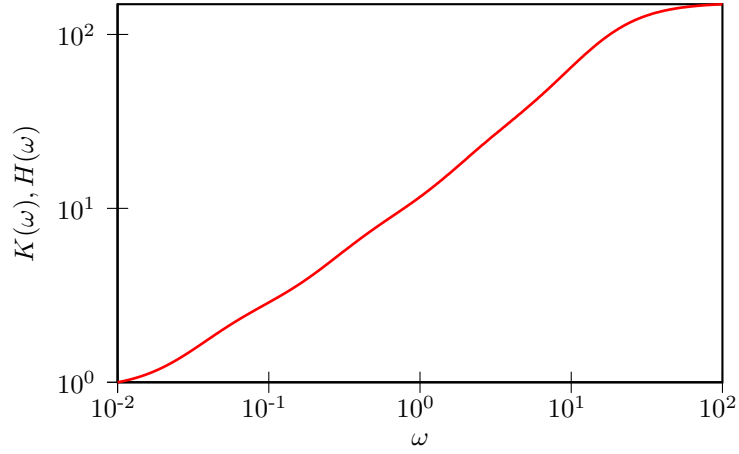


# GENERALIZED LANGEVIN EQUATION ANALYTICS

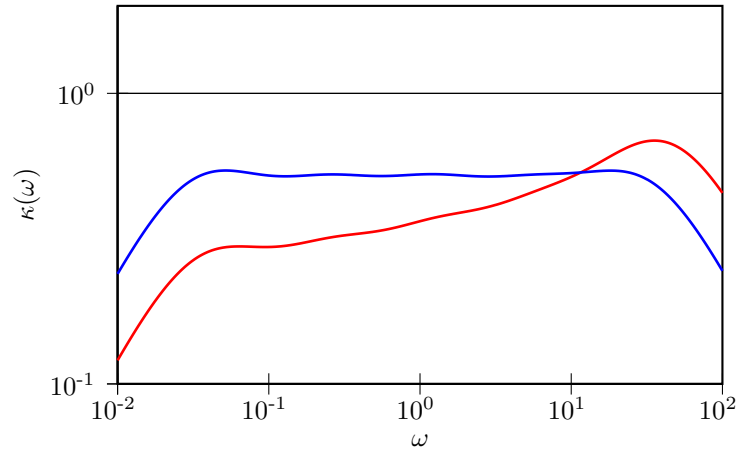
- Drift matrix  $A_p$ :

$$\begin{pmatrix} 2.6187 \times 10^{+01} & -7.9631 \times 10^{-02} & 3.7101 \times 10^{-01} & -1.5549 \times 10^{+00} & 1.9172 \times 10^{+01} \\ 1.4336 \times 10^{-01} & 5.6410 \times 10^{-03} & -9.4363 \times 10^{-02} & -1.8400 \times 10^{-01} & 8.4600 \times 10^{-02} \\ 1.0027 \times 10^{+00} & 9.4363 \times 10^{-02} & 3.2627 \times 10^{-01} & 3.3303 \times 10^{-01} & 4.5013 \times 10^{-01} \\ -4.1771 \times 10^{+00} & 1.8400 \times 10^{-01} & -3.3303 \times 10^{-01} & 2.4335 \times 10^{+00} & -9.2785 \times 10^{-01} \\ 1.7045 \times 10^{+01} & -8.4600 \times 10^{-02} & -4.5013 \times 10^{-01} & 9.2785 \times 10^{-01} & 1.5479 \times 10^{+01} \end{pmatrix}$$

- Fluctuation-Dissipation theorem is enforced,  $C_p = k_B T$
- Memory kernel FT,  $K(\omega)/K(0) = H(\omega)/H(0)$



- Sampling efficiency, for  $q^2$  and  $p^2 + \omega^2 q^2$ :



- Free-particle diffusion coeff. ( $mD/k_B T$ ):  $6.3523 \times 10^{+00}$