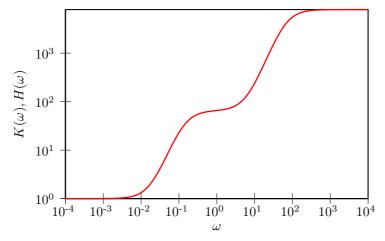
## GENERALIZED LANGEVIN EQUATION ANALYTICS

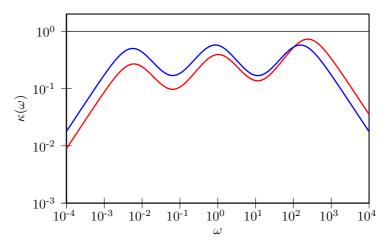
• Drift matrix  $A_p$ :

$$\begin{pmatrix} 1.7653 \times 10^{+02} & -1.3667 \times 10^{+00} & 1.1017 \times 10^{+02} \\ 2.1786 \times 10^{+00} & 1.2132 \times 10^{-01} & 1.0793 \times 10^{+00} \\ 1.0522 \times 10^{+02} & -1.0793 \times 10^{+00} & 6.6207 \times 10^{+01} \end{pmatrix}$$

- Fluctuation-Dissipation theorem is enforced,  $\mathbf{C}_p = k_B T$
- 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.  $(mD/k_BT)$ :  $4.4669 \times 10^{+01}$