ADVANCED MATLAB GUI

COURSE OUTLINE

1. Advanced GUI topics
   a. GUI conventions and best practices
   b. GUI tradeoffs and design principles
   c. Writing robust fault-tolerant code
   d. Avoiding common GUI pitfalls
   e. Passing information around the GUI
   f. Improving Matlab GUI performance
   g. GUI units and resizing
   h. Advanced topics in GUI programming

2. Customizing the figure window
   a. The figure’s main menu
   b. Context menus
   c. Using HTML
   d. Toolbars

3. Integrating & interacting with GUI controls
   a. Integrating ActiveX and Java controls
   b. GUIDE vs. m-programming trade-offs
   c. GUI callback programming
   d. Dynamic (automatic) updates/refreshes
   e. Using timers for periodic updates
   f. Listening to control action events
   g. Adding new properties to uicontrols
   h. Using hidden/undocumented properties
   i. Listening to property-change events

4. Uitools
   a. Uitable
   b. Uitree
   c. Uitab & uitabgroup
   d. Uiundo
   e. Other uitools

5. Where next? – topics and resources for further learning

Summary

A full-day advanced Matlab course.
You will learn:
- how to write robust fault-tolerant GUI
- how to apply best practices in your GUI applications
- how to customize the figure's toolbar and main menu
- how to use HTML for improved rendering of menus, labels and controls
- how to integrate ActiveX and Java components in Matlab GUI
- how to improve the performance and interactivity of your Matlab GUI
- how to customize your Matlab GUI in ways that you never knew were possible

Target audience

(1) Matlab users with a solid experience using Matlab graphics and GUI, who wish to improve their program’s quality, appearance and usability.

(2) Matlab users who wish to sell professional-looking Matlab-based GUI software.

Basic familiarity with Matlab GUI is assumed.