

- 6.14. For the amplifier-motor of Example 6.3, design a terminal-time weighted optimal regulator such that the load angle,  $\theta(t)$ , is brought to zero in exactly 0.5 seconds, beginning with the initial condition  $\mathbf{x}(0) = [0.1; 0; 0]^T$ . Plot the outputs and the required control inputs. What is the maximum overshoot of the angular velocity,  $\dot{\theta}^{(1)}(t)$ , and what is the final value of  $\theta^{(1)}(t)$ ?

## References

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