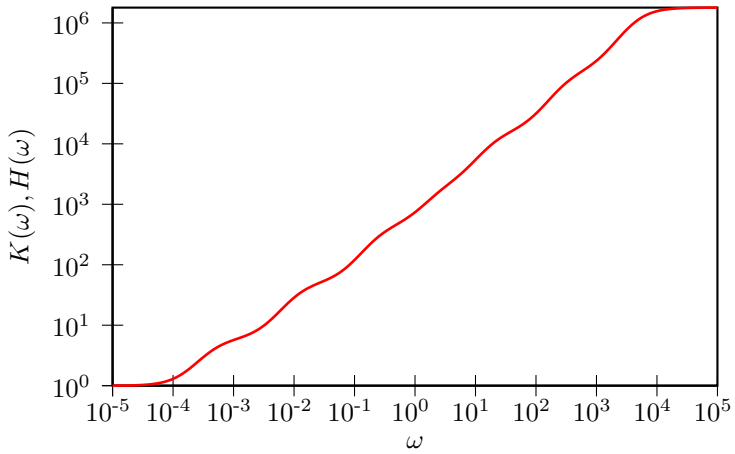
Generalized Langevin Equation analytics

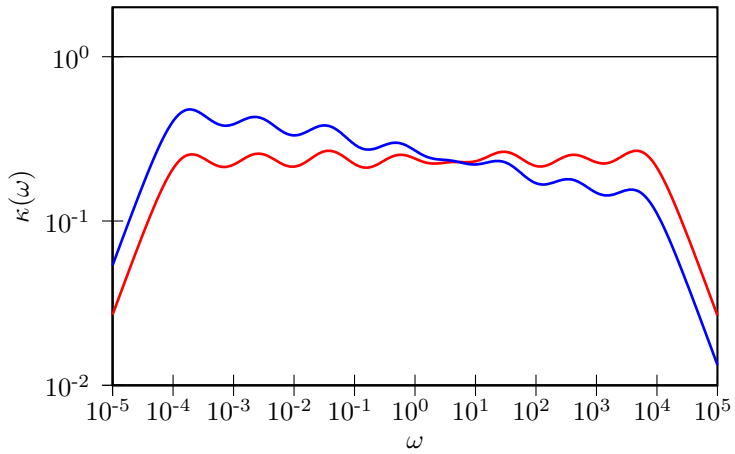
- **Drift matrix $\mathbf{A}_p$:**

$$\begin{pmatrix}
1.3360\times10^{+03} & 8.3270\times10^{-04} & 1.8504\times10^{-02} & 2.5511\times10^{-01} & -1.6331\times10^{+00} & -1.3343\times10^{+01} & 1.6799\times10^{+02} & 2.2205\times10^{+03} & 6.27 \\
1.2014\times10^{-03} & 3.2557\times10^{-04} & 7.4798\times10^{-04} & 9.6220\times10^{-04} & 4.2447\times10^{-03} & 1.6956\times10^{-03} & 3.2855\times10^{-03} & 6.7479\times10^{-04} & -1.43 \\
1.8338\times10^{-02} & -7.4798\times10^{-04} & 1.0200\times10^{-02} & 1.4247\times10^{-03} & -1.3960\times10^{-03} & 1.5137\times10^{-03} & -1.2000\times10^{-03} & 2.5466\times10^{-03} & -6.34 \\
2.5052\times10^{-01} & -9.6220\times10^{-04} & -1.4247\times10^{-03} & 2.2065\times10^{-01} & 2.2645\times10^{-03} & 1.3847\times10^{-03} & 4.3882\times10^{-03} & -4.0794\times10^{-04} & 8.96 \\
-1.6255\times10^{+00} & -4.2447\times10^{-03} & 1.3960\times10^{-03} & -2.2645\times10^{-03} & 2.2181\times10^{+00} & 1.2499\times10^{-03} & 2.4927\times10^{-03} & 1.1170\times10^{-03} & 3.14 \\
-1.3416\times10^{+01} & -1.6956\times10^{-03} & -1.5137\times10^{-03} & -1.3847\times10^{-03} & -1.2499\times10^{-03} & 1.7722\times10^{+01} & 3.8885\times10^{-03} & -4.4198\times10^{-04} & 1.01 \\
1.6818\times10^{+02} & -3.2855\times10^{-03} & 1.2000\times10^{-03} & -4.3882\times10^{-03} & -2.4927\times10^{-03} & -3.8885\times10^{-03} & 2.7918\times10^{+02} & 8.3753\times10^{-04} & 2.17 \\
2.2209\times10^{+03} & -6.7479\times10^{-04} & -2.5466\times10^{-03} & 4.0794\times10^{-04} & -1.1170\times10^{-03} & 4.4198\times10^{-04} & -8.3753\times10^{-04} & 4.0433\times10^{+03} & 3.46 \\
6.0924\times10^{+02} & 1.4386\times10^{-02} & 6.3464\times10^{-03} & -8.9664\times10^{-01} & -3.1486\times10^{-01} & -1.0109\times10^{+01} & -2.1761\times10^{+01} & -3.4609\times10^{+00} & 1.08
\end{pmatrix}$$

- **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. $(mD/k_B T)$:** $1.3492 \times 10^{+03}$