How to present experiment figures in academic paper or course project based on Matlab?

- Do not rely only on color to distinguish curves (they are indistinguishable in black-white printout, and many people still read hardcopy generated by black-white printers).
- 2. Do not use very light color for your plotting curves, such as light green, light gray, yellow.... They are hard to read in black-white printout.
- 3. Use different line styles to distinguish curves (Matlab provides four line styles: solid, dashed, dotted, dash-doted).
- 4. Use markers on some curves for further distinguishing. In Matlab, plot(X, Y, 'b-.o'); use different markers for different curves.
- 5. Make sure your "useful" curves occupy most of the figure's drawing area. You need to manually change X or Y axis range in many cases to do that.
- 6. Make sure your figure's font (label, legend, axis values) are large enough to be readable in your report or paper. Make sure curves are thick enough to be readable.
- 7. The curves should not be covered by, e.g., legend.
- 8. Figure legend text, axis text, caption text, should be self-explanatory.
- 9. In your report or paper, put some explanation words in figure's caption.
- 10.On a single figure, try not put more than 4 curves on it. Too many curves make the figure very hard to read.

Some Examples:



Don't use the same line styles for different curves. Color is not useful when a reader reads the printout paper.



Text in legend needs to be self-explanatory. Curves should not all be solid line style.



Markers should not be the same and should not be too small to distinguish. You need to enlarge text font to make them readable.



The end of the simulation curves are processed in a wrong way. You need to continue to generate the values to make all curves have the same number of points on the figure.



Figure curves should occupy the majority of the graph area. The above figure should use a much smaller X-axis scale, such as $0 \sim 6$.



Figure curves should occupy the majority of the graph area. The above figure should use a much smaller X-axis scale, such as $0 \sim 15$.



The figure should have many more data points to make the curves smooth.