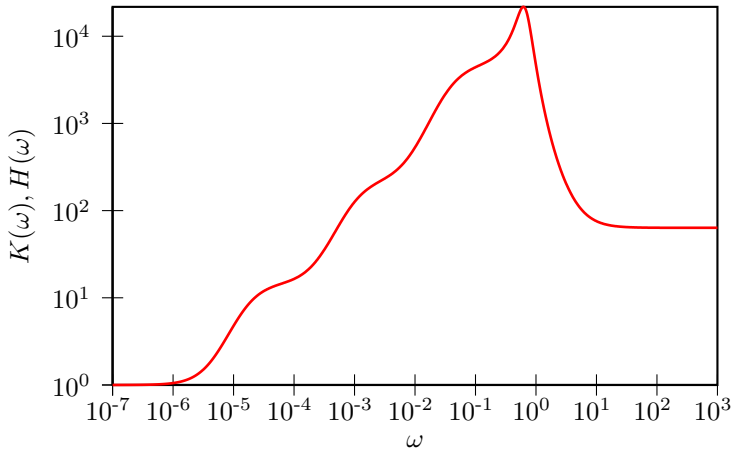
Generalized Langevin Equation analytics

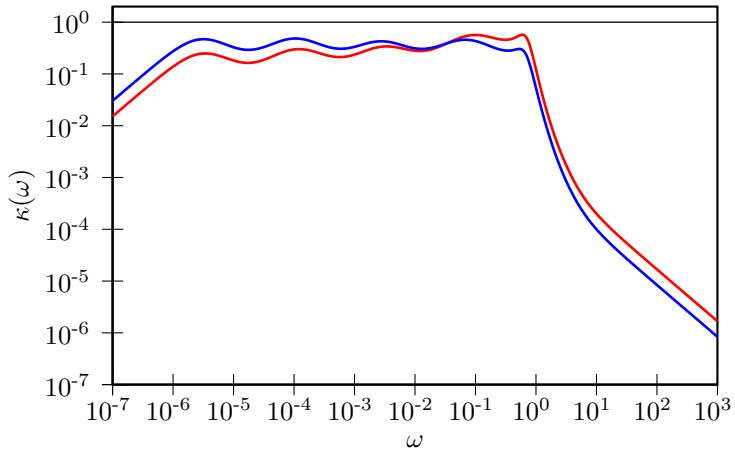
- **Drift matrix $\mathbf{A}_p$:**

$$\begin{pmatrix}
8.3824\times10^{-04} & 1.9646\times10^{-04} & 5.1462\times10^{-02} & 1.9884\times10^{-01} & -1.5317\times10^{-03} & 2.4637\times10^{-01} & 6.9753\times10^{-02} \\
-1.3514\times10^{-04} & 1.0137\times10^{-05} & -4.1651\times10^{-05} & -1.6827\times10^{-04} & 1.1945\times10^{-04} & -1.7202\times10^{-03} & -1.4549\times10^{-03} \\
-5.1428\times10^{-02} & 4.1651\times10^{-05} & 1.3818\times10^{-05} & 1.2556\times10^{-01} & -1.1999\times10^{-03} & 8.6172\times10^{-03} & 3.4271\times10^{-02} \\
-1.9904\times10^{-01} & 1.6827\times10^{-04} & -1.2556\times10^{-01} & 2.9606\times10^{-04} & -1.0340\times10^{-03} & -5.4252\times10^{-01} & -1.5814\times10^{-01} \\
6.2726\times10^{-04} & -1.1945\times10^{-04} & 1.1999\times10^{-03} & 1.0340\times10^{-03} & 2.9776\times10^{-04} & -7.1372\times10^{-03} & 3.2897\times10^{-02} \\
-2.4769\times10^{-01} & 1.7202\times10^{-03} & -8.6172\times10^{-03} & 5.4252\times10^{-01} & 7.1372\times10^{-03} & 2.0380\times10^{-01} & -4.2332\times10^{-01} \\
-7.0419\times10^{-02} & 1.4549\times10^{-03} & -3.4271\times10^{-02} & 1.5814\times10^{-01} & -3.2897\times10^{-02} & 4.2332\times10^{-01} & 7.1376\times10^{-01}
\end{pmatrix}$$

- **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. $(mD/k_B T)$:** $7.5806 \times 10^{+04}$