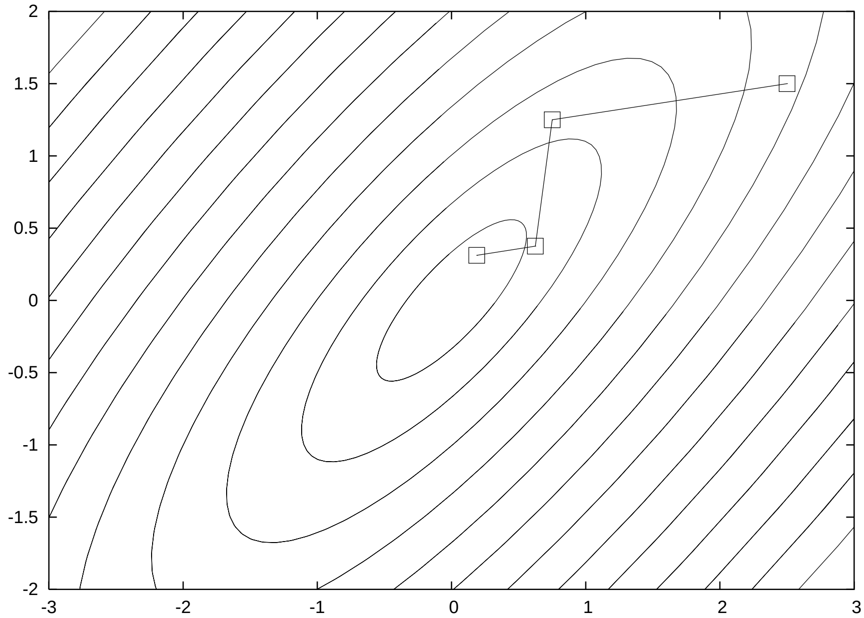
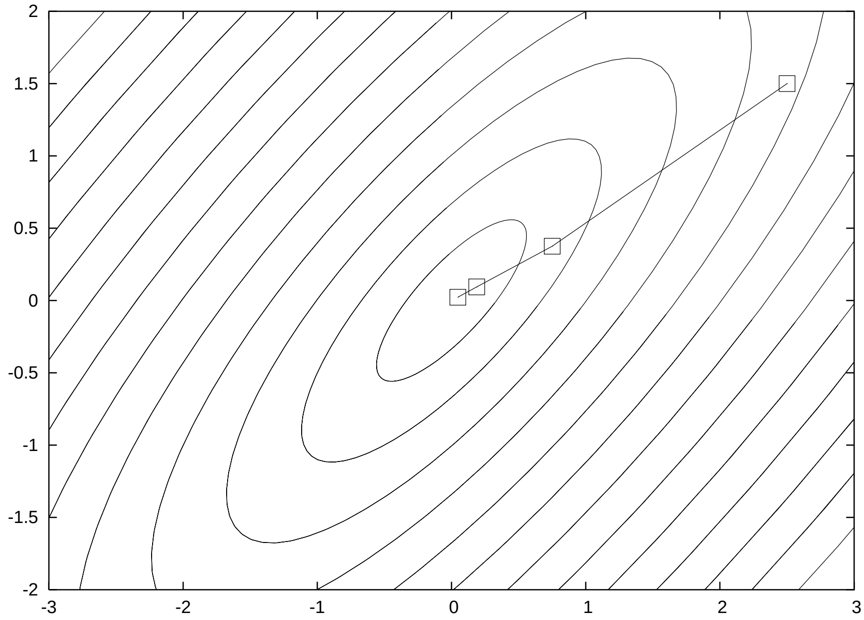
Prof. Dr. P. Kunkel
Fakultät für Mathematik und Informatik
Universität Leipzig

