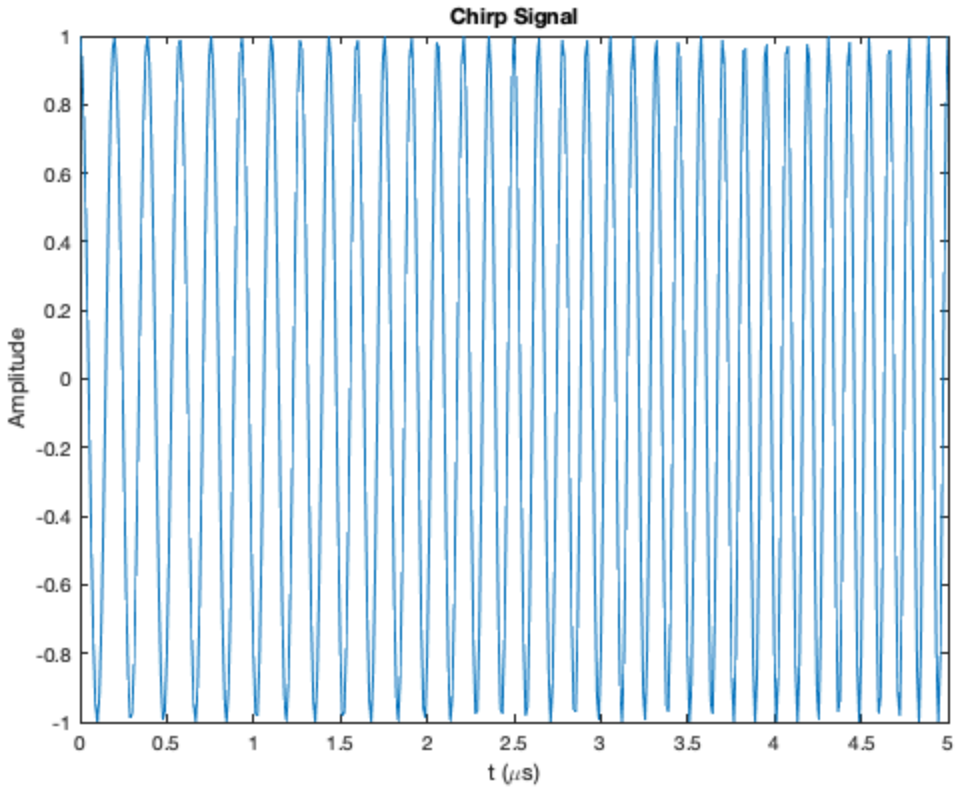
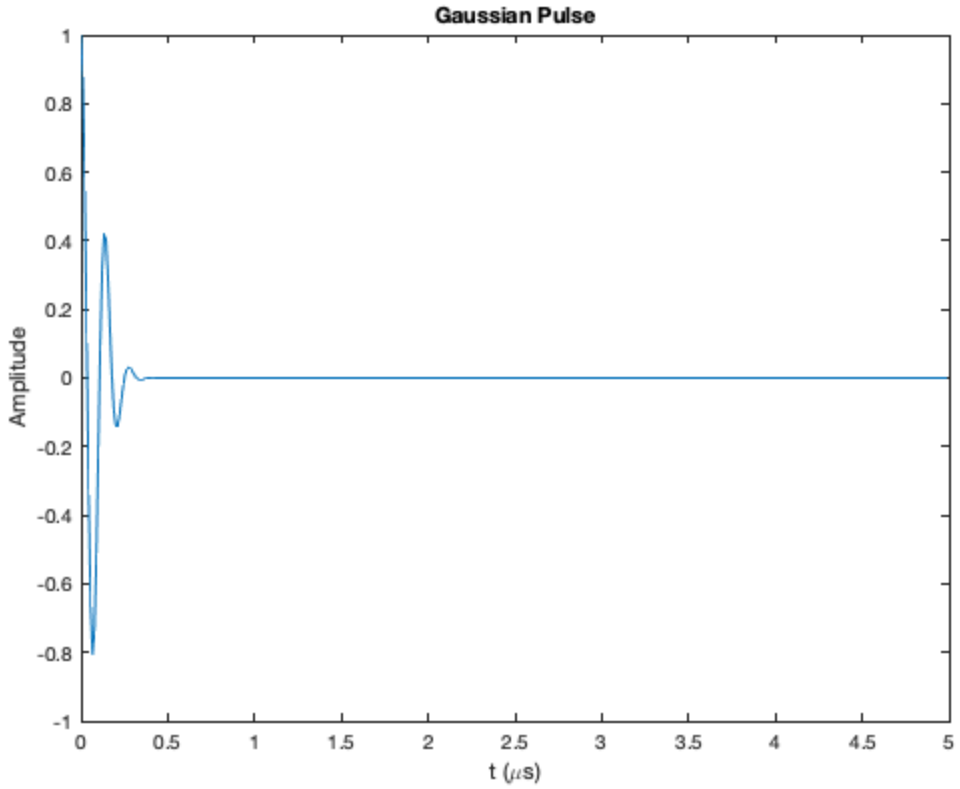
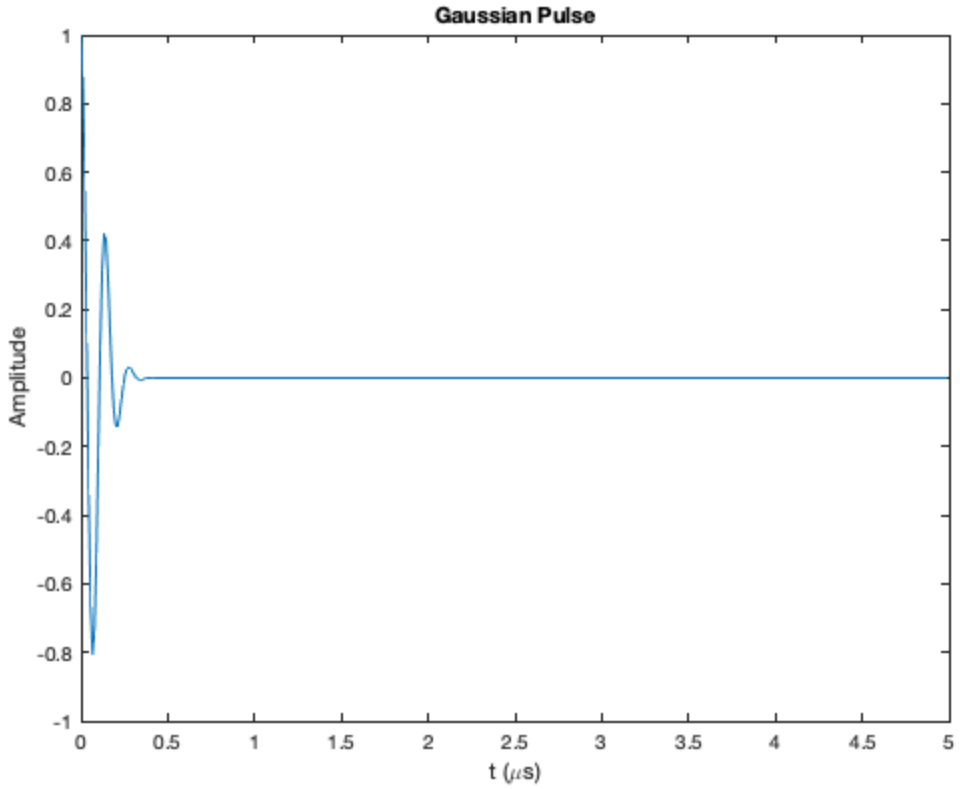
```
t0 = 0;
t1 = 5*10^-6;
f0 = 5*10^6;
f1 = 9*10^6;
fs = f1 * 10;
t = t0:1/fs:t1;
x = chirp(t,f0,t1,f1);
figure(1)
plot(t*10^6,x)
xlabel('t (\mus)')
ylabel('Amplitude')
title('Chirp Signal')
%plot((1:length(x))*(fs/length(x))*10^-6,abs(fft(x)))
```

