

MSc in ACSE Reading List 2011

Control Fundamentals and State Space Control

1. Astrom, Murray, 'Feedback Systems: An Introduction for Scientists and Engineers' - available here:
2. http://www.cds.caltech.edu/~murray/amwiki/Main_Page
3. Franklin, Powell, Emami-Naeini, Feedback Control for Dynamic Systems, Prentice-Hall
4. Dorf and Bishop, Modern Control Systems, Prentice Hall
5. Franklin and Powell and Emami-Naeini, Feedback control of dynamic systems, Prentice-Hall
6. Ogata, Modern control engineering, Prentice-Hall

Process Control and Automation

1. Seborg, Edgar, Mellichamp, Process Dynamics and Control, Wiley
2. Marlin, Process Control, McGraw Hill
3. Luyben, Essentials of Process Control, McGraw-Hill Chemical Engineering

System Identification and Digital Control

1. L Ljung, *System Identification: Theory for the User*, Prentice Hall, 1998.
2. P Wellstead, *System Identification*, download from course homepage – blackboard.
3. L Ljung & T Soderstrom, *Theory and Practice of Recursive Identification*, MIT Press, 1983.
4. Dorf and Bishop, Modern control systems, Prentice-Hall
5. K. J. Astrom and B. Wittenmark: *Computer-Controlled Systems (3rd edition)*. Prentice Hall, 1997.
6. L. Ljung and T. Glad: *Control Theory: Multivariable and Nonlinear Methods*. Taylor and Francis, 2000.
7. G. F. Franklin, J. D. Powell and M. L. Workman: *Digital control of dynamic systems (3rd edition)*. Addison-Wesley, 1998.

Nonlinear and Adaptive Control Systems

1. Cook, P. A., *Nonlinear Control Systems, 2nd Ed*, Prentice Hall, 1994
2. Slotine, J. E. and Li, W., *Applied Nonlinear Control, Prentice Hall*, New Jersey, 1991
3. Vidyasagar, V., *Nonlinear Control Systems Analysis, 2nd Ed*, Prentice Hall, New Jersey, 1993
4. Khalil, H., K., *Nonlinear Systems, 3rd Ed*, Prentice Hall, New Jersey, 2003
5. Krstic, M., Kanellakopoulos, I. and Kokotovic, P. V., *Nonlinear and Adaptive Control Design*, John Wiley & Sons, New York, 1995
6. Marino, R. and Tomei, P. *Nonlinear Control Design: Geometric, Adaptive, and Robust*, Prentice Hall, London, 1995

7. Narendra, K. S. and Annaswamy, A. M. *Stable Adaptive Systems*, Prentice Hall, New Jersey, 1987
8. Ioannou, P. A. and Sun, J., *Robust Adaptive Control*, Prentice Hall, New Jersey, 1996

Intelligent Control & Robotics

1. R. Babuska, *Fuzzy Modelling for Control*. Kluwer, 1998.
2. E. Wang L.-X. *A Course in Fuzzy Systems and Control*. Prentice Hall, 1997.
3. L Behera and I Kar, *Intelligent Systems and Control: Principles and Applications*, Oxford University Press, 2009.
4. D. Katic and M. Vukobratovic, *Intelligent Control of Robotic Systems*, Kluwer Academic Publishers, 2003.
5. Princeton: Robotics and Intelligent Systems:
<http://www.princeton.edu/~stengel/MAE345Lectures.html>
6. MIT: Underactuated robotics: <http://ocw.mit.edu/courses/electrical-engineering-and-computer-science/6-832-underactuated-robotics-spring-2009/>

Optimal and Robust Control

1. J. B. Burl, *Linear Optimal Control*, Addison Wesley, 1998.
2. L. Ljung and T. Glad: *Control Theory: Multivariable and Nonlinear Methods*. Taylor and Francis, 2000.
3. H. Kwakernaak and R. Sivan: *Linear Optimal Control Systems*. Wiley 1972.
<http://www.ieeecss.org/main/classic-books/classic-books>
4. K Zhou, JC Doyle and K Glover, *Robust and Optimal Control*, Prentice Hall
5. M Green and D Limebeer, *Linear Robust Control*, Prentice Hall
6. Skogestad and Postelwaithe, *Multi Variable Feedback Control*