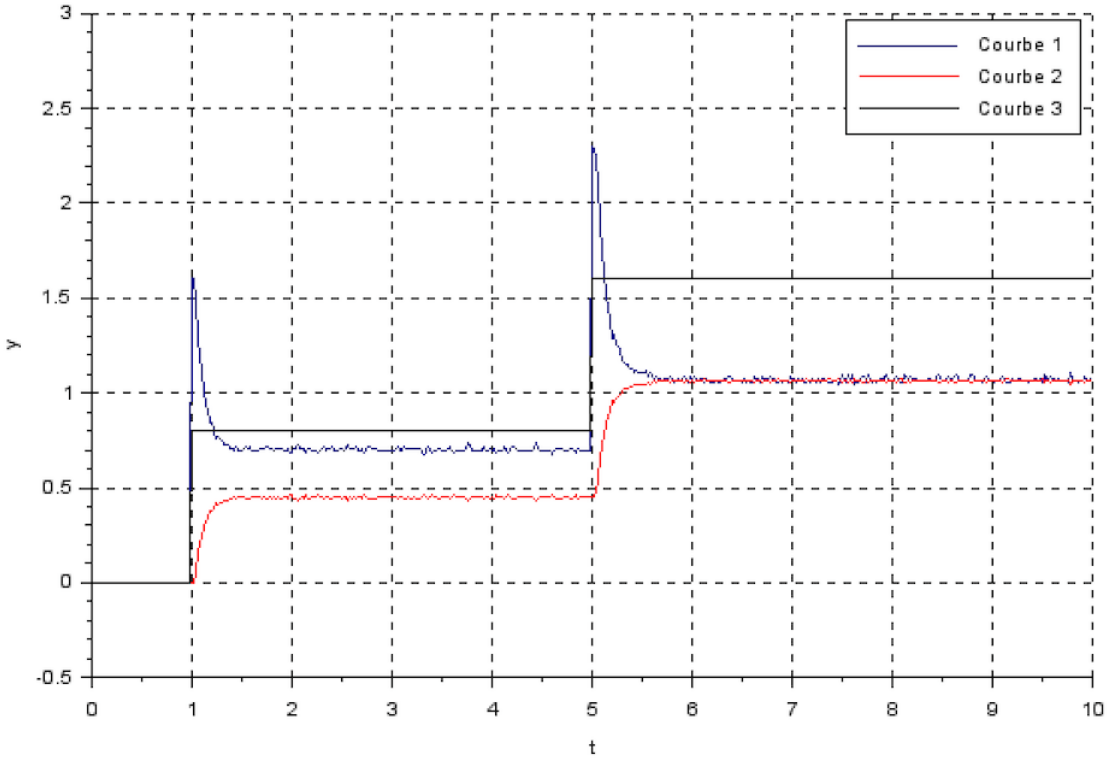
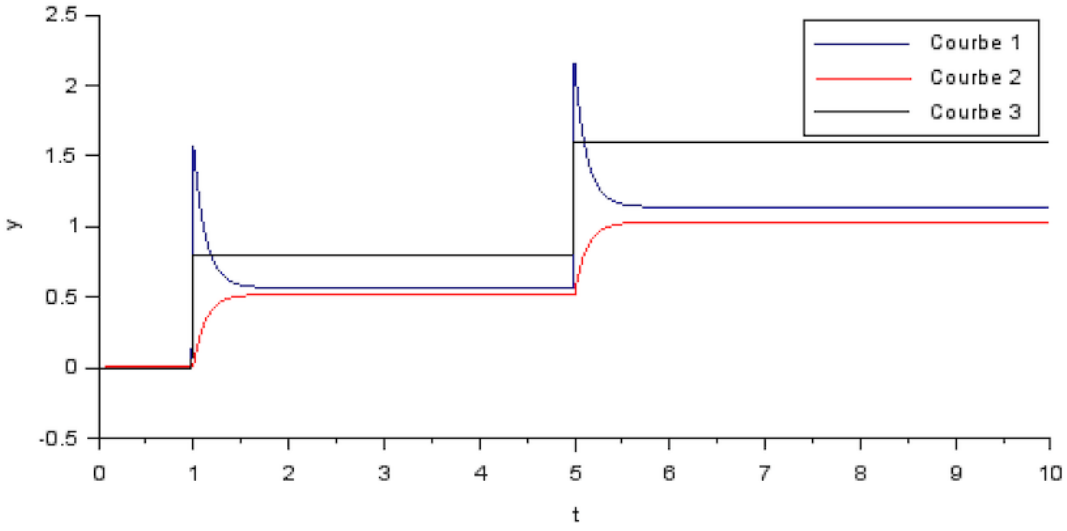
前期 第 6 回 実験報告（実験日：R6 年 5 月 27 日）　名列番号：38　氏名：宮里 孝希

第 6 回　ＤＣモータの速度制御(DC モータの PI 制御)

