

2.141 Modeling and Simulation of Dynamic Systems

Reading Assignment

10/25/06

Required reading:

Text:

ENGINEERING SYSTEM DYNAMICS
A Unified Graph-Centered Approach
Forbes T. Brown
Second Edition CRC Press ISBN: 0849396484

- Chapter 9, Section 9.1 (pp. 583-604)

Paper:

Hogan, N. and Buerger, Stephen P. (2005) *Impedance and Interaction Control*.
Chapter 19 in: Robotics and Automation Handbook, T.R.Kurfess, (ed.) CRC
Press.

Optional reading:

- Chapter 12, Section 12.3 & 12.4 (pp. 972-988)

Section 12.3 contains a good discussion of Lagrange's equation including a traditional derivation using variational calculus. To the best of my knowledge, the "Lagrangian bond graphs" in section 12.4 are largely an intellectual curiosity.