Course Overview

The course covers intermediate topics to help you solve problems typical in the science, financial and engineering sectors. We will look at ways to increase your productivity when developing applications in MATLAB, we will explore techniques for good programming practice, and we will show you how you can make best use of the large library of application specific routines for your problems.

MATLAB is an ideal product for trying out of new ideas or enabling you to look at old data with a fresh perspective. For that reason, we encourage you to bring along to the course your own data and problems that you are willing to share so we can see the concrete benefits of using MATLAB.

Who Should Attend

The course is designed for intermediate MATLAB users who have had some prior exposure to writing simple MATLAB scripts and functions, or who have used similar rapid prototyping products. We recommend you attend the Introduction to MATLAB course if you have no experience with MATLAB or if you want to refresh your knowledge before attending this course.

Register today to secure your spot on the course.

Course Highlights

- An overview of the new productivity features in MATLAB
- Working efficiently with matrices and large data sets
- Strings and file i/o
- Good programming practice and debugging tips
- Data analysis, statistics, curve and surface fitting
- Interfacing MATLAB to other applications like Google Earth
- Applying appropriate numerical techniques to scientific and engineering problems
- A brief overview of various toolboxes including Optimization, Statistics, Spreadsheet Link Ex and Control System Toolboxes.
- Basic data analysis and curve fitting

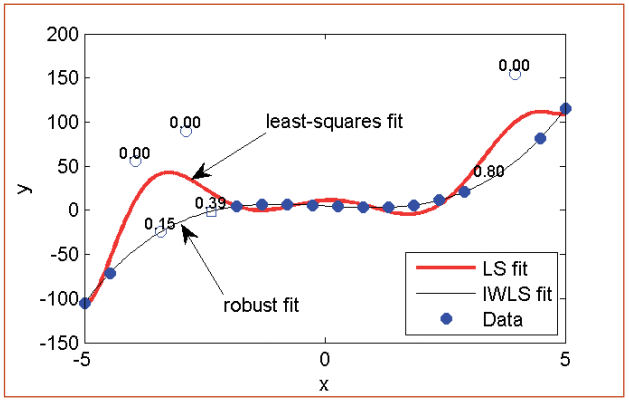

Table 5.1: Approximations to $\sqrt{9}$ using the Newton-Rhapson scheme with 80 digits of precision.

#	Estimate of $\sqrt{9}$.
1	3.00319081462195464115127556199238070040872151135166094921647839268397938185114 33
2	3.00000169508009649416396727041552746855667506556757081983817247212695036639254 34
3	3.00000000000047888248500705440602658797712083166136401518620636792761540263954 33
4	3.00000000000000000000000000382214057410825134754915187956609325748174609934125561
5	3.00000000000000000000000000000000000000000000000000000000243479309470742553522121598 1
6	3.00000000000000000000000000000000000000000000000000000000000000000000000000000000001
7	3.00000000000000000000000000000000000000000000000000000000000000000000000000000000001

Benefits of using MATLAB

MATLAB is a software development environment that offers high-performance numerical computation, data analysis, visualisation capabilities and application development tools.

You can write statements in MATLAB and have them calculate immediately so they are tested as you go.

MATLAB provides immediate access to thousands of fundamental and speciality functions written by experts, in addition to those written by yourself or your colleagues.

MATLAB's built-in graphing tools and GUI builder ensure that you customise your data and models to help you interpret your data more easily for quicker decision-making.

Visit www.hrs.co.nz/matlab for a more detailed description.

Left: In the presence of outliers, using least-squares to fit a curve to your data is not always a good idea.

Bottom left: Illustrating how a scheme with quadratic convergence by doubling the accuracy each iteration rapidly homes into the solution.

On-site Training Option

We regularly train groups of people on-site in a wide variety of industries and locations spanning from government departments, financial institutions, engineering companies, and basic research groups. We make an effort to customise the courses to suit your problems and your interests.

Register online at www.hrs.co.nz/intermediatematlabtraining

YES - I want to Register!

Course Investment

1. $945 + GST before 16 August 2010
2. $1095 + GST thereafter

Tax invoices will be sent after the course. We allow cancellation at no fee until 10 days prior to the course, after that date payment is required. Course attendees can be substituted to avoid cancellation. Visit our website for full details.

Four Ways to Register

Visit: www.hrs.co.nz/intermediatematlabtraining
E-mail: matlabtraining@hrs.co.nz
Phone: 0800 477 776 or 07 839 9102
Fax: Complete form & fax to 07 839 9103

Contact Details

Full Name

Position and Department

Organisation

Postal Address | Suburb

City | Postcode

Telephone (day) | Fax

E-mail

Payment Details

○ Company Purchase Order

○ Credit Card - Visa | Mastercard (Delete One)

Name on Credit Card

Expiry Date | Amount NZ$

Signature | Today's Date

About The Trainer

David Wilson is an Associate Professor in the Department of Electrical & Electronic Engineering at the Auckland University of Technology. He is also a director of the Industrial Information and Control Centre, (I2C2) which is a joint collaboration with the University of Auckland involved with process control, modelling and optimisation of industrial processes.

Before joining AUT University, he was a senior lecturer in Sweden and Switzerland working with pulp and paper companies, Swiss pharmaceutical companies and government sponsored environmental projects.

David's research interests lie in model predictive control, GPS applications in the marine industry, and modelling and simulation of a wide variety of applications spanning the finance, agriculture, fishing and manufacturing industries.

David received his Ph.D. from the University of Queensland in 1990, and a BE (Chemical & Materials) from the University of Auckland.

AUT UNIVERSITY

HRS Hoare Research Software Ltd

MATLAB® & SIMULINK®

Intermediate MATLAB Training Course

15 September 2010
AUT, Auckland
Presented by
Associate Professor David I. Wilson

Register today at:
www.hrs.co.nz/intermediatematlabtraining

HRS Contact Details:
P: 0800 477 776
F: 07 839 9103
E: info@hrs.co.nz
W: www.hrs.co.nz

New Zealand's Technical Software Source