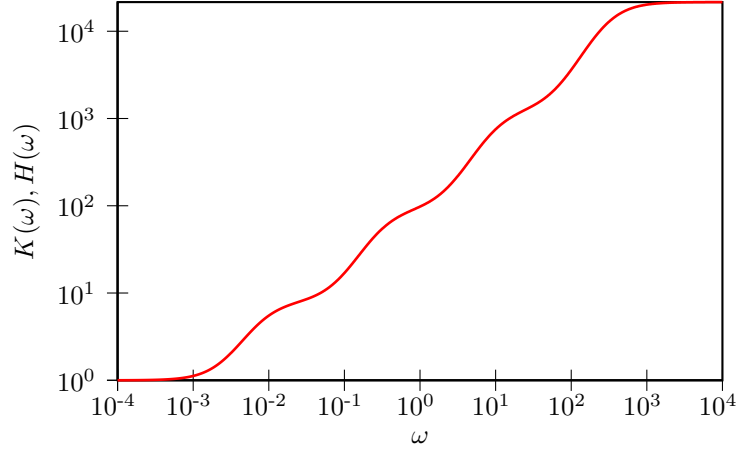


# GENERALIZED LANGEVIN EQUATION ANALYTICS

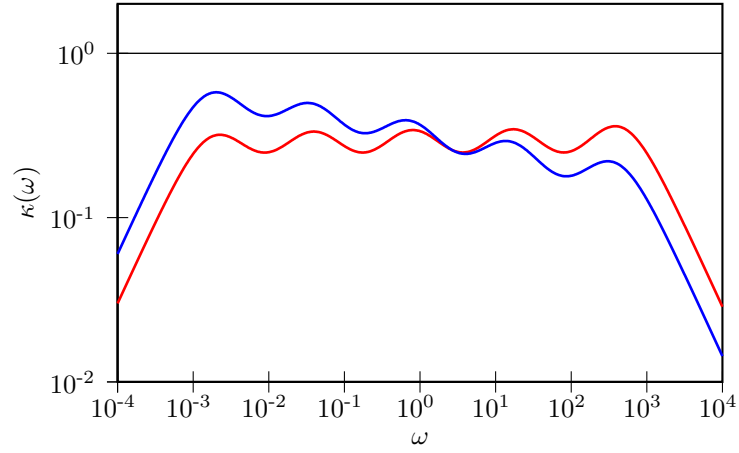
- Drift matrix  $A_p$ :

$$\begin{pmatrix} 1.4360 \times 10^{+02} & 4.1032 \times 10^{-02} & 3.9333 \times 10^{-01} & -8.1776 \times 10^{+00} & 1.9200 \times 10^{+02} \\ -1.2745 \times 10^{-02} & 5.3654 \times 10^{-03} & -2.3217 \times 10^{-02} & -3.5052 \times 10^{-02} & -4.1920 \times 10^{-02} \\ 4.0043 \times 10^{-01} & 2.3217 \times 10^{-02} & 2.8533 \times 10^{-01} & 5.1148 \times 10^{-02} & -1.9831 \times 10^{-03} \\ -8.1915 \times 10^{+00} & 3.5052 \times 10^{-02} & -5.1148 \times 10^{-02} & 8.8742 \times 10^{+00} & 5.9261 \times 10^{-02} \\ 1.9315 \times 10^{+02} & 4.1920 \times 10^{-02} & 1.9831 \times 10^{-03} & -5.9261 \times 10^{-02} & 2.7377 \times 10^{+02} \end{pmatrix}$$

- 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. ( $mD/k_B T$ ):  $1.5057 \times 10^{+02}$