

Bode plot and relative stability exercise

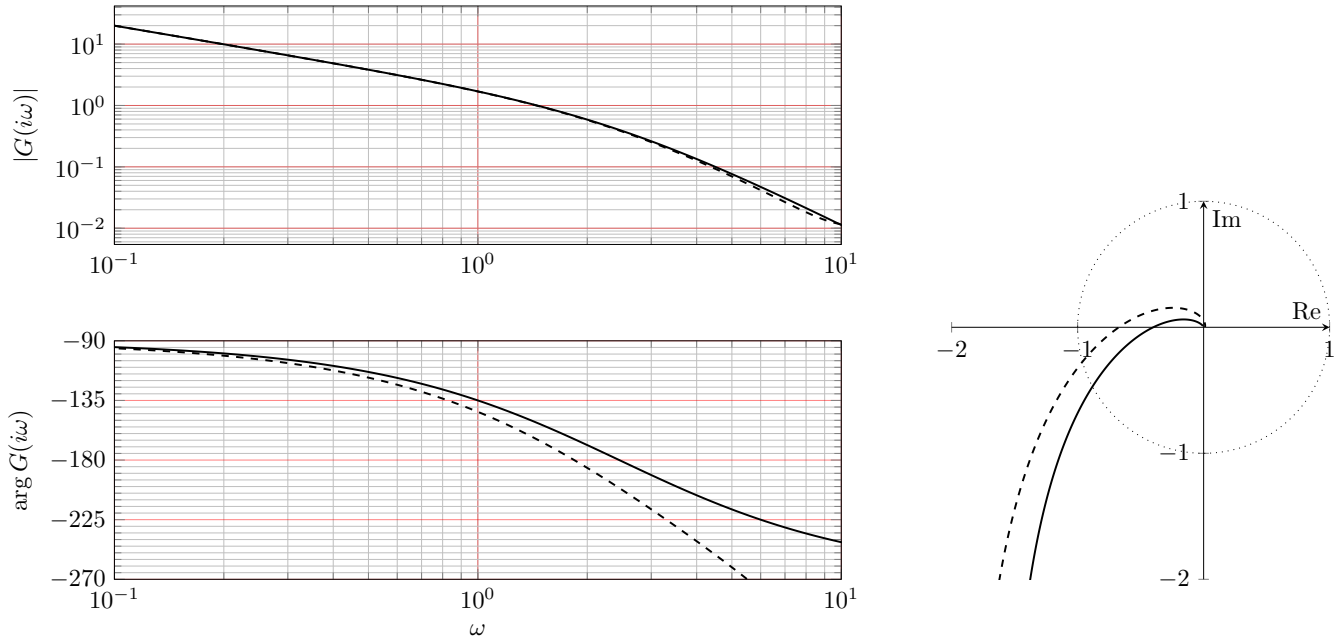
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1 Sampling introduces delay

The continuous-time system

$$G(s) = \frac{12}{s(s+2)(s+3)}$$

is sampled using zero-order-hold. The figure below shows the Bode plot and the Nyquist plot for both the continuous-time system (solid lines) and the discrete-time system (dashed lines).



1. Determine the amplitude margins and the phase margins for both systems.
2. What is the delay that the sampling introduces?
3. What is the sampling period?