

NM6615 Simulation and Optimization of Analog Circuits

Principles of circuit simulation: DC/AC/TR analysis. Basic analog optimization tasks: worst-case analysis, yield analysis, nominal design, design centering. Basic principles of optimization: optimality conditions, line search, Nelder-Mead method, Newton approach, Conjugate Gradient approach, Quadratic Programming, Sequential Quadratic Programming. Structural analysis of analog circuits.