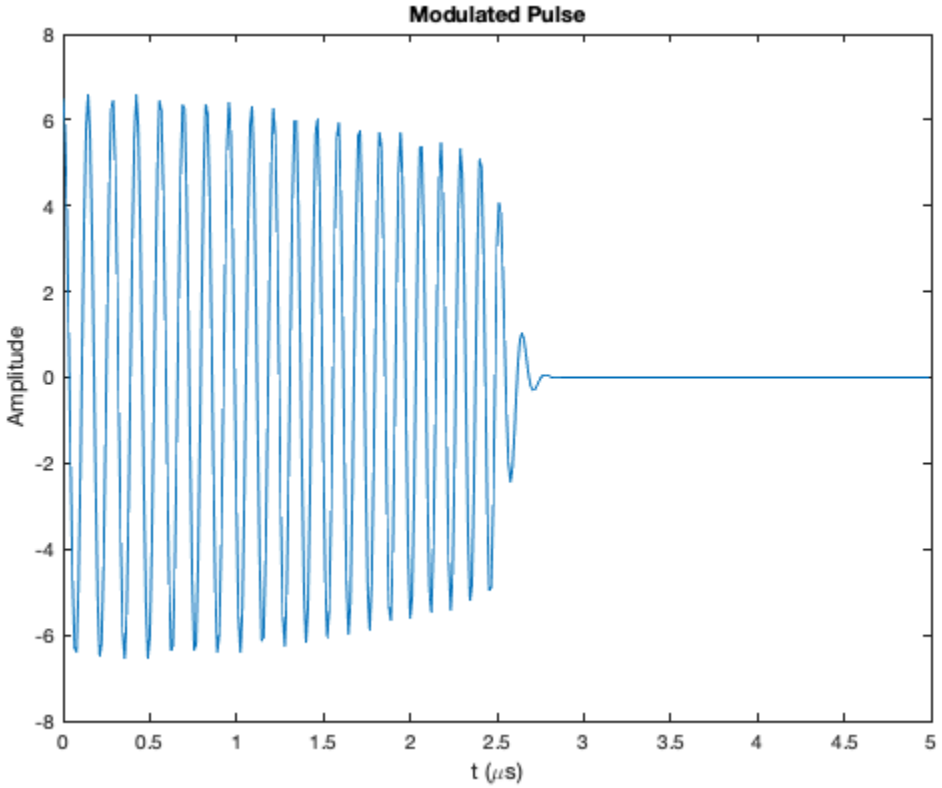



```
gPuls = gauspuls(t,7*10^6,.5);
figure(2)
plot(t*10^6,gPuls)
xlabel('t (\mus)')
ylabel('Amplitude')
title('Gaussian Pulse')
```

