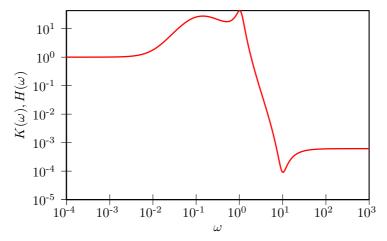
## GENERALIZED LANGEVIN EQUATION ANALYTICS

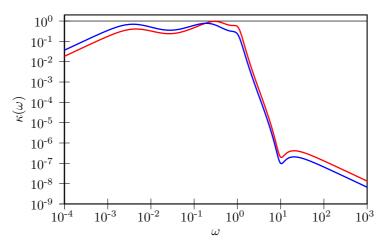
• Drift matrix  $A_p$ :

```
 \begin{pmatrix} 6.6836 \times 10^{-06} & 4.3227 \times 10^{-01} & 9.3926 \times 10^{-02} & 2.0902 \times 10^{-01} & -6.5123 \times 10^{-03} \\ -4.3226 \times 10^{-01} & 2.0635 \times 10^{-04} & -1.9865 \times 10^{-01} & -6.7874 \times 10^{-01} & -2.2657 \times 10^{-01} \\ -9.3928 \times 10^{-02} & 1.9865 \times 10^{-01} & 6.7963 \times 10^{-04} & -1.7768 \times 10^{-02} & -5.0722 \times 10^{-02} \\ -2.0901 \times 10^{-01} & 6.7874 \times 10^{-01} & 1.7768 \times 10^{-02} & 1.0789 \times 10^{-04} & -8.5735 \times 10^{-01} \\ 2.1750 \times 10^{-03} & 2.2657 \times 10^{-01} & 5.0722 \times 10^{-02} & 8.5735 \times 10^{-01} & 7.2237 \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.  $(mD/k_BT)$ :  $9.2045 \times 10^{+01}$