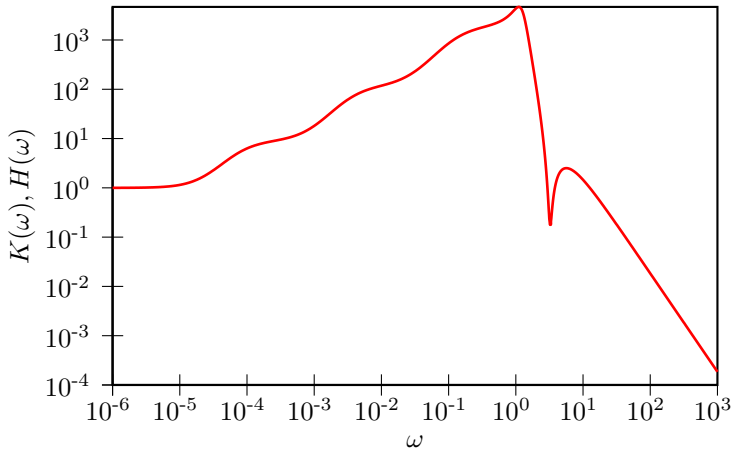
Generalized Langevin Equation analytics

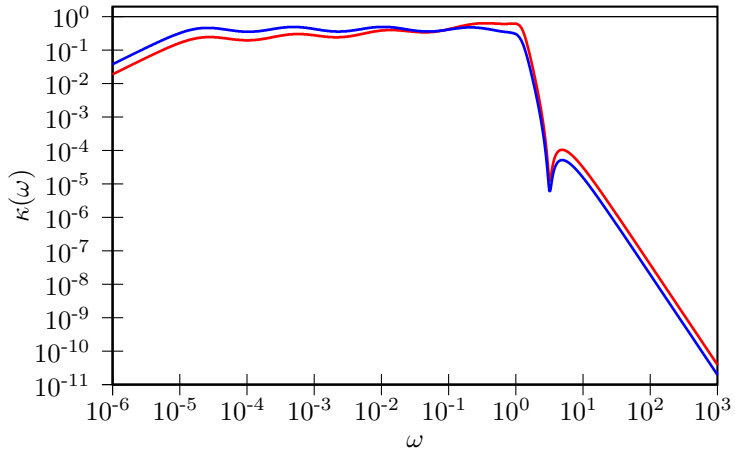
- **Drift matrix $\mathbf{A}_p$:**

$$\begin{pmatrix}
1.0000\times10^{-10} & 2.4702\times10^{-04} & 7.0731\times10^{-02} & 1.9662\times10^{-01} & 4.8860\times10^{-01} & 2.2188\times10^{-02} & 8.2427\times10^{-02} \\
-2.4700\times10^{-04} & 2.7323\times10^{-06} & 1.3522\times10^{-03} & 1.4745\times10^{-02} & -4.4741\times10^{-04} & -3.0100\times10^{-03} & -2.5018\times10^{-01} \\
-7.0731\times10^{-02} & -1.3522\times10^{-03} & 6.7206\times10^{-07} & 1.6131\times10^{-01} & 6.0429\times10^{-03} & 5.3826\times10^{-05} & 1.1126\times10^{-01} \\
-1.9662\times10^{-01} & -1.4745\times10^{-02} & -1.6131\times10^{-01} & 1.8718\times10^{-04} & -1.1056\times10^{+00} & -5.6594\times10^{-02} & 1.2005\times10^{+00} \\
-4.8860\times10^{-01} & 4.4741\times10^{-04} & -6.0429\times10^{-03} & 1.1056\times10^{+00} & 2.4220\times10^{-04} & 1.2166\times10^{-03} & -4.3630\times10^{-01} \\
-2.2188\times10^{-02} & 3.0100\times10^{-03} & -5.3826\times10^{-05} & 5.6594\times10^{-02} & -1.2166\times10^{-03} & 1.1033\times10^{-02} & -4.6523\times10^{-01} \\
-8.2410\times10^{-02} & 2.5018\times10^{-01} & -1.1126\times10^{-01} & -1.2005\times10^{+00} & 4.3630\times10^{-01} & 4.6523\times10^{-01} & 2.8645\times10^{+00}
\end{pmatrix}$$

- **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_BT):** $9.4490 \times 10^{+03}$