T = 100;

dt = 0.01; % bin length (s)

n = 1; % number of independent observations

Q\_true = diag([1e-6 1e-4]);

X\_lam = normrnd(1,.5,[round(T/dt),1]);

G\_nu = normrnd(1,.5,[round(T/dt),1]);

%

beta\_true = ones(1, round(T/dt))' + ...

detrend(cumsum(randn(round(T/dt),1)\*sqrt(Q\_true(1, 1))));

gamma\_true = ones(1, round(T/dt))' + ...

detrend(cumsum(randn(round(T/dt),1)\*sqrt(Q\_true(2, 2))));

left: mesh plot for log-likelihoods (dashed read lines = true value; blue dot = optimized Q)

right: fitting results under optimized Q.

