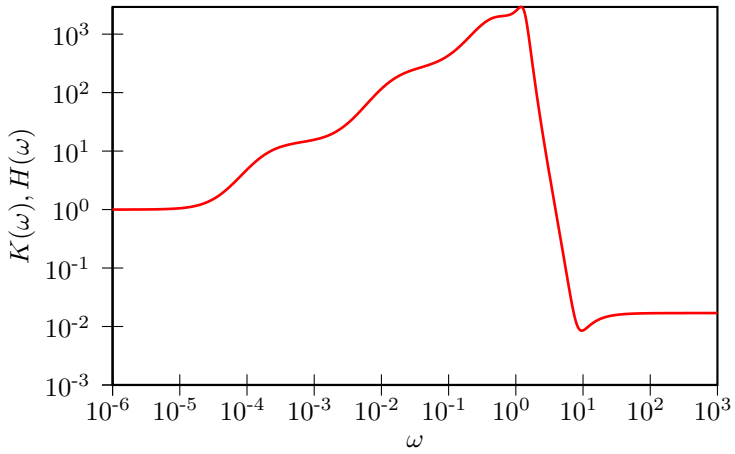
Generalized Langevin Equation analytics

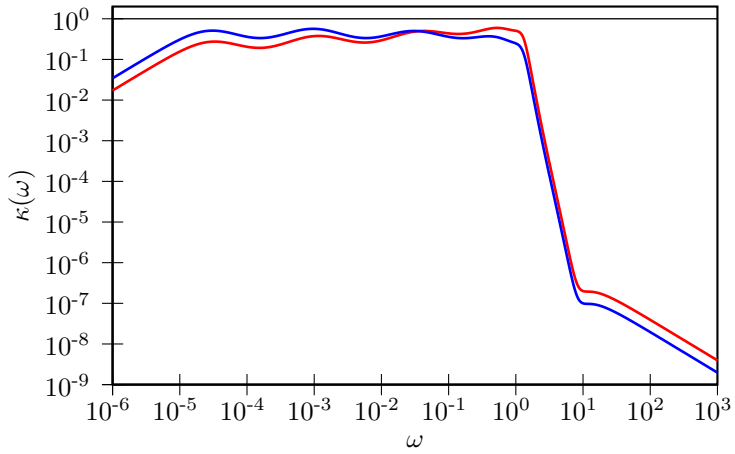
- **Drift matrix $\mathbf{A}_p$:**

$$\begin{pmatrix}
1.9726\times10^{-06} & 4.5333\times10^{-01} & 6.3097\times10^{-02} & 1.4150\times10^{-01} & 4.1795\times10^{-03} & 2.9873\times10^{-03} & 1.0457\times10^{-02} \\
-4.5333\times10^{-01} & 5.6569\times10^{-07} & -8.6149\times10^{-03} & 1.0342\times10^{+00} & -6.2043\times10^{-04} & 2.3693\times10^{-02} & -1.1036\times10^{-01} \\
-6.3097\times10^{-02} & 8.6149\times10^{-03} & 1.5216\times10^{-06} & 1.4954\times10^{-01} & -1.6489\times10^{-03} & 1.0894\times10^{-03} & 9.1573\times10^{-02} \\
-1.4151\times10^{-01} & -1.0342\times10^{+00} & -1.4954\times10^{-01} & 2.6555\times10^{-05} & -1.9726\times10^{-02} & -1.0068\times10^{-02} & 1.0148\times10^{+00} \\
-4.1846\times10^{-03} & 6.2043\times10^{-04} & 1.6489\times10^{-03} & 1.9726\times10^{-02} & 5.4587\times10^{-04} & -1.4023\times10^{-04} & -2.4499\times10^{-01} \\
-2.8291\times10^{-03} & -2.3693\times10^{-02} & -1.0894\times10^{-03} & 1.0068\times10^{-02} & 1.4023\times10^{-04} & 6.0700\times10^{-02} & -4.5566\times10^{-01} \\
-7.8880\times10^{-03} & 1.1036\times10^{-01} & -9.1573\times10^{-02} & -1.0148\times10^{+00} & 2.4499\times10^{-01} & 4.5566\times10^{-01} & 1.3355\times10^{+00}
\end{pmatrix}$$

- **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. $(mD/k_B T)$:** $8.6094 \times 10^{+03}$