

## Bonus Points 2

Monday, December 4, 2023 8:07 PM

# What Is Linear Quadratic Regulator (LQR) Optimal Control? | State Space, Part 4

From <[https://www.youtube.com/watch?v=E\\_RDCFOlJx4&ab\\_channel=MATLAB](https://www.youtube.com/watch?v=E_RDCFOlJx4&ab_channel=MATLAB)>

What does it mean to be optimal? How to think about the LQR problem. The state space is the same, but how we choose K is different. We find the optimal K by choosing characteristics specifically through performance and effort. How much performance can we get for the least amount of effort? Instead of figuring out pole locations we assess what is important to us and then let the algorithm place the poles optimally. We don't place poles, we optimize Q and R.