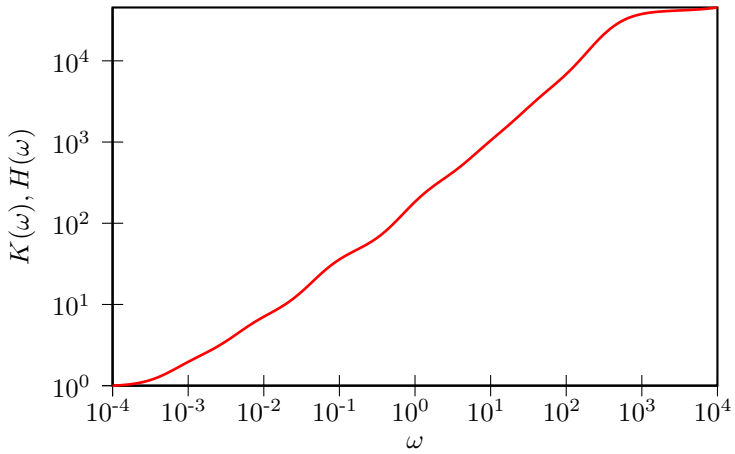
Generalized Langevin Equation analytics

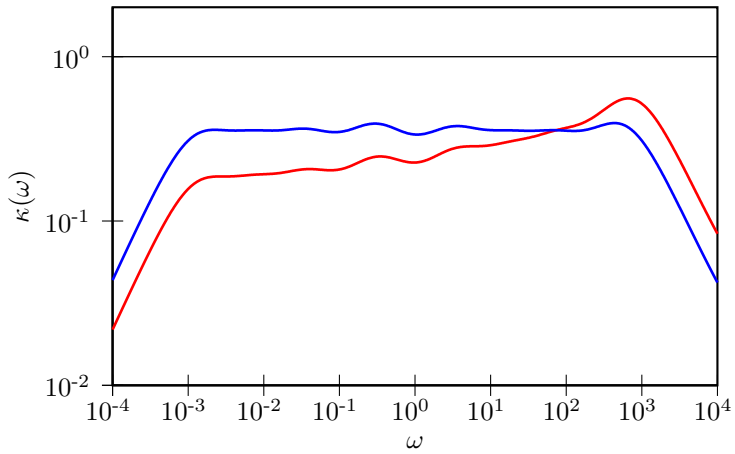
- **Drift matrix $\mathbf{A}_p$:**

$$\begin{pmatrix}
5.5488\times10^{+02} & 5.0695\times10^{-03} & 2.7679\times10^{-02} & 1.6327\times10^{-01} & 1.6355\times10^{+00} & -7.9396\times10^{+00} & -3.5614\times10^{+01} & 3.4756\times10^{+02} & 1.79 \\
-8.1116\times10^{-03} & 2.6883\times10^{-04} & 2.6062\times10^{-04} & -5.6750\times10^{-03} & -1.8055\times10^{-02} & -1.3899\times10^{-02} & -4.7594\times10^{-03} & -4.9320\times10^{-03} & 2.29 \\
1.7588\times10^{-03} & -2.6062\times10^{-04} & 3.9781\times10^{-03} & -1.0019\times10^{-02} & -1.5013\times10^{-02} & -1.2663\times10^{-02} & -1.1717\times10^{-02} & 1.4592\times10^{-02} & -4.61 \\
1.5571\times10^{-01} & 5.6750\times10^{-03} & 1.0019\times10^{-02} & 7.0918\times10^{-02} & -6.9377\times10^{-03} & -9.9482\times10^{-03} & -1.1473\times10^{-02} & -2.2038\times10^{-02} & -6.08 \\
1.7264\times10^{+00} & 1.8055\times10^{-02} & 1.5013\times10^{-02} & 6.9377\times10^{-03} & 1.1043\times10^{+00} & 1.4167\times10^{-02} & -3.3780\times10^{-02} & -2.2614\times10^{-03} & -2.30 \\
-7.9369\times10^{+00} & 1.3899\times10^{-02} & 1.2663\times10^{-02} & 9.9482\times10^{-03} & -1.4167\times10^{-02} & 8.0981\times10^{+00} & -1.2275\times10^{-02} & -3.9876\times10^{-03} & -9.90 \\
-3.5394\times10^{+01} & 4.7594\times10^{-03} & 1.1717\times10^{-02} & 1.1473\times10^{-02} & 3.3780\times10^{-02} & 1.2275\times10^{-02} & 4.0388\times10^{+01} & -2.4062\times10^{-02} & 1.57 \\
3.4783\times10^{+02} & 4.9320\times10^{-03} & -1.4592\times10^{-02} & 2.2038\times10^{-02} & 2.2614\times10^{-03} & 3.9876\times10^{-03} & 2.4062\times10^{-02} & 3.4826\times10^{+02} & 7.56 \\
1.7871\times10^{+03} & -2.2949\times10^{-01} & 4.6104\times10^{-03} & 6.0801\times10^{-02} & 2.3021\times10^{-01} & 9.9066\times10^{-03} & -1.5762\times10^{-01} & -7.5659\times10^{-02} & 1.93
\end{pmatrix}$$

- **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. ($mD/k_B T$):** $1.0961 \times 10^{+02}$