1. Ki=0 固定

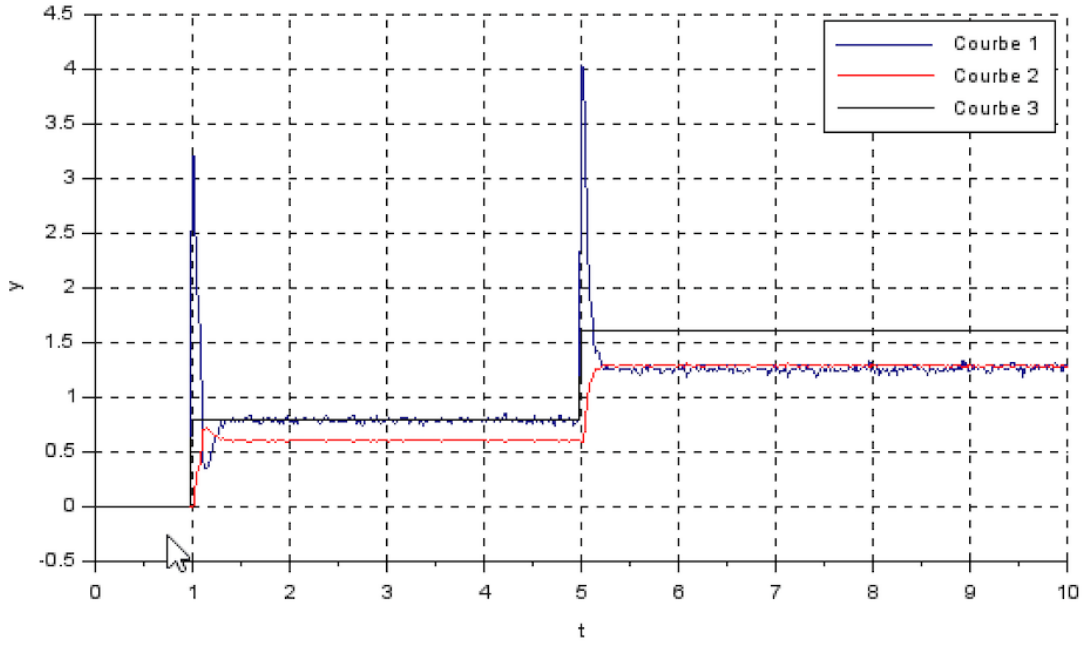
   Kp = 2

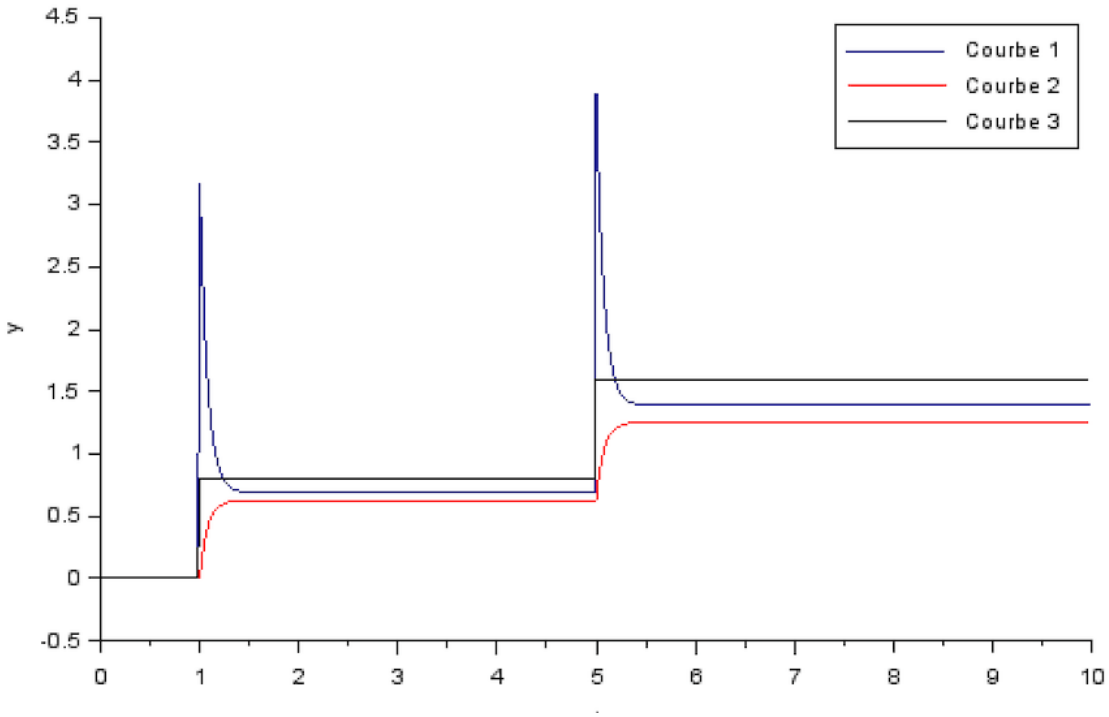




```
-->p1
 p1  =

     0.

-->p2
 p2  =

   - 7.9689903
```

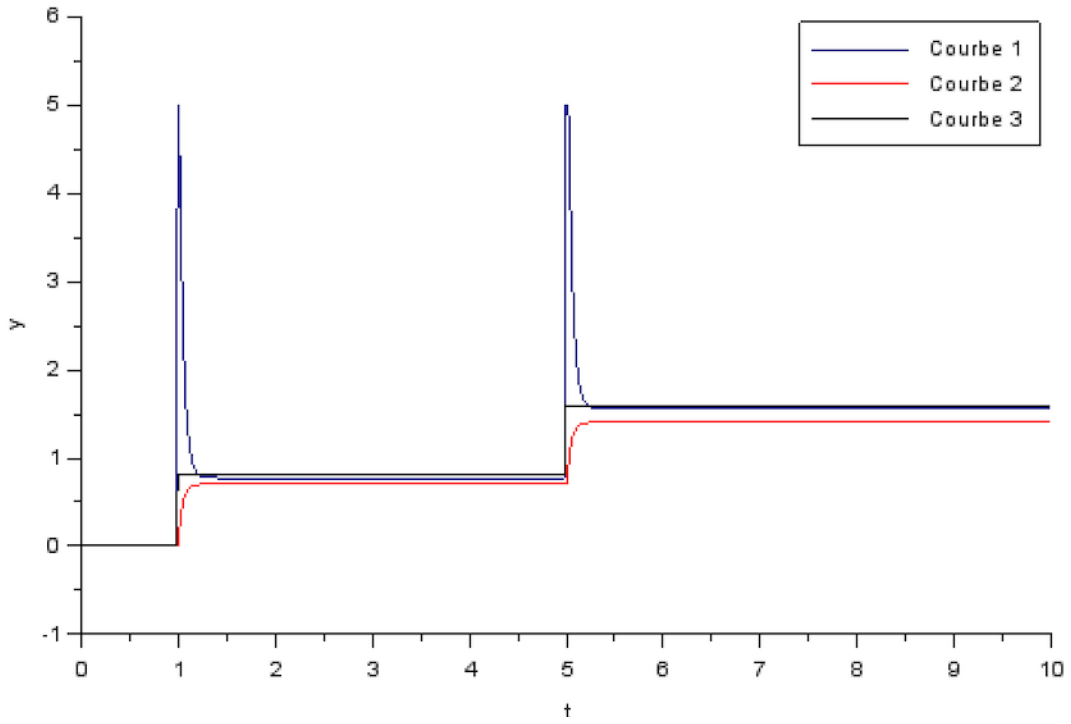
Kp=4

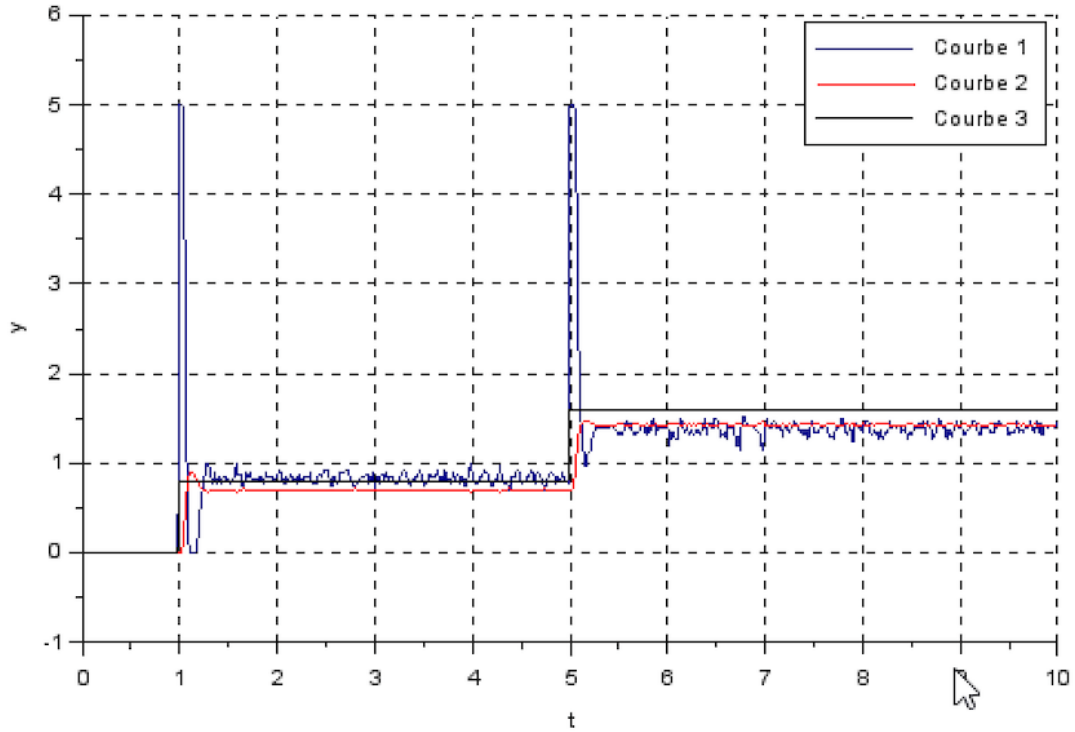

Courbe 1
Courbe 2
Courbe 3
y
t
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
-0.5
0
1
2
3
4
5
6
7
8
9
10


Courbe 1
Courbe 2
Courbe 3
y
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
-0.5
0
1
2
3
4
5
6
7
8
9
10

```
-->p1
 p1  =

    0.

-->p2
 p2  =

  - 13.080838
```

