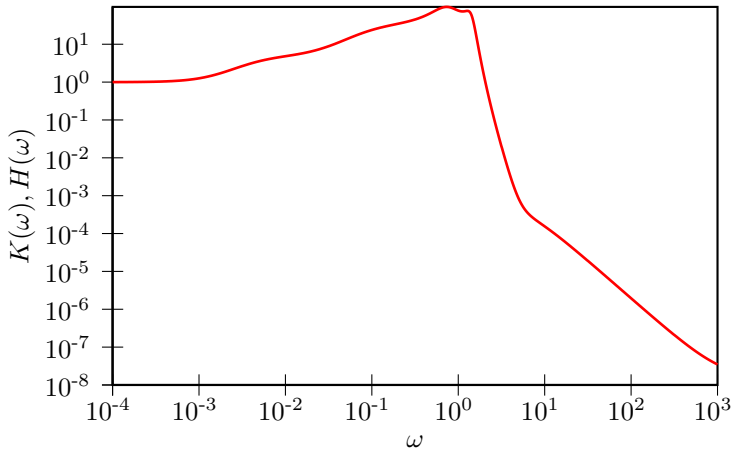
Generalized Langevin Equation analytics

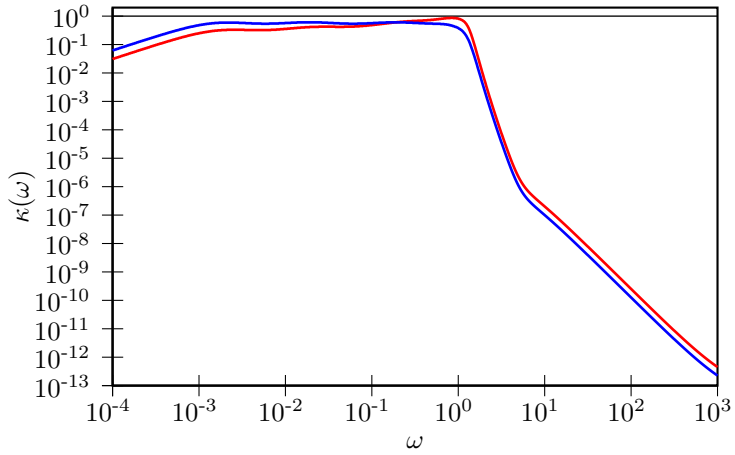
- **Drift matrix $\mathbf{A}_p$:**

$$\begin{pmatrix}
9.9996\times10^{-11} & 6.4518\times10^{-01} & 9.2950\times10^{-02} & -8.0344\times10^{-03} & 7.7804\times10^{-03} & 2.2726\times10^{-02} & -7.1095\times10^{-06} \\
-6.4518\times10^{-01} & 3.2906\times10^{-08} & 8.9447\times10^{-02} & 4.6398\times10^{-02} & 9.8108\times10^{-01} & -9.4038\times10^{-02} & -6.3877\times10^{-02} \\
-9.2950\times10^{-02} & -8.9447\times10^{-02} & 2.5727\times10^{-06} & 1.4414\times10^{-02} & 1.2515\times10^{-01} & 2.6863\times10^{-01} & 1.2936\times10^{-01} \\
8.0344\times10^{-03} & -4.6398\times10^{-02} & -1.4414\times10^{-02} & 1.1749\times10^{-04} & -1.3770\times10^{-02} & -2.0236\times10^{-01} & -3.1098\times10^{-02} \\
-7.7803\times10^{-03} & -9.8108\times10^{-01} & -1.2515\times10^{-01} & 1.3770\times10^{-02} & 5.1626\times10^{-03} & 7.6390\times10^{-01} & 1.6789\times10^{-02} \\
-2.2726\times10^{-02} & 9.4038\times10^{-02} & -2.6863\times10^{-01} & 2.0236\times10^{-01} & -7.6390\times10^{-01} & 2.4216\times10^{-01} & 1.0269\times10^{+00} \\
8.2231\times10^{-06} & 6.3877\times10^{-02} & -1.2936\times10^{-01} & 3.1098\times10^{-02} & -1.6789\times10^{-02} & -1.0269\times10^{+00} & 9.4857\times10^{-01}
\end{pmatrix}$$

- **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_BT):** $1.5517 \times 10^{+02}$