Creating Interactive Matlab GUI

Webinar Outline

1. GUIDE – Matlab’s GUI Design Editor
   a. Matlab GUI alternatives and roadmap
   b. Using GUIDE to design a custom GUI
   c. Available built-in MATLAB uicontrols
   d. Customizing GUI properties and behavior
   e. Important figure and uicontrol properties
   f. GUIDE’s utility windows
   g. The GUIDE-generated file-duo

2. Customizing GUI appearance and behavior
   a. Typical evolution of Matlab GUI developers
   b. Programmatic GUI creation & control
   c. GUIDE vs. m-programming
   d. Callback functionality for GUI components
   e. Sharing data between GUI components
   f. The handles data struct
   g. Using handle visibility
   h. Position, size and units

3. Matlab’s new App Designer and web-based GUI
   a. App Designer environment, widgets and code
   b. The web-based future of Matlab’s GUI
   c. App Designer vs. GUIDE – pros & cons

4. Performance considerations
   a. Speeding up the initial GUI generation
   b. Improving GUI responsiveness
   c. Actual vs. perceived performance
   d. Continuous interface feedback
   e. Avoiding common performance pitfalls

Summary
You will learn how to:
- apply GUI design principles in Matlab
- create simple Matlab GUIs
- manipulate and customize graphs, images and GUI components
- display Matlab data in various manners
- create custom Matlab code to handle user interactivity
- understand performance implications, to improve GUI speed

Target audience
Matlab users of any level, from beginners to advanced, who wish to improve the appearance and usability of their programs.

For this webinar, programming experience is advantageous, but NOT necessary.
Matlab users who have prior experience with Matlab GUI may consider the Advanced Matlab GUI webinar instead.