples: 1700 Samples: 200 Samples: 2000 0.6 RMSE (p.u) Samples: 500 Samples: 800 0.4 0.2 0.0 20 100 120 140 160 80 Number of Houses (Features)