

Computer Exercise 4

EL2520 Control Theory and Practice

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Minimum phase case

Dynamic decoupling

The dynamic decoupling in exercise 3.2.1 is

$$W(s) = \dots$$

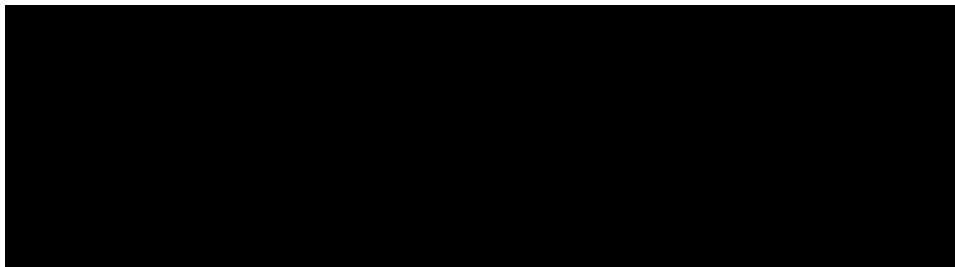


Figure 1: Bode diagram of $\tilde{G}(s)$ derived in exercise 3.2.1

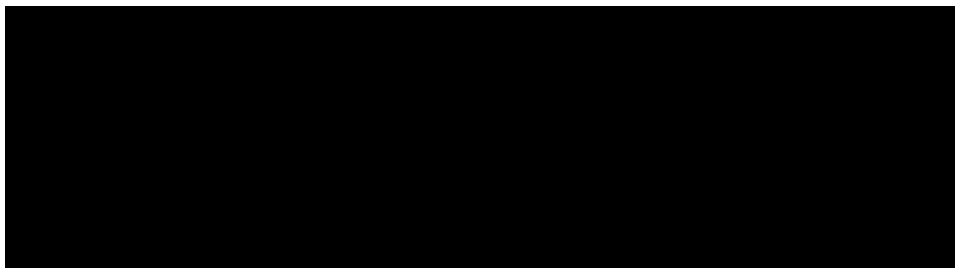


Figure 2: Simulink plots from exercise 3.2.4

Is the controller good?

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 Are the output signals coupled?

Glover-MacFarlane robust loop-shaping

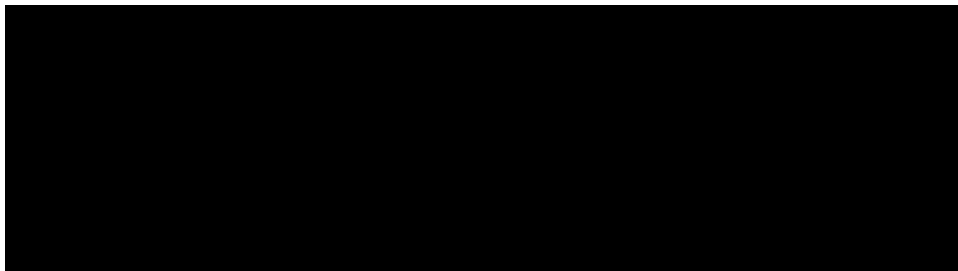


Figure 3: Simulink plots from exercise 3.3.4

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

Non-minimum phase case

Dynamic decoupling

The dynamic decoupling in exercise 3.2.1 is

$$W(s) = \dots$$

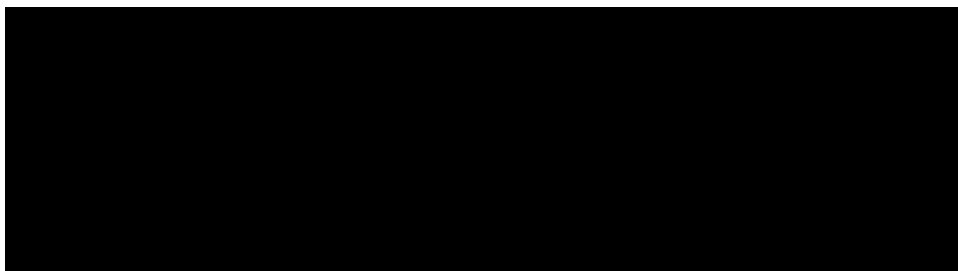


Figure 4: Bode diagram of $\tilde{G}(s)$ derived in exercise 3.2.1

Is the controller good?

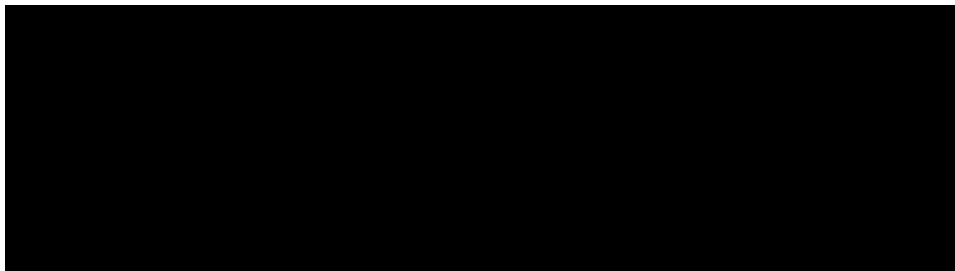


Figure 5: Simulink plots from exercise 3.2.4

Are the output signals coupled?

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Glover-MacFarlane robust loop-shaping

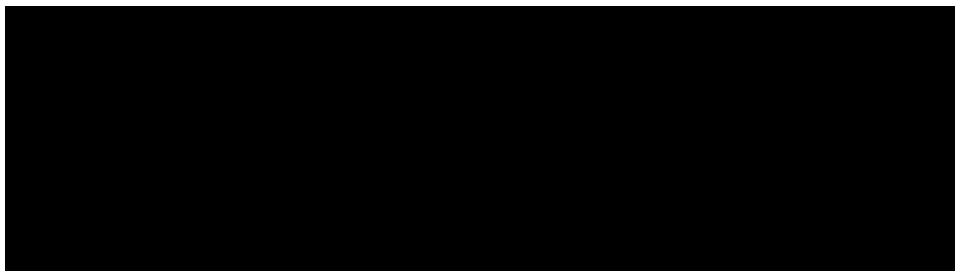


Figure 6: Simulink plots from exercise 3.3.4

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

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