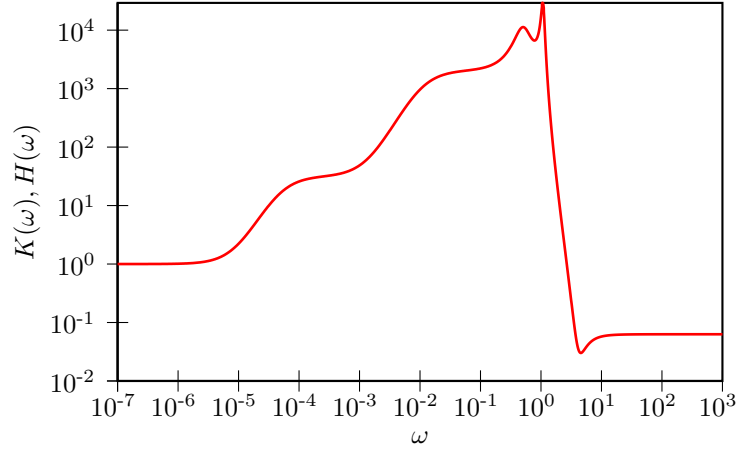


GENERALIZED LANGEVIN EQUATION ANALYTICS

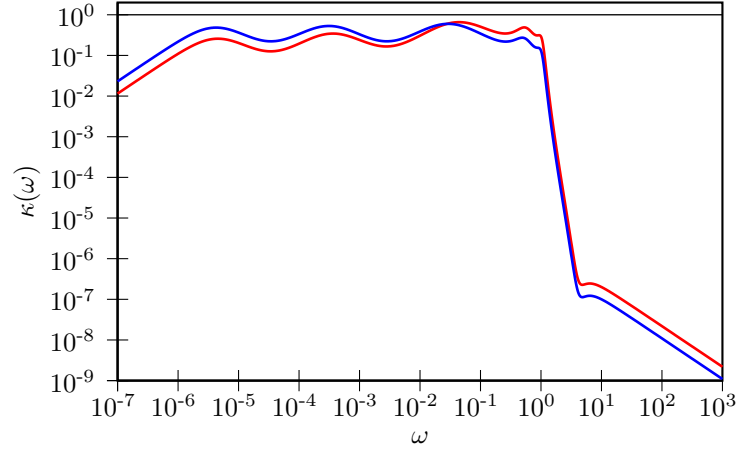
- Drift matrix A_p :

$$\begin{pmatrix} 1.0934 \times 10^{-06} & 3.4557 \times 10^{-01} & 5.2718 \times 10^{-02} & 1.9453 \times 10^{-03} & 1.4586 \times 10^{-02} & -1.4802 \times 10^{-03} & 9.1947 \times 10^{-03} \\ -3.4557 \times 10^{-01} & 2.6718 \times 10^{-08} & 2.8546 \times 10^{-02} & 3.9917 \times 10^{-03} & 8.5043 \times 10^{-01} & -8.6965 \times 10^{-02} & 4.0893 \times 10^{-03} \\ -5.2719 \times 10^{-02} & -2.8546 \times 10^{-02} & 1.1177 \times 10^{-07} & 1.9020 \times 10^{-03} & 1.3188 \times 10^{-01} & 5.8259 \times 10^{-04} & 1.2398 \times 10^{-01} \\ -1.9453 \times 10^{-03} & -3.9917 \times 10^{-03} & -1.9020 \times 10^{-03} & 3.3623 \times 10^{-08} & -5.3386 \times 10^{-03} & -2.1100 \times 10^{-02} & -9.4190 \times 10^{-02} \\ -1.4588 \times 10^{-02} & -8.5043 \times 10^{-01} & -1.3188 \times 10^{-01} & 5.3386 \times 10^{-03} & 1.4721 \times 10^{-05} & 4.8003 \times 10^{-02} & 6.1810 \times 10^{-01} \\ 9.8513 \times 10^{-04} & 8.6965 \times 10^{-02} & -5.8259 \times 10^{-04} & 2.1100 \times 10^{-02} & -4.8003 \times 10^{-02} & 2.1971 \times 10^{-01} & 5.2221 \times 10^{-01} \\ -8.4999 \times 10^{-03} & -4.0893 \times 10^{-03} & -1.2398 \times 10^{-01} & 9.4190 \times 10^{-02} & -6.1810 \times 10^{-01} & -5.2221 \times 10^{-01} & 2.7468 \times 10^{-01} \end{pmatrix}$$

- 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. ($mD/k_B T$): $5.7567 \times 10^{+04}$