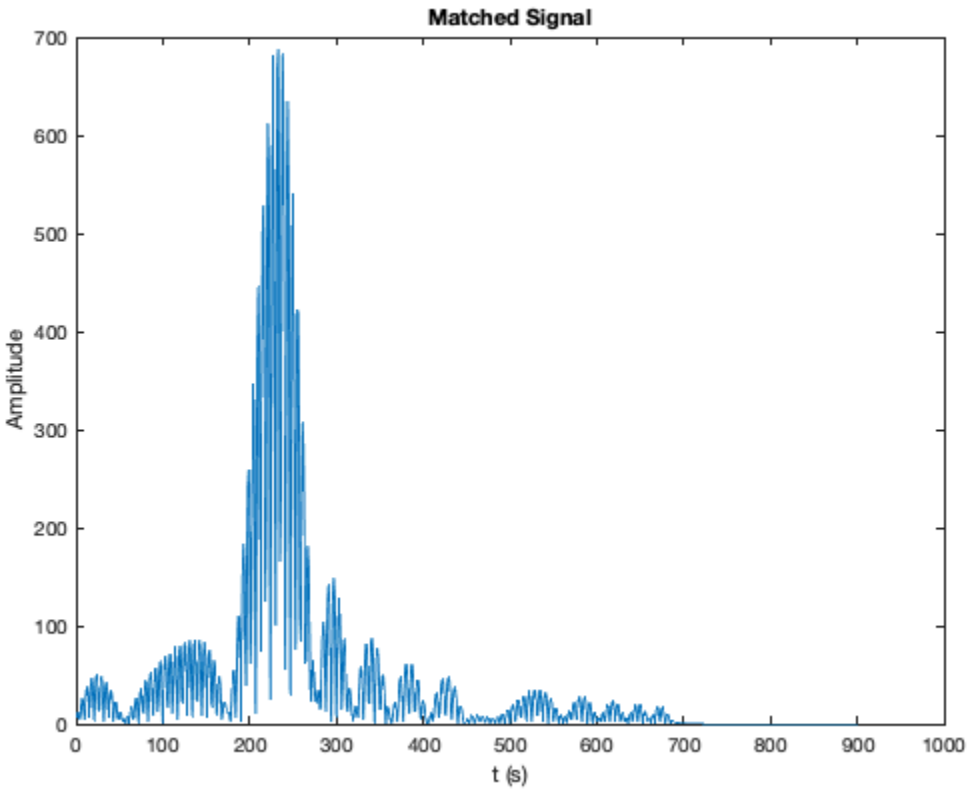



```
convedSig = conv(x,gPuls,'same');
figure(3)
plot(t*10^6,convedSig)
xlabel('t (\mus)')
ylabel('Amplitude')
title('Modulated Pulse')
```


Gaussian Pulse
Amplitude
t (μs)
1
0.8
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
-0.8
-1
0
0.5
1
1.5
2
2.5
3
3.5
4
4.5
5


Modulated Pulse
Amplitude
t (μs)
8
6
4
2
0
-2
-4
-6
-8
0
0.5
1
1.5
2
2.5
3
3.5
4
4.5
5

```
matchedSig = abs(xcorr(convedSig,x));
figure(4)
plot(matchedSig)
xlabel('t (s)')
ylabel('Amplitude')
title('Matched Signal')
```



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