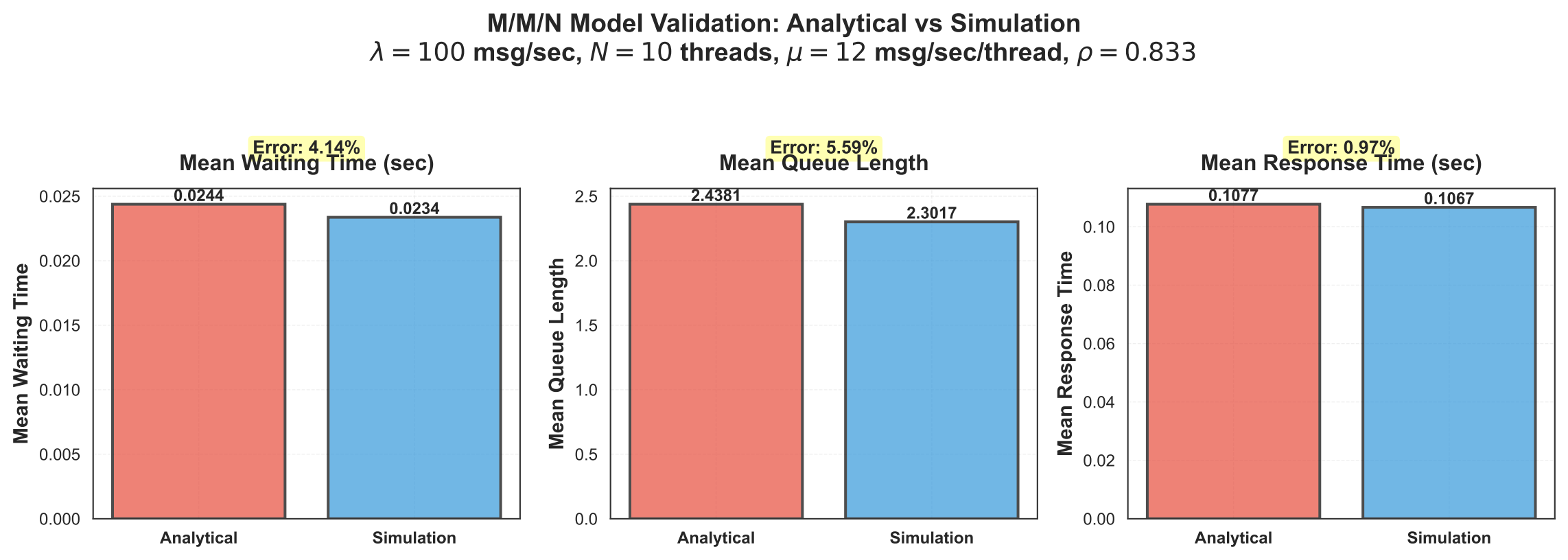
M/M/N Model Validation: Analytical vs Simulation
$\lambda = 100$ msg/sec, $N = 10$ threads, $\mu = 12$ msg/sec/thread, $\rho = 0.833$
Error: 4.14%
Mean Waiting Time (sec)
Mean Waiting Time
0.025
0.020
0.015
0.010
0.005
0.000
0.0244
0.0234
Analytical
Simulation
Error: 5.59%
Mean Queue Length
Mean Queue Length
2.5
2.0
1.5
1.0
0.5
0.0
2.4381
2.3017
Analytical
Simulation
Error: 0.97%
Mean Response Time (sec)
Mean Response Time
0.10
0.08
0.06
0.04
0.02
0.00
0.1077
0.1067
Analytical
Simulation