Kp=8

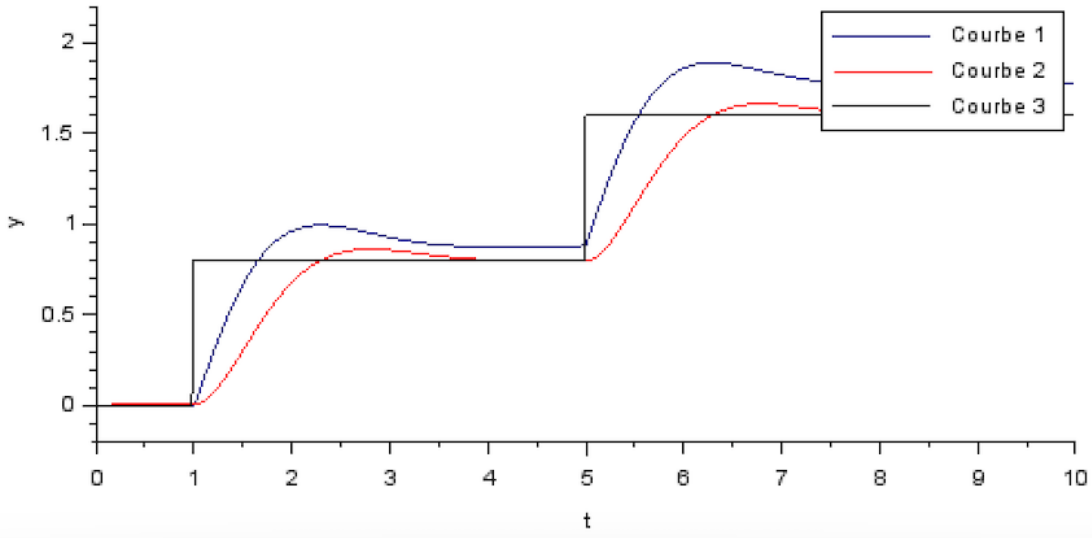


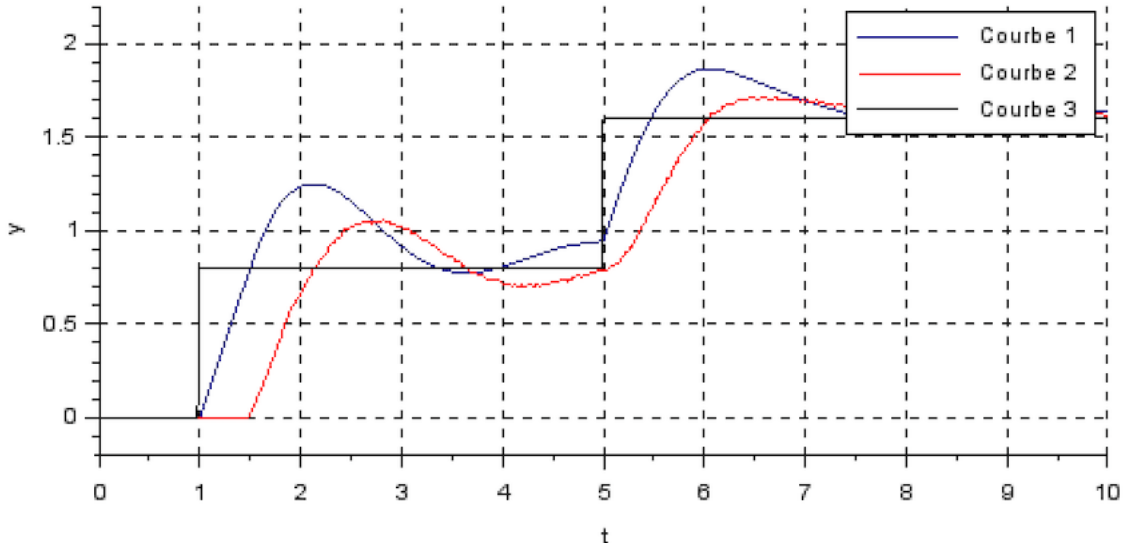


```
-->p1
 p1  =

    0.

-->p2
 p2  =

  - 23.304533
```

2. Kp = 0 固定

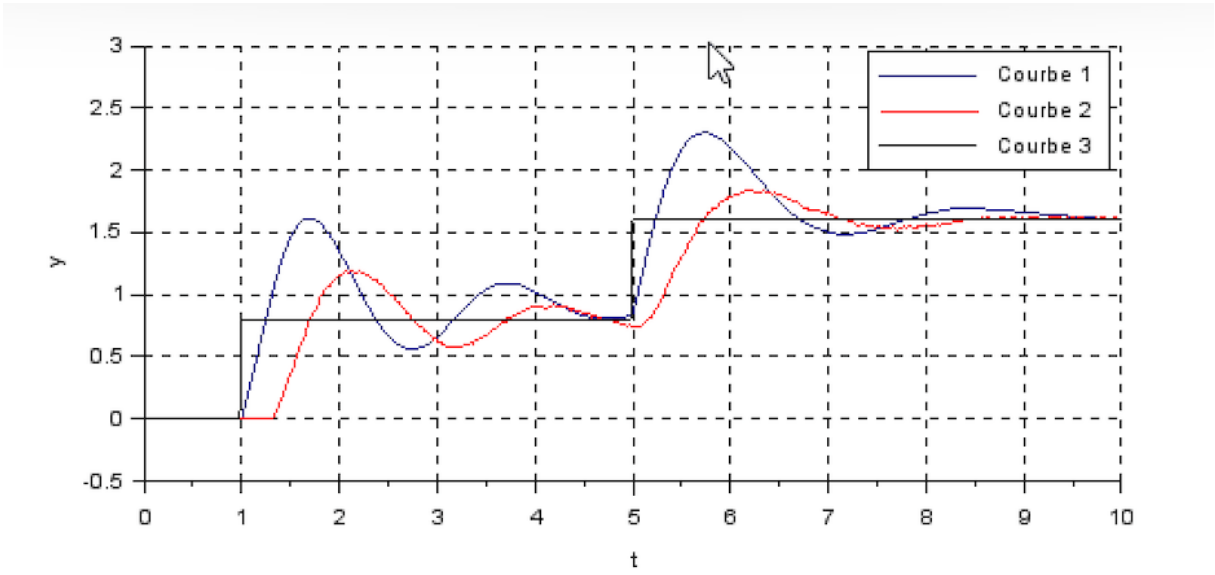
Ki = 2

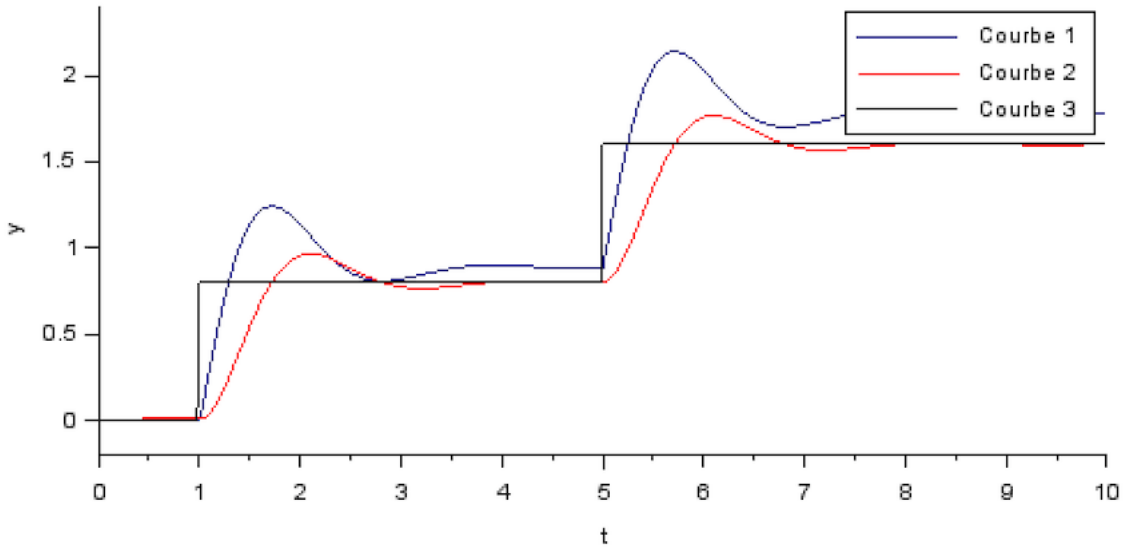





```
-->p1
 p1  =

  - 1.4285714 + 1.7524358i

-->p2
 p2  =

  - 1.4285714 - 1.7524358i
```

