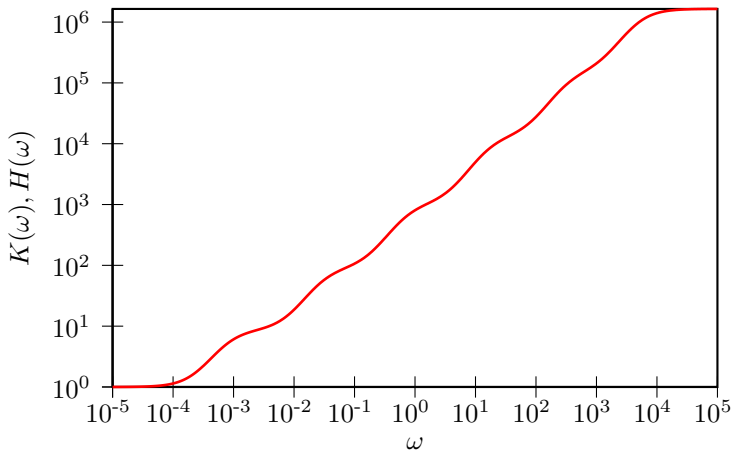
Generalized Langevin Equation analytics

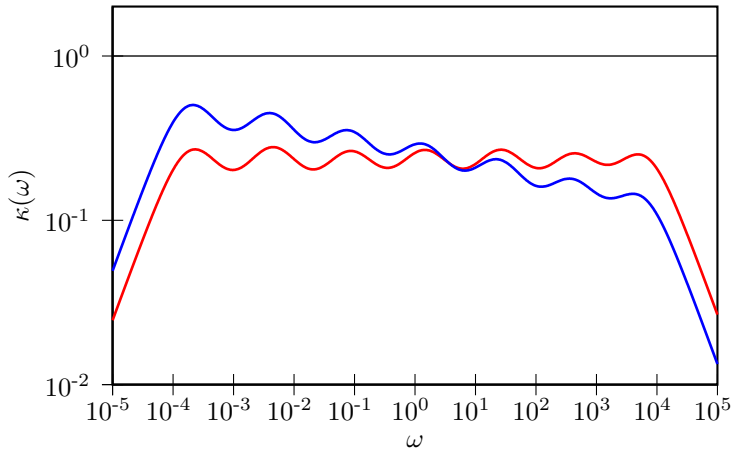
- **Drift matrix $\mathbf{A}_p$:**

$$\begin{pmatrix}
1.3377\times10^{+03} & 3.0902\times10^{-02} & 4.1429\times10^{-02} & -6.7025\times10^{-01} & 1.1808\times10^{+01} & 1.7770\times10^{+02} & 2.3246\times10^{+03} \\
-2.6616\times10^{-02} & 7.2148\times10^{-04} & 1.6033\times10^{-04} & 3.5952\times10^{-04} & -5.6838\times10^{-03} & -5.6503\times10^{-03} & -3.8477\times10^{-02} \\
4.1214\times10^{-02} & -1.6033\times10^{-04} & 2.6489\times10^{-02} & 9.8507\times10^{-03} & -1.3833\times10^{-03} & 2.3221\times10^{-02} & -3.4884\times10^{-03} \\
-7.0085\times10^{-01} & -3.5952\times10^{-04} & -9.8507\times10^{-03} & 6.3051\times10^{-01} & 6.3294\times10^{-03} & -1.1368\times10^{-03} & -2.6163\times10^{-03} \\
1.1837\times10^{+01} & 5.6838\times10^{-03} & 1.3833\times10^{-03} & -6.3294\times10^{-03} & 1.4522\times10^{+01} & -1.9202\times10^{-02} & 2.7912\times10^{-03} \\
1.7703\times10^{+02} & 5.6503\times10^{-03} & -2.3221\times10^{-02} & 1.1368\times10^{-03} & 1.9202\times10^{-02} & 2.8983\times10^{+02} & -4.4037\times10^{-01} \\
2.3221\times10^{+03} & 3.8477\times10^{-02} & 3.4884\times10^{-03} & 2.6163\times10^{-03} & -2.7912\times10^{-03} & 4.4037\times10^{-01} & 4.4292\times10^{+03}
\end{pmatrix}$$

- **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. $(mD/k_B T)$:** $1.2345 \times 10^{+03}$