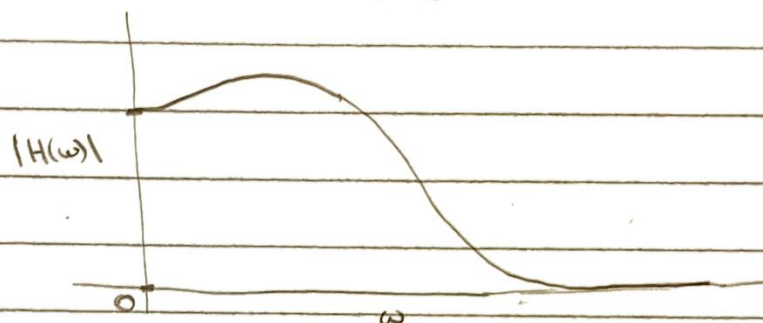


On page 104 we are given equation 5.14

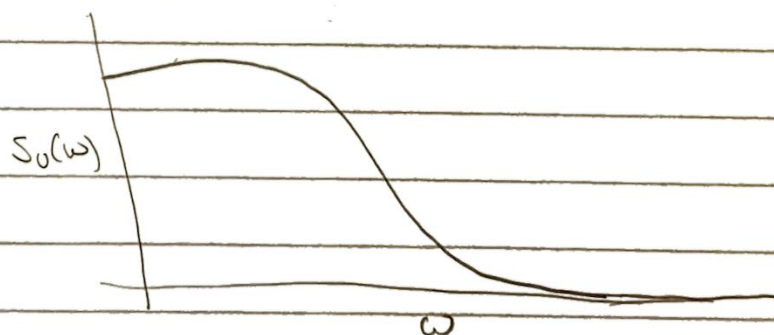
$$S_x(\omega) = H(-\omega) \cdot S_0(\omega) \cdot H^T(\omega)$$

which maps input ($S_0(\omega)$) through the system dynamics ($H(\omega)$) to the output ($S_x(\omega)$), in the frequency domain.

An example is given in figure 5.2 and 5.4. In figure 5.2 a $H(\omega)$ is illustrated in a loglog-domain. If we look at the amplitude we see a picture similar to the one below where we have mapped back into a non-log y axis.



In figure 5.4 the variance spectrum of the input is given and we give ~~it~~ again in a non-log



We then get output signal places where both the input and the system is non-zero, because we multiply them together in eq 5.14

When the input is white noise $S_0(\omega) = \infty$ for all ω and hence only the system dynamics matters.

In figure 5.4 we also see a white noise would have a dirac delta function as autocovariance function in the time-domain.