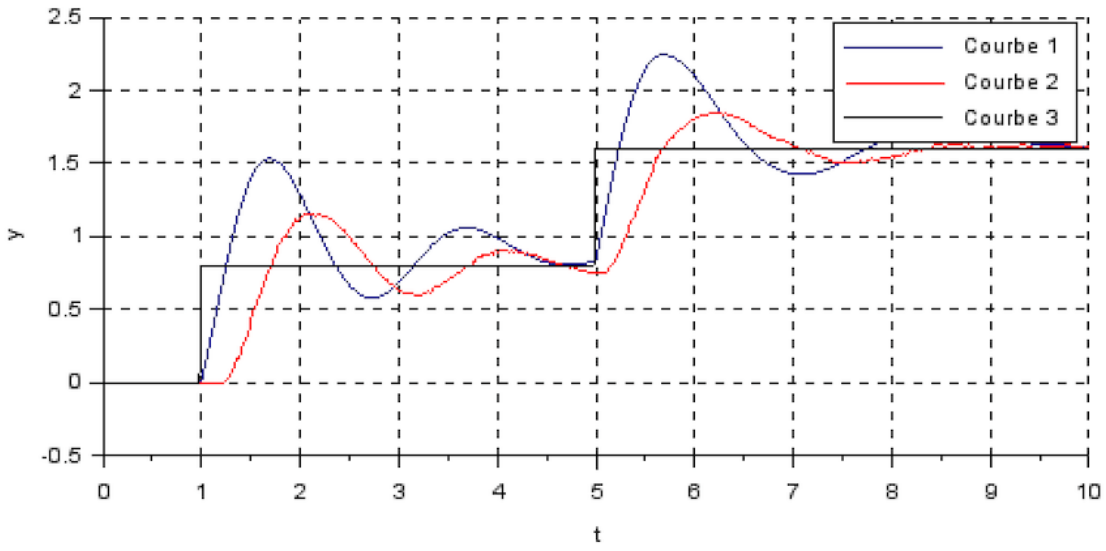
Ki=4

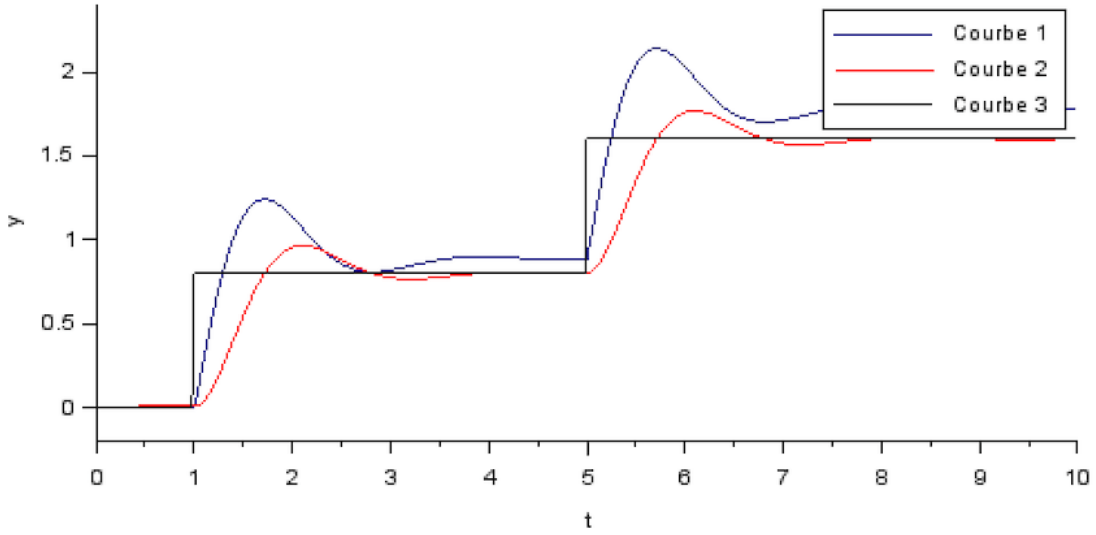





```
-->p1
 p1  =

  - 1.4285714 + 2.8605731i

-->p2
 p2  =

  - 1.4285714 - 2.8605731i
```

Ki=8

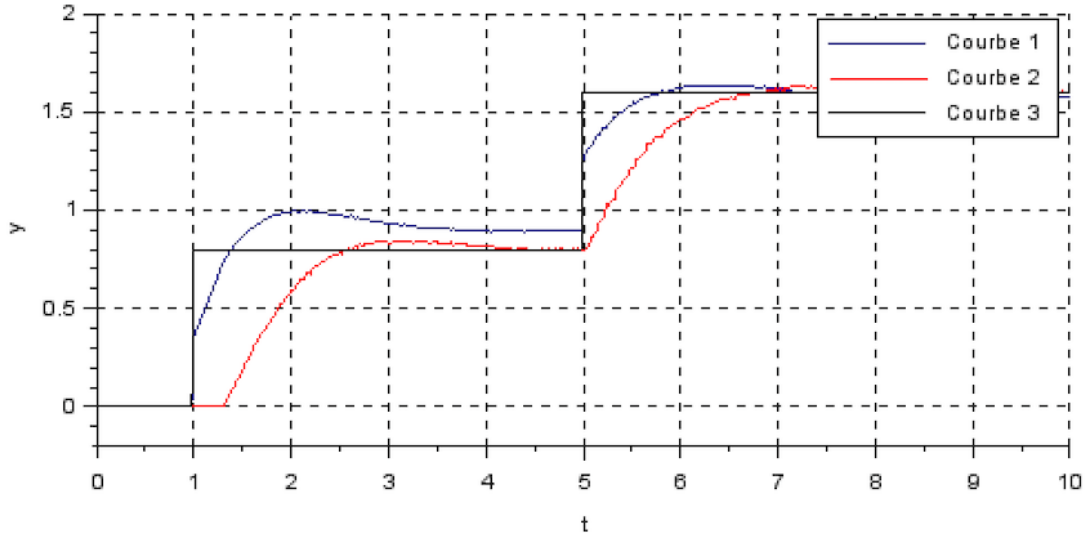


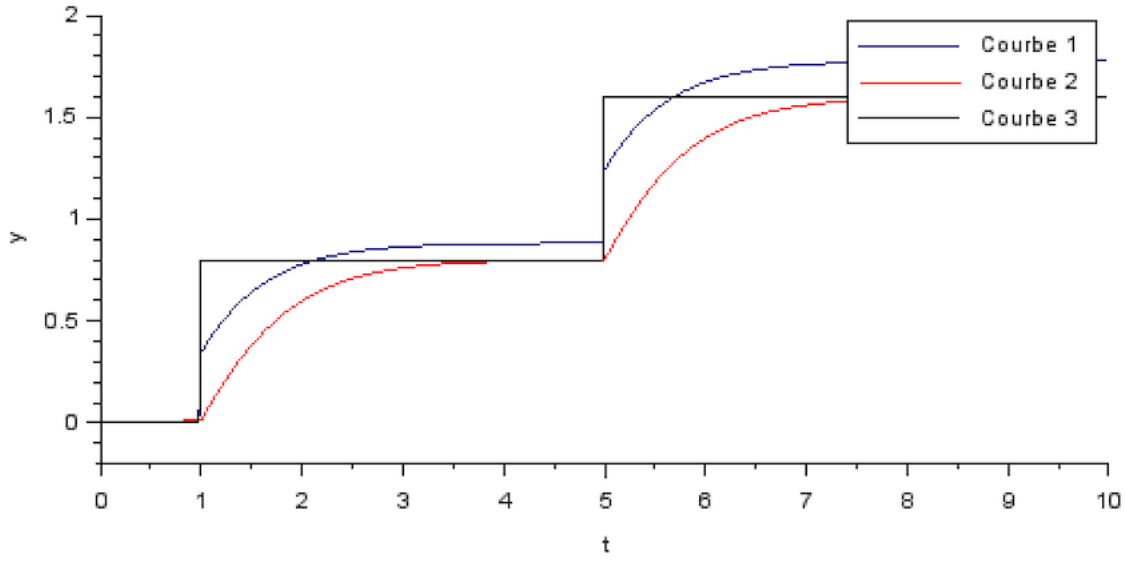



```
-->p1
 p1  =

  - 1.4285714 + 4.2902883i

-->p2
 p2  =

  - 1.4285714 - 4.2902883i
```

