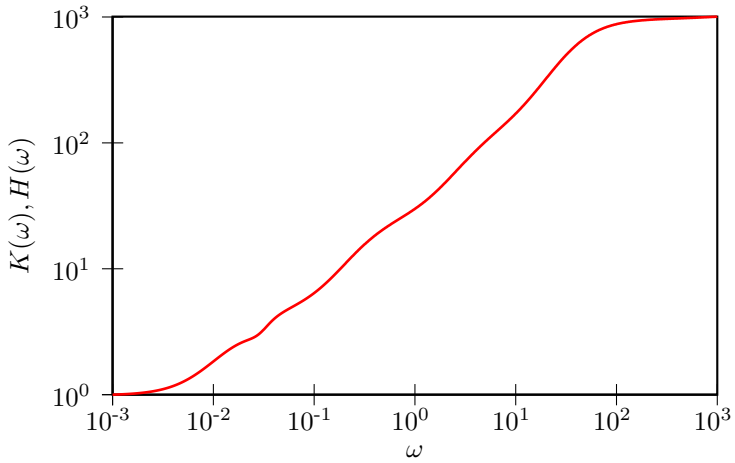
Generalized Langevin Equation analytics

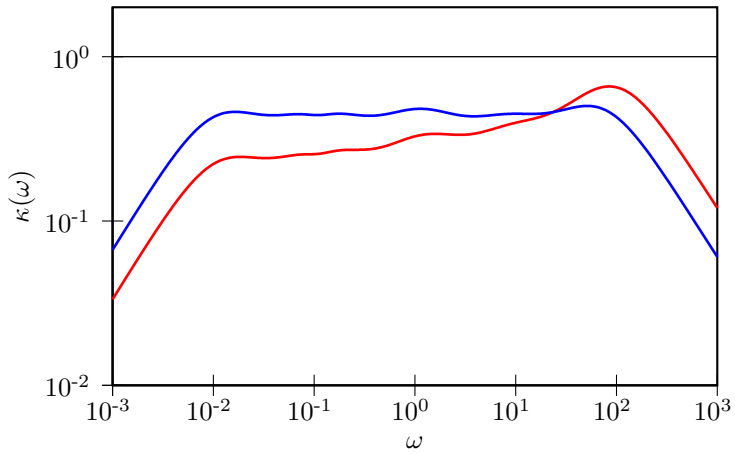
- **Drift matrix $\mathbf{A}_p$:**

$$\begin{pmatrix}
7.1357\times10^{+01} & 4.9811\times10^{-02} & 4.4885\times10^{-02} & 6.5657\times10^{-02} & 6.0828\times10^{-01} & -4.9060\times10^{+00} & 4.2893\times10^{+01} & -6.6174\times10^{+01} & -2.86 \\
-5.3532\times10^{-02} & 1.1694\times10^{-03} & 1.6308\times10^{-02} & -2.4468\times10^{-02} & 1.1945\times10^{-03} & 2.7216\times10^{-03} & -1.1429\times10^{-02} & -3.8433\times10^{-02} & 1.26 \\
-1.0158\times10^{-02} & -1.6308\times10^{-02} & 1.0738\times10^{-02} & 9.5601\times10^{-03} & -1.1425\times10^{-02} & -9.6611\times10^{-03} & -2.0483\times10^{-02} & -2.0367\times10^{-01} & -1.98 \\
8.1890\times10^{-02} & 2.4468\times10^{-02} & -9.5601\times10^{-03} & 2.7942\times10^{-02} & 1.1160\times10^{-02} & 3.2133\times10^{-03} & -1.6571\times10^{-02} & 1.0250\times10^{-01} & -2.77 \\
5.8127\times10^{-01} & -1.1945\times10^{-03} & 1.1425\times10^{-02} & -1.1160\times10^{-02} & 3.0001\times10^{-01} & -3.6676\times10^{-02} & -5.3608\times10^{-03} & -1.1852\times10^{+00} & 2.56 \\
-4.1763\times10^{+00} & -2.7216\times10^{-03} & 9.6611\times10^{-03} & -3.2133\times10^{-03} & 3.6676\times10^{-02} & 3.6304\times10^{+00} & -8.9869\times10^{-03} & -1.1285\times10^{+00} & 1.62 \\
4.2029\times10^{+01} & 1.1429\times10^{-02} & 2.0483\times10^{-02} & 1.6571\times10^{-02} & 5.3608\times10^{-03} & 8.9869\times10^{-03} & 3.5066\times10^{+01} & -3.4271\times10^{-01} & 2.77 \\
-5.9162\times10^{+01} & 3.8433\times10^{-02} & 2.0367\times10^{-01} & -1.0250\times10^{-01} & 1.1852\times10^{+00} & 1.1285\times10^{+00} & 3.4271\times10^{-01} & 9.4945\times10^{+02} & 5.51 \\
-2.9999\times10^{+02} & -1.2617\times10^{-01} & 1.9893\times10^{-01} & 2.7704\times10^{-02} & -2.5608\times10^{+00} & -1.6246\times10^{+00} & -2.7736\times10^{+00} & -5.5124\times10^{-01} & 9.85
\end{pmatrix}$$

- **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. ($mD/k_B T$):** $1.6776 \times 10^{+01}$