MATLAB programming course for beginners, supported by Wagatsuma Lab@Kyutech

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Specifications and requirements

1. @Time: 2021-5-19

2. @Author: Hiroaki Wagatsuma

3. @Site: (1) https://github.com/hirowgit/1B0_matla_optmization_course

4. @Site: (2) https://github.com/hirowgit/1B1_matlab_signal_analysis_course

5. @IDE: MATLAB R2018a

6. @File : (1) TSP_lecture2.m

7. @File: (2) lec1D_A2_PLF_plot_Normal.m

Main program

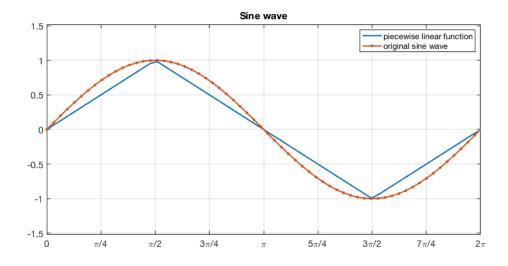
clear all

close all % sin wave

figure(1); clf

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```
set(1, 'name', 'sine_wave2', 'Position',[720
                                             820
leglabel={'piecewise linear function', 'original sine wave'};
dT=0.1;
t=0:dT:2*pi+dT;
y=sin(t);
y2=@(t) (2/pi*t).*(t<=pi/2)+(-2/pi*t+2).*(t>pi/2 & t<=pi) ...
    +(-2/pi*t+2).*(t>pi \& t<=3*pi/2)+(2/pi*t-4).*(t>3*pi/2 \& t<=2*pi);
% see more detail of how you can obtain this parameters in
TSP_lecture3.m
plot(t,y2(t),t,y,'.-','LineWidth',2,'MarkerSize',12);
set(gca, 'xlim', [0,2*pi], 'ylim', [-1.2,1.2], 'FontSize', 14);
legend(leglabel, 'best')
xtickpoint=0:pi/4:2*pi;
xlabel={'0','\pi/4','\pi/2','3\pi/4','\pi','5\pi/4','3\pi/2','7\pi/4','2\pi'};
set(gca,'xtick',xtickpoint,'xticklabel',xlabel)
title('Sine wave');
grid on;
axis equal;
datafname='m figures';
save fig;
Warning: Ignoring extra legend entries.
Warning: The figure is too large for the page and will be cut off.
 Resize the
figure, adjust the output size by setting the figure's PaperPosition
property,
use the 'print' command with either the '-bestfit' or '-fillpage'
 options, or
use the 'Best fit' or 'Fill page' options on the 'Print Preview'
 window.
```



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