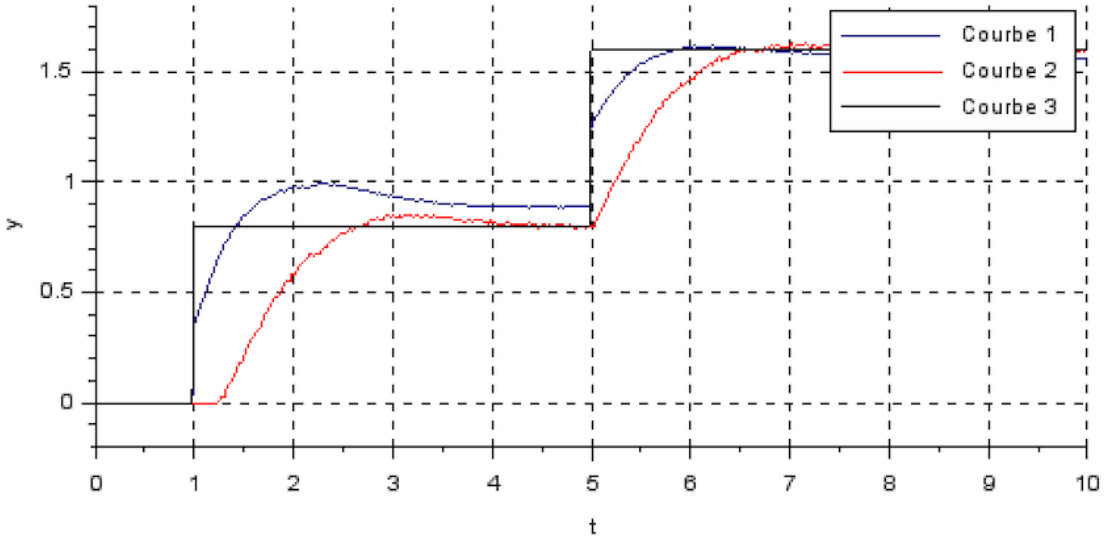
3. 極指定

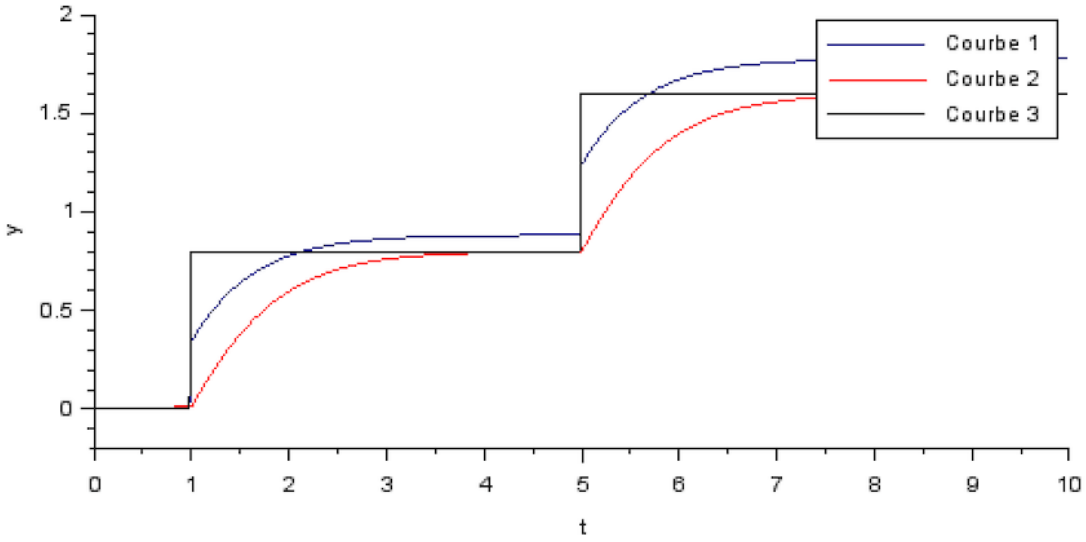
p1=p2=-2


Courbe 1
Courbe 2
Courbe 3
y
t
0
0.5
1
1.5
2
0
1
2
3
4
5
6
7
8
9
10

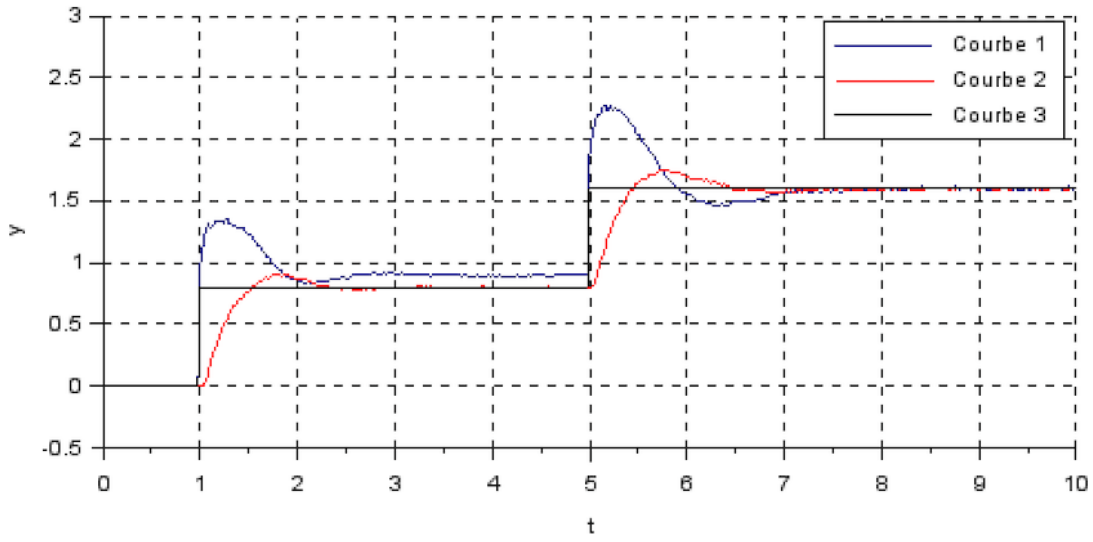

Courbe 1
Courbe 2
Courbe 3
y
t
0
0.5
1
1.5
2
0
1
2
3
4
5
6
7
8
9
10

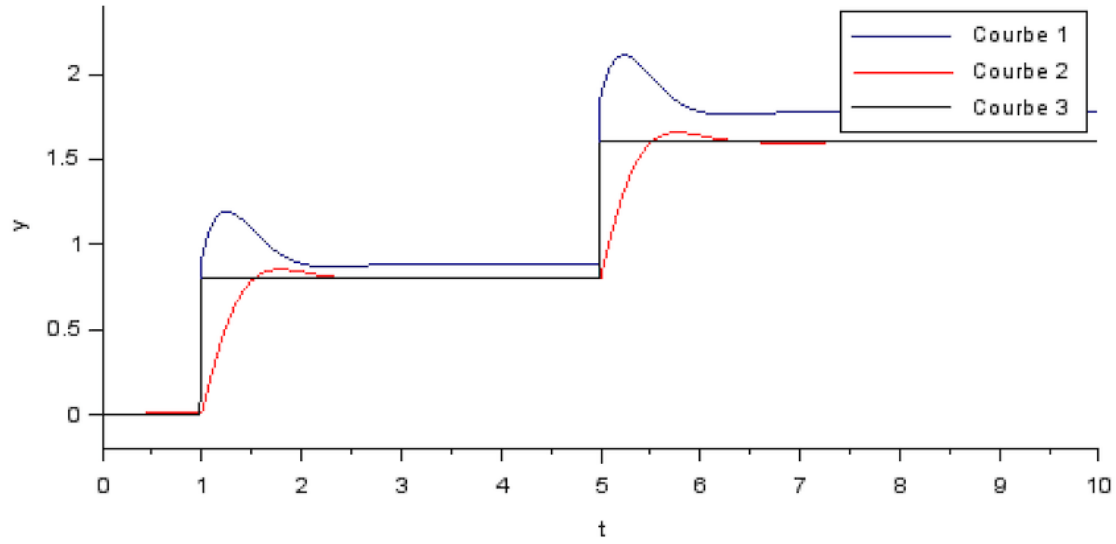
p1=p2=-4


Courbe 1
Courbe 2
Courbe 3
y
t
0
0.5
1
1.5
0
1
2
