

# Literature in the PhD programme in Mechatronics at UiA

19.11.09

## MT-601 Design, Modelling and Simulation of Mechatronic Systems

### *Design Methodology in Mechatronics:*

- The Mechatronics Handbook, Editor: Robert H. Bishop, 2002, CRC Press, USA, ISBN 0849300665. Section I - subsection 1..6.
- Course specific notes and selected scientific papers.

### *Modelling and Simulation of Mechatronic Systems:*

- The Mechatronics Handbook, Editor: Robert H. Bishop, 2002, CRC Press, USA, ISBN 0849300665. Section II - subsection 7..15.
- Numerical Recipes, <http://www.nrbook.com/a/bookf90pdf.php>
- Course specific notes and selected scientific papers.

## MT-602 Advanced Control and Robotics

- Selected academic papers from the databases (IEEE, ASME, Engineering Village)
- S. Skogestad and I. Postlethwaite, Multivariable Feedback Control: Analysis and Design
- M.W. Spong and W. Vidyasagar, Robot Dynamics and Control
- H.K. Khalil. Nonlinear Systems. 2002

## MT-701 Fluid Power Systems Design - Selected Topics

- Course specific notes and selected scientific papers

## MT-702 Electromagnetic Modelling

- Mohan, "Advanced electric drives", MNPERE 2001
- Lecture notes and selected papers

## MT-703 Analysis of Dynamic Mechanical Systems - Selected Topics

### *Multibody Dynamics & Vibrations:*

- Planar Multibody Dynamics, Parviz E. Nikravesh, Taylor & Francis 2007, ISBN 9781420045727.
- Mechanical Vibrations 4<sup>th</sup> Ed., Singiresu S. Rao, Prentice Hall, 2003.
- Course specific notes and selected scientific papers.

### *Applied Fracture Mechanics & Reliability:*

- Metal Fatigue in Engineering, 2nd Edition, Ralph I. Stephens, Ali Fatemi, Robert R. Stephens, and Henry O. Fuchs, Wiley, 2000, ISBN: 9780471510598.
- Course specific notes and selected scientific papers.

## MT-704 Energy Conversion

- Culp, A.W., Jr., "Principles of Energy Conversion", pp. 43-496
- Course specific notes and selected scientific papers