

- industry cross-fertilisation
- technology transfer
- industry forum
- seminars
- consultancy and case studies
- training

Nonlinear Control Systems

Agenda (1-day Course)

Day 1: Introduction to Nonlinear System Modelling and Control

09.00 Introduction to Nonlinear Systems and Modelling Methods

09.45 Introduction to Nonlinear System Control Design Techniques
(Overview of Nonlinear Control Design Methods)

10.30 *TEA/COFFEE*

10.45 State-space Modelling Systems and Engine Control Example
(Nonlinear system modelling methods and problems resulting in nonlinear systems control design)

11.30 Hands-On Session: Nonlinear System Modelling (e.g. Engine Control)

12.30 *LUNCH*

13.30 Introduction to Simple Nonlinear Control Design Methods and Nonlinear Generalized Minimum Variance (NGMV) Control
(System Models, Cost Definition, Design, Implementation)

14.30 Advanced Nonlinear Controls Including Sliding Mode and the NGMV Family of Control Design Methods
(Factorization based, Nonlinear Quadratic Generalized Minimum Variance, H^∞ control approaches)

15.15 *TEA/COFFEE*

15.30 Introduction to Nonlinear Filtering and Nonlinear Control Design Applications

16.30 Demonstration of Solving Design Problems Using NGMV toolbox

17.00 *CLOSE*