3
4
5
6
7
8
9
10


Courbe 1
Courbe 2
Courbe 3
y
t
0
0.5
1
1.5
2
0
1
2
3
4
5
6
7
8
9
10

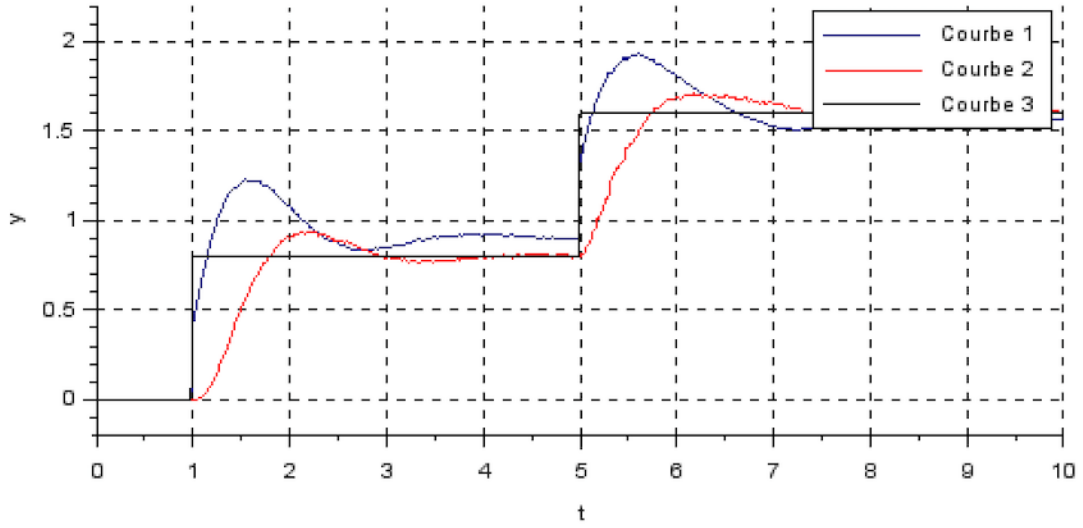
p1=-3+3j, p2=-3-3j

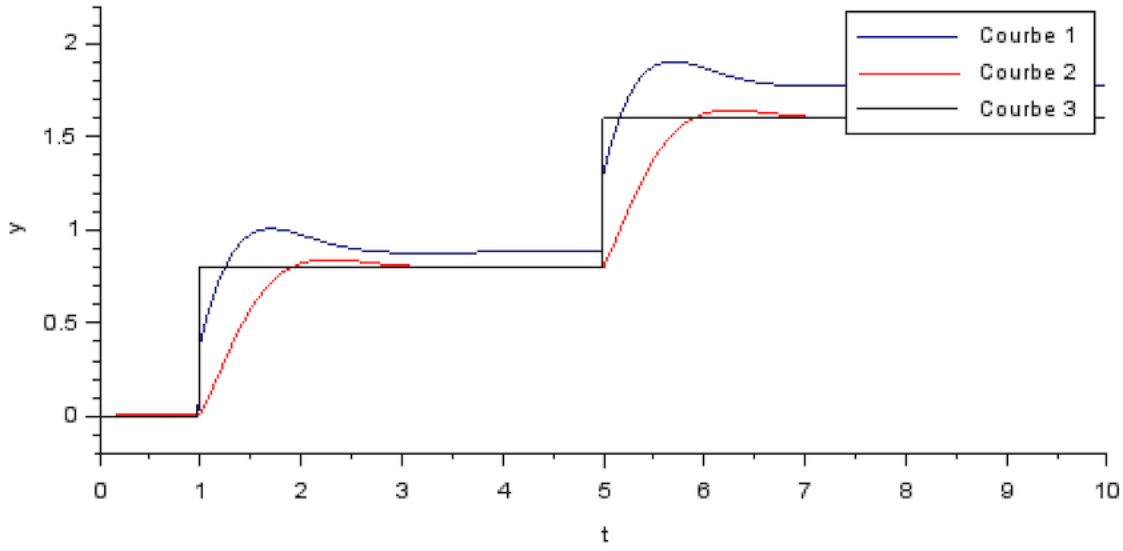




減衰比ζ=0.7 固定

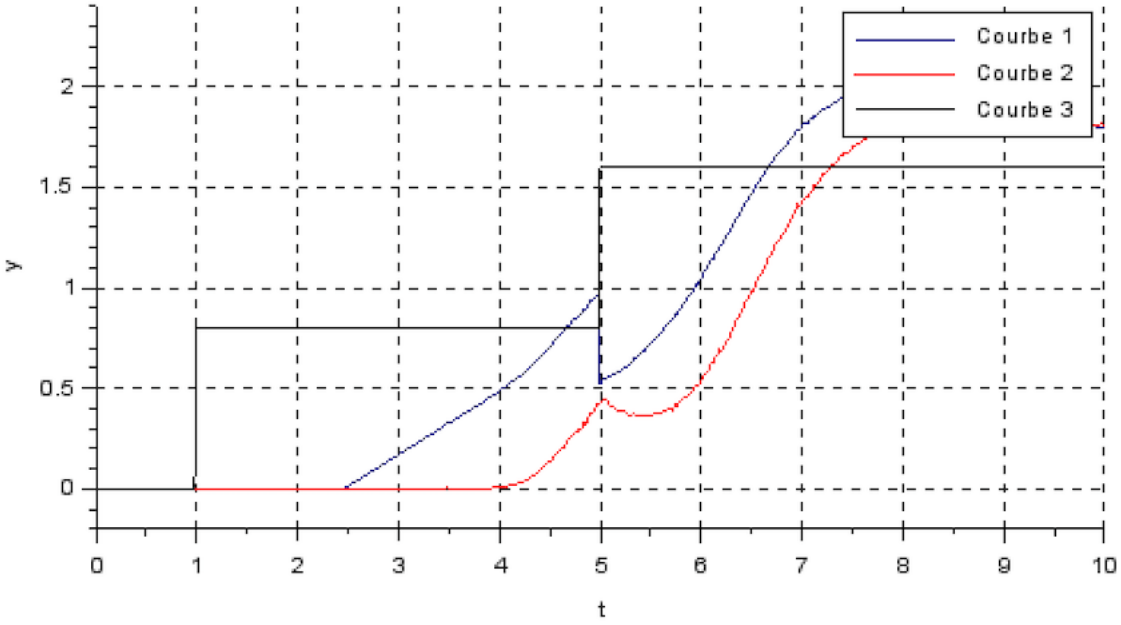
ωn = 1

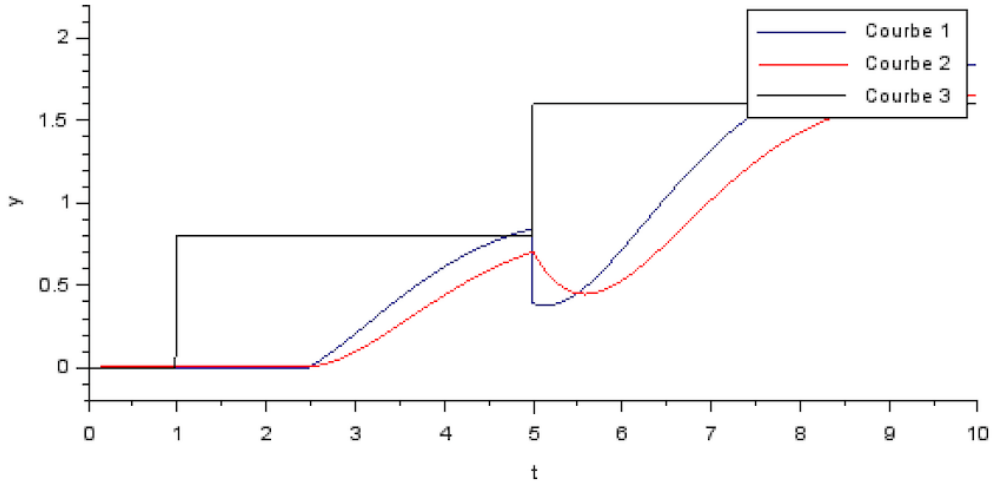





```
-->p1
 p1  =

  - 0.7 + 0.7141428i

-->p2
 p2  =

  - 0.7 - 0.7141428i
```

