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

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Specifications and requirements

```
1. @Time: 2022-11-30
2. @Author: Hiroaki Wagatsuma
3. @Site: https://github.com/hirowgit/1A1 matlab intermediate course
4. @IDE: MATLAB R2022a
5. @File: LongTail_pdf_Advanced.m
figure(8); clf;
rng(3,'twister');
x = trnd(5,2000,1);
q = quantile(x, .95);
y = x(x>q) - q;
n = numel(y);
paramEsts = gpfit(y);
          = paramEsts(1)
                           % Tail index parameter
sigmaHat = paramEsts(2) % Scale parameter
bins = 0:.25:7;
h = bar(bins,histc(y,bins)/(length(y)*.25),'histc');
h.FaceColor = [.9 .9 .9];
ygrid = linspace(0,1.1*max(y),100);
```

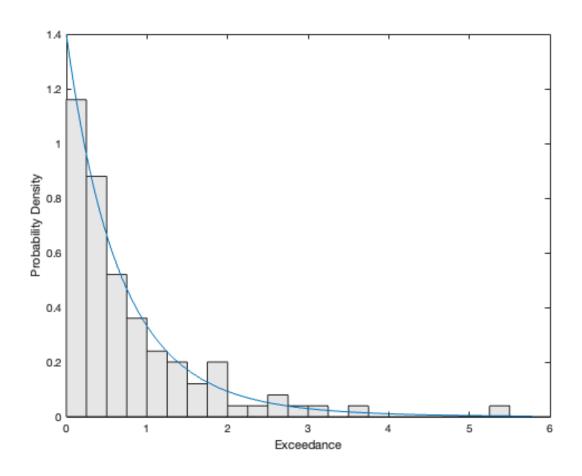
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```
line(ygrid,gppdf(ygrid,kHat,sigmaHat));
xlim([0,6]);
xlabel('Exceedance');
ylabel('Probability Density');

% NofStID=244;
% NofPrdID=1670;
%
% y*NofPrdID

kHat =
    0.0987

sigmaHat =
    0.7156
```



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