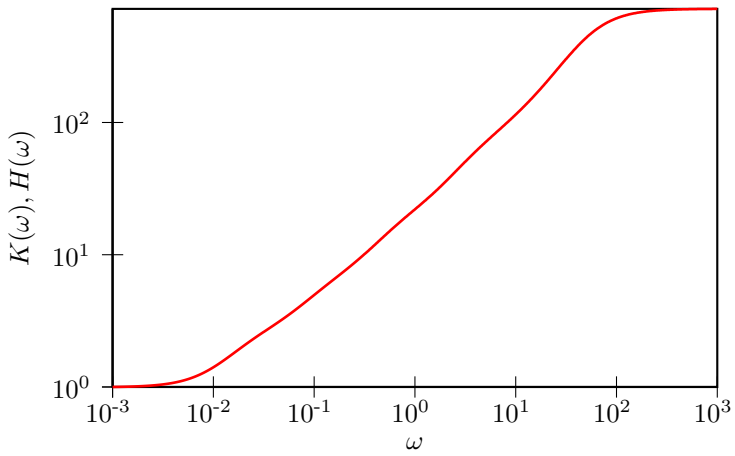
Generalized Langevin Equation analytics

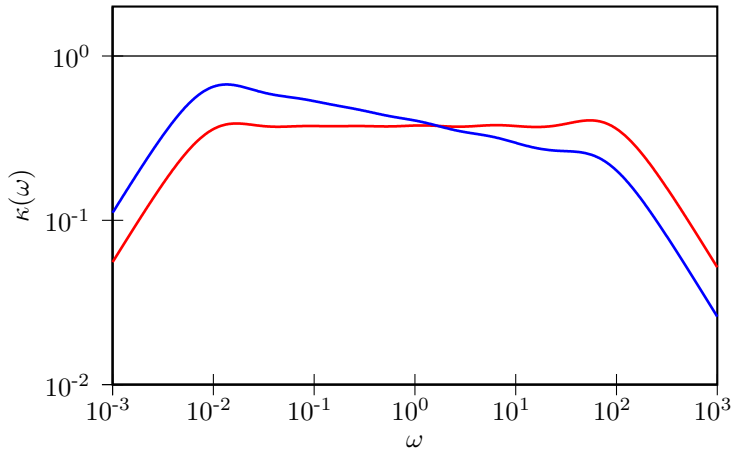
- **Drift matrix $\mathbf{A}_p$:**

$$\begin{pmatrix}
2.5997\times10^{+01} & -5.2665\times10^{-02} & 1.7079\times10^{-01} & 5.4628\times10^{-01} & 2.5711\times10^{+00} & -4.9578\times10^{+00} & 3.1663\times10^{+01} \\
1.5255\times10^{-02} & 1.4716\times10^{-02} & -8.1863\times10^{-03} & 1.9422\times10^{-02} & -7.3977\times10^{-02} & -1.0188\times10^{-01} & 5.4138\times10^{-02} \\
1.0857\times10^{-01} & 8.1863\times10^{-03} & 1.0665\times10^{-01} & 2.4952\times10^{-02} & 2.0025\times10^{-02} & 3.3527\times10^{-02} & -1.2017\times10^{-02} \\
5.3954\times10^{-01} & -1.9422\times10^{-02} & -2.4952\times10^{-02} & 5.7151\times10^{-01} & -3.7425\times10^{-02} & 9.9587\times10^{-02} & -2.8358\times10^{-02} \\
2.6402\times10^{+00} & 7.3977\times10^{-02} & -2.0025\times10^{-02} & 3.7425\times10^{-02} & 3.4913\times10^{+00} & -1.4920\times10^{-02} & 3.5031\times10^{-01} \\
-4.3437\times10^{+00} & 1.0188\times10^{-01} & -3.3527\times10^{-02} & -9.9587\times10^{-02} & 1.4920\times10^{-02} & 1.1942\times10^{+01} & 9.9960\times10^{-01} \\
3.2191\times10^{+01} & -5.4138\times10^{-02} & 1.2017\times10^{-02} & 2.8358\times10^{-02} & -3.5031\times10^{-01} & -9.9960\times10^{-01} & 4.7384\times10^{+01}
\end{pmatrix}$$

- **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. $(mD/k_B T)$:** $2.7982 \times 10^{+01}$