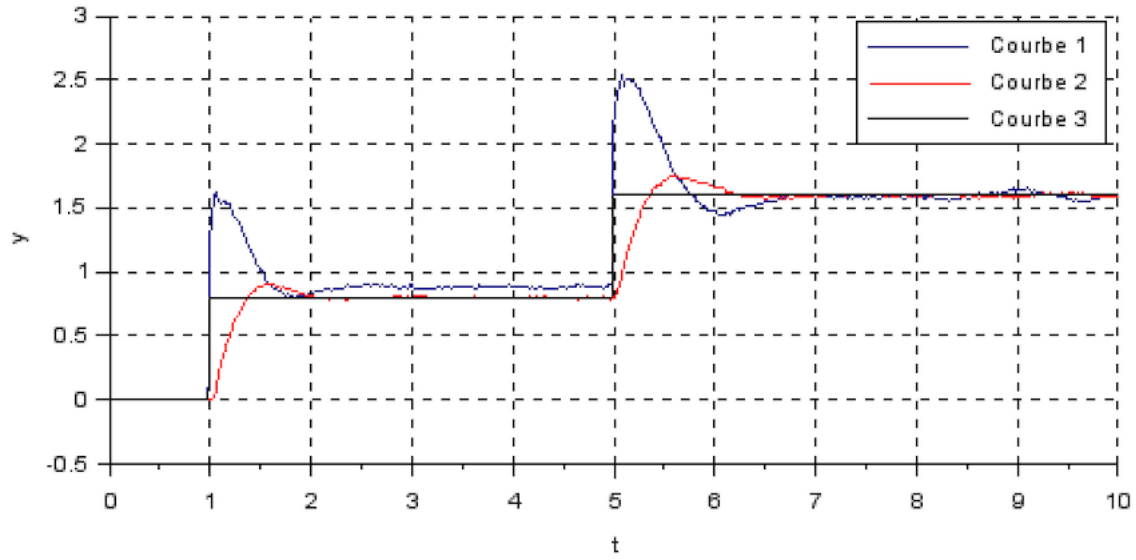
$\omega n = 3$

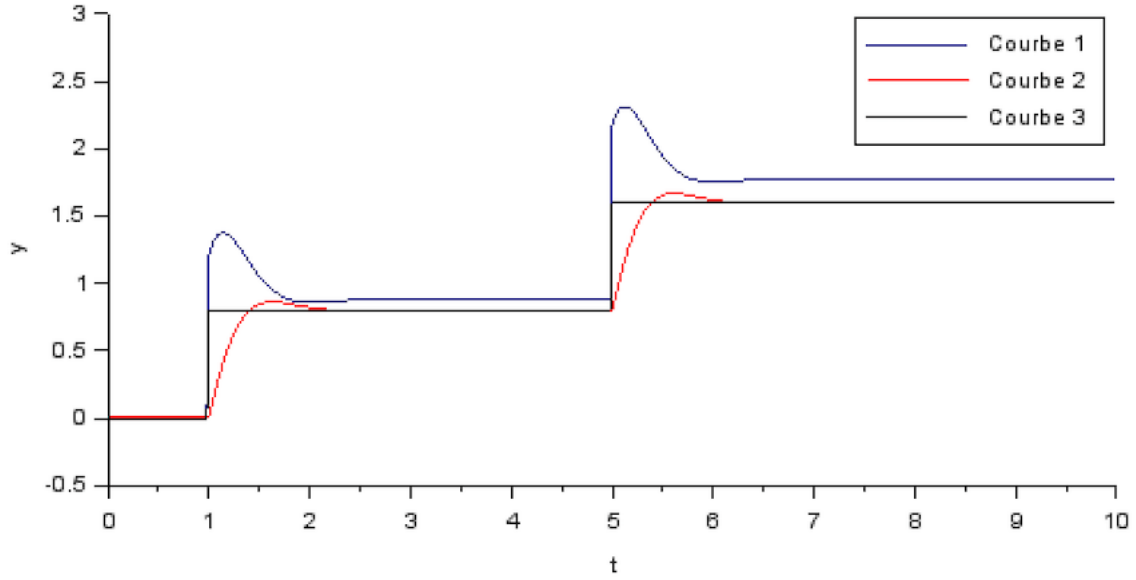





```
-->p1
 p1  =

  - 2.1 + 2.1424285i

-->p2
 p2  =

  - 2.1 - 2.1424285i
```

$\omega n = 5$

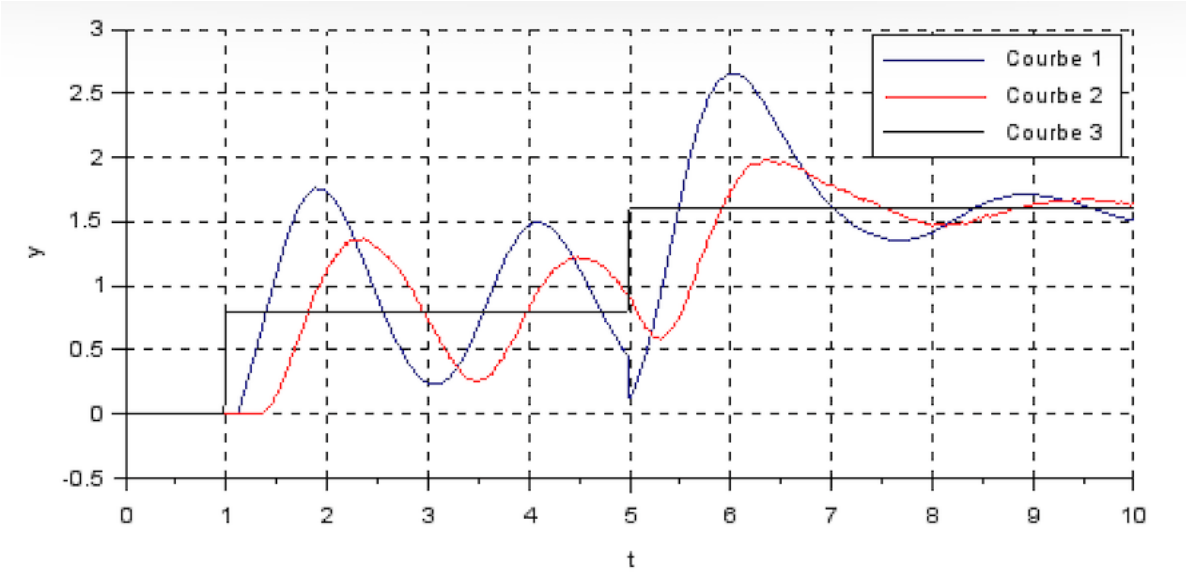


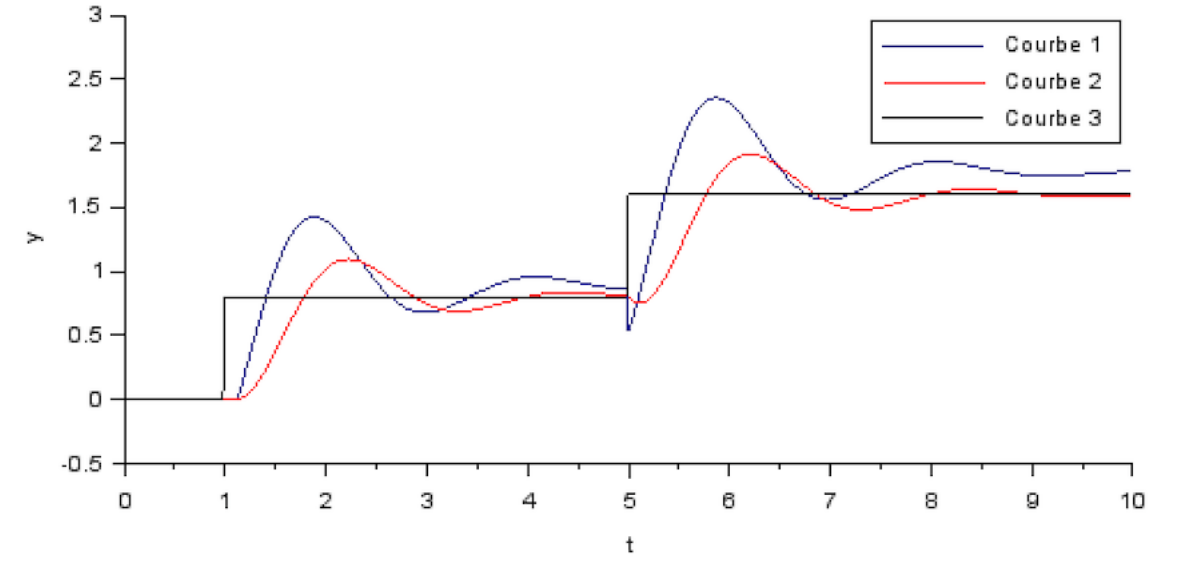



```
-->p1
 p1  =

  - 3.5 + 3.5707142i

-->p2
 p2  =

  - 3.5 - 3.5707142i
```

