Computer Exercise 4
EL2520 Control Theory and Practice

Jiaqi Li
jiaqli@kth.se
960326-1711

Sifan Jiang
sifanj@kth.se
961220-8232

May 11, 2019

Minimum phase case

Dynamic decoupling

The dynamic decoupling in exercise 3.2.1 is

$$W(s) = \dots$$

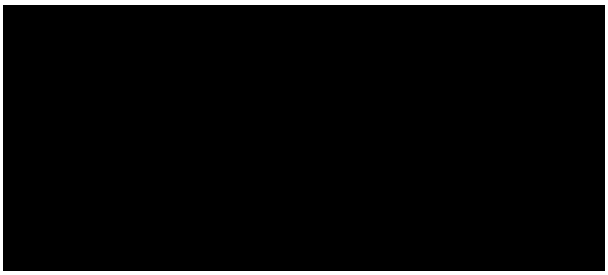

Figure 1: Bode diagram of $\tilde{G}(s)$ derived in exercise 3.2.1

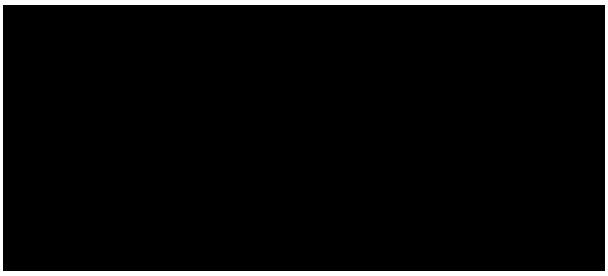

Figure 2: Simulink plots from exercise 3.2.4

- Is the controller good?
- Are the output signals coupled?

Glover-MacFarlane robust loop-shaping

What are the similarities and differences compared to the nominal design?

. . . . . .
. . . . . .

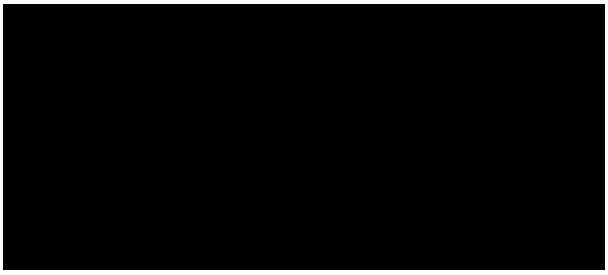

Figure 3: Simulink plots from exercise 3.3.4

Non-minimum phase case

Dynamic decoupling

The dynamic decoupling in exercise 3.2.1 is

$$W(s) = \dots$$

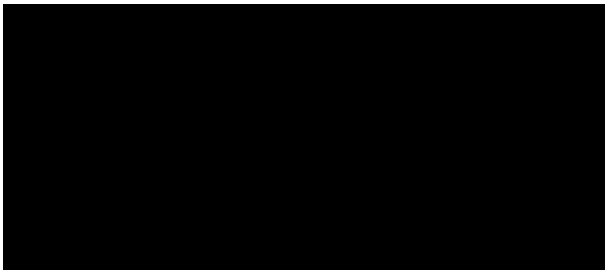

Figure 4: Bode diagram of $\tilde{G}(s)$ derived in exercise 3.2.1

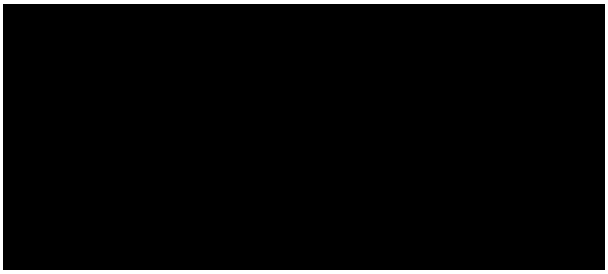

Figure 5: Simulink plots from exercise 3.2.4

- Is the controller good?
- Are the output signals coupled?

Glover-MacFarlane robust loop-shaping

What are the similarities and differences compared to the nominal design?

. . . . . .
. . . . . .

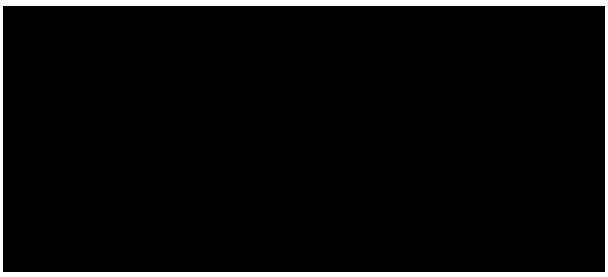

Figure 6: Simulink plots from exercise 3.3.4