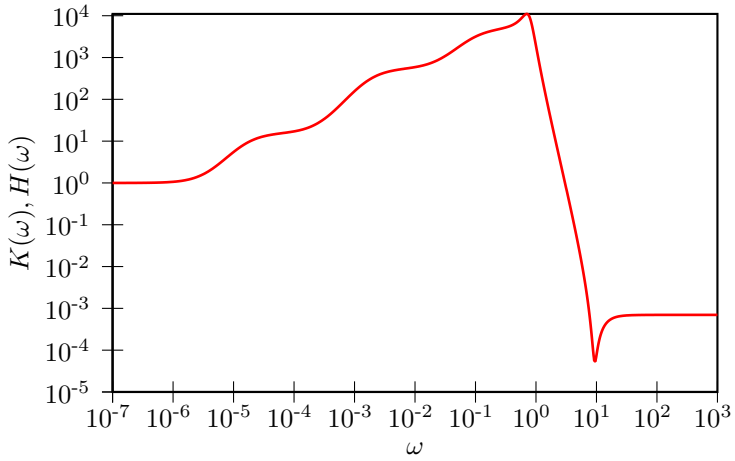
Generalized Langevin Equation analytics

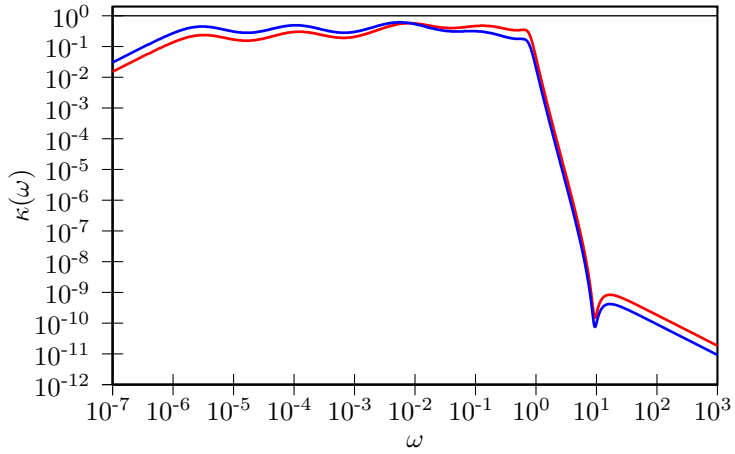
- **Drift matrix $\mathbf{A}_p$:**

$$\begin{pmatrix}
9.2126\times10^{-09} & 2.2793\times10^{-01} & 3.4539\times10^{-02} & 3.2908\times10^{-04} & -4.6593\times10^{-04} & 2.7305\times10^{-04} & 1.1709\times10^{-03} \\
-2.2793\times10^{-01} & 1.2061\times10^{-09} & 2.0223\times10^{-02} & -4.2358\times10^{-04} & 6.4183\times10^{-01} & -1.0987\times10^{-02} & 2.3263\times10^{-02} \\
-3.4539\times10^{-02} & -2.0223\times10^{-02} & 2.8957\times10^{-07} & 1.1361\times10^{-04} & 9.7020\times10^{-02} & -1.2806\times10^{-03} & 5.9764\times10^{-02} \\
-3.2907\times10^{-04} & 4.2358\times10^{-04} & -1.1361\times10^{-04} & 4.0418\times10^{-06} & -9.8918\times10^{-04} & -2.5785\times10^{-03} & -9.9309\times10^{-02} \\
4.6597\times10^{-04} & -6.4183\times10^{-01} & -9.7020\times10^{-02} & 9.8918\times10^{-04} & 5.0666\times10^{-06} & 7.2821\times10^{-03} & 6.6022\times10^{-01} \\
-2.7386\times10^{-04} & 1.0987\times10^{-02} & 1.2806\times10^{-03} & 2.5785\times10^{-03} & -7.2821\times10^{-03} & 1.1698\times10^{-02} & 2.3203\times10^{-01} \\
-9.7561\times10^{-04} & -2.3263\times10^{-02} & -5.9764\times10^{-02} & 9.9309\times10^{-02} & -6.6022\times10^{-01} & -2.3203\times10^{-01} & 1.1183\times10^{+00}
\end{pmatrix}$$

- **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):** $7.5894 \times 10^{+04}$