4. 固有振動数 $\omega n=3$

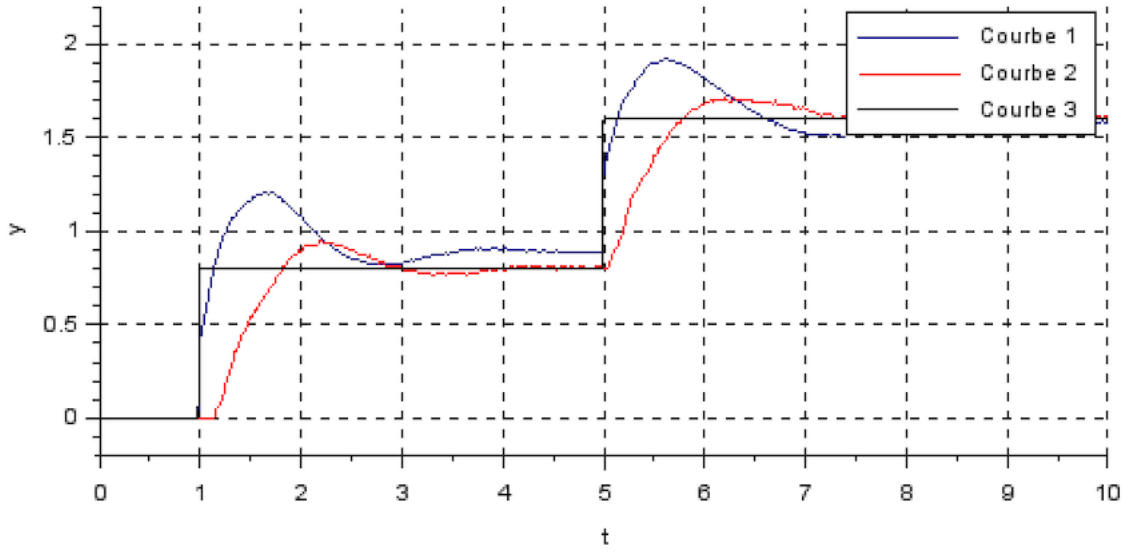
$\zeta=0.3$

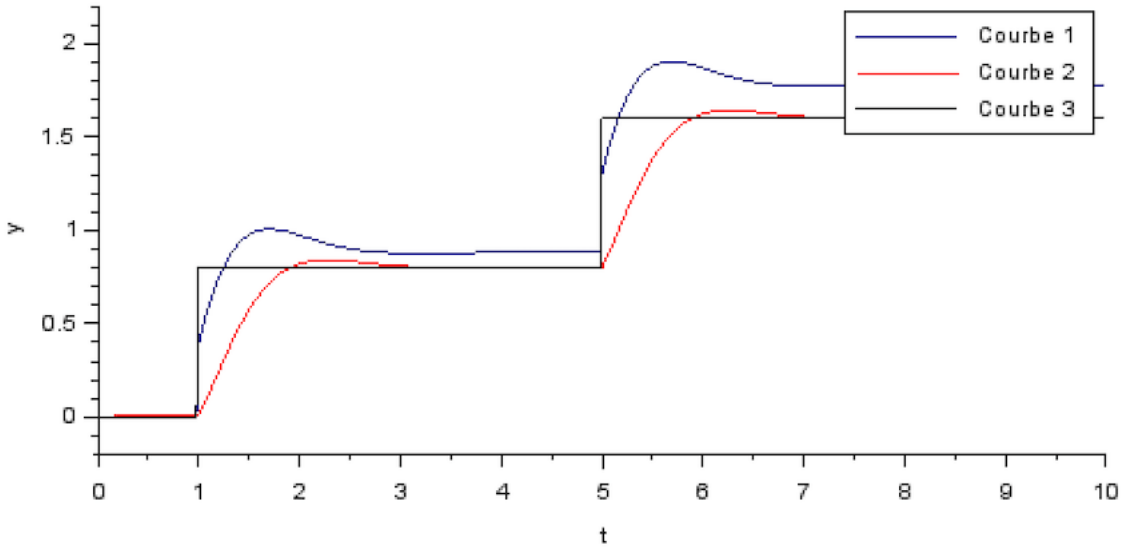





```
-->p1
 p1  =

  - 0.9 + 2.8618176i

-->p2
 p2  =

  - 0.9 - 2.8618176i
```

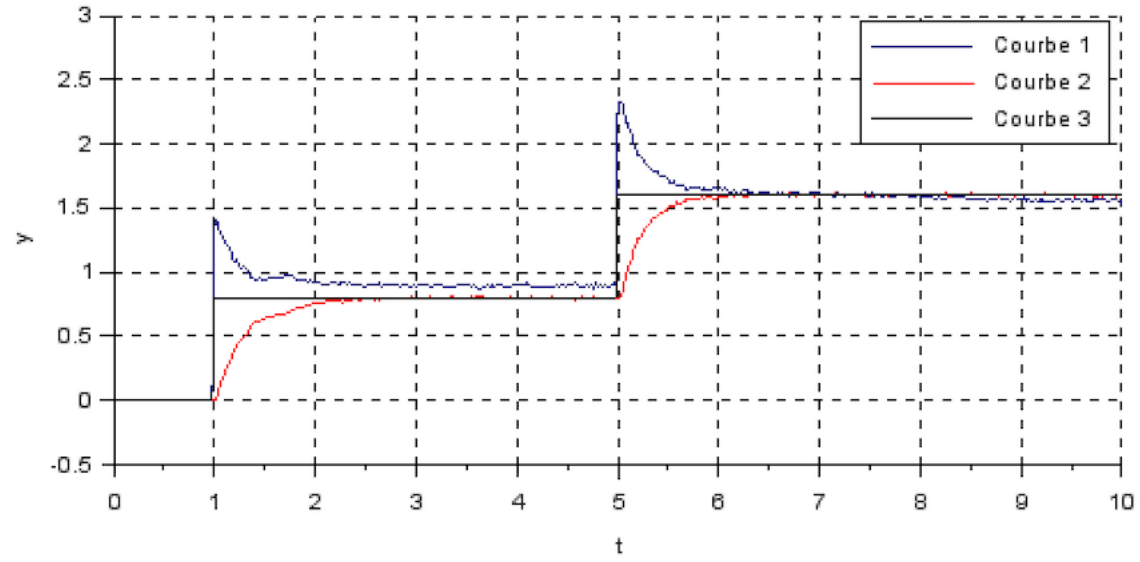
ζ =0. 7

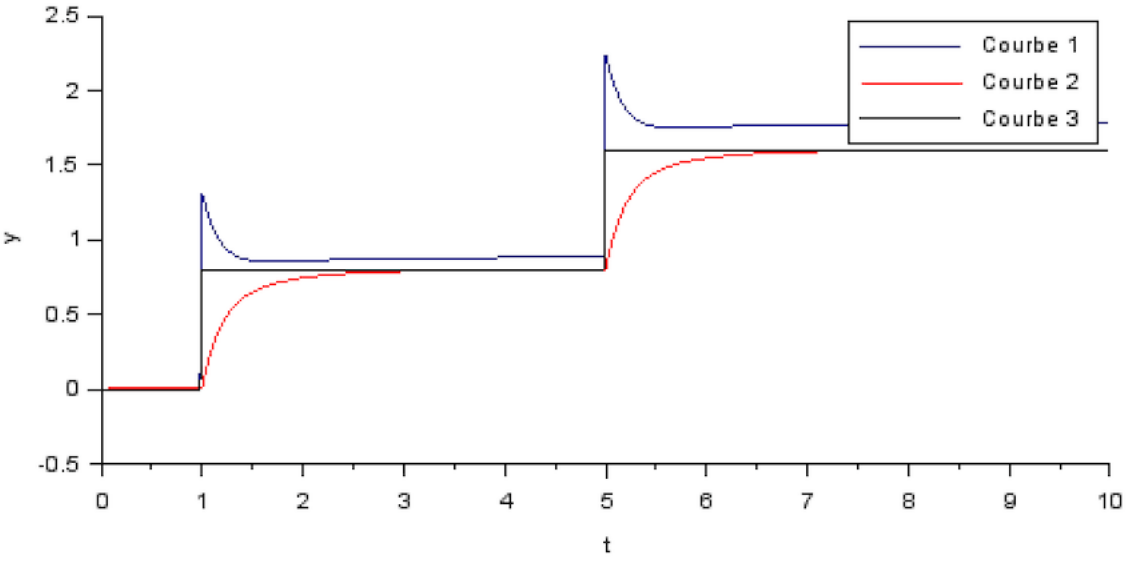





```
-->p1
 p1  =

  - 2.1 + 2.1424285i

-->p2
 p2  =

  - 2.1 - 2.1424285i
```

ζ =1.2






```
-->p1
 p1  =

  - 1.6100251

-->p2
 p2  =

  - 5.5899749
```