WS 2022/23

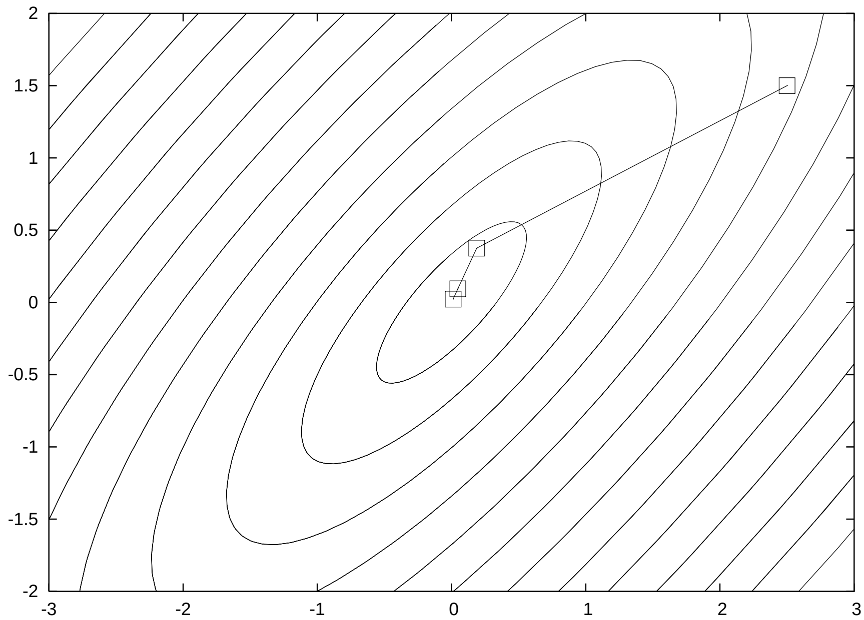
Numerische lineare Algebra



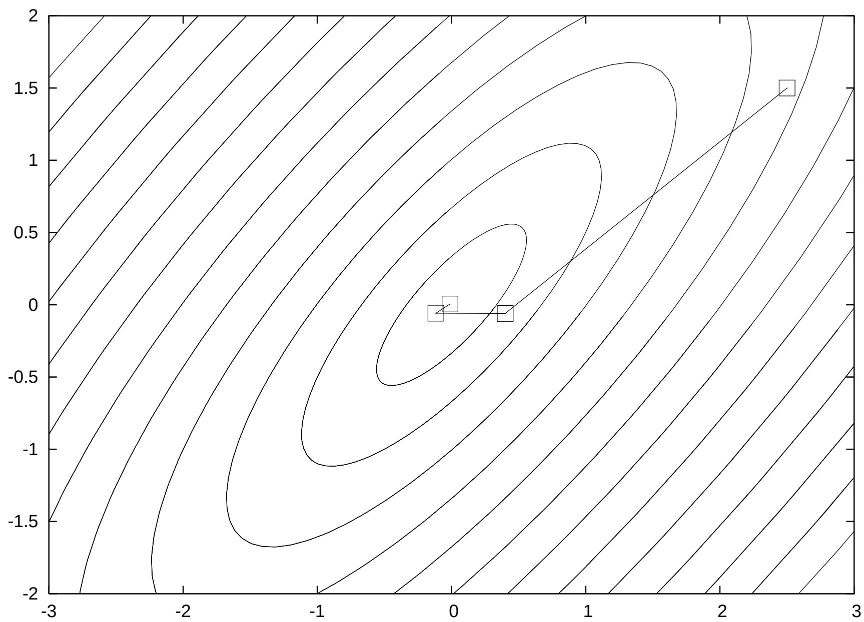
Jacobi-Verfahren $\varrho = \texttt{0.500}$



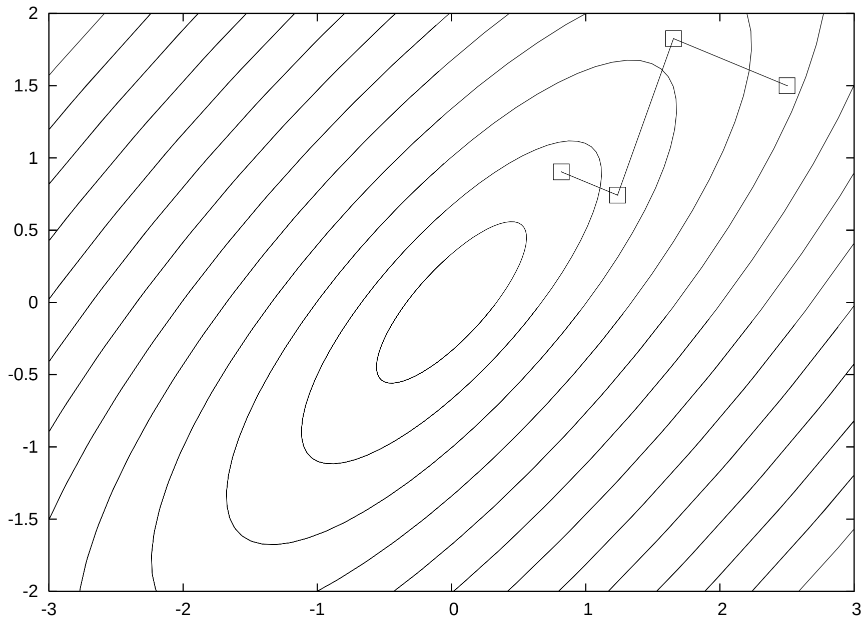
Gauß-Seidel-Verfahren $\varrho = \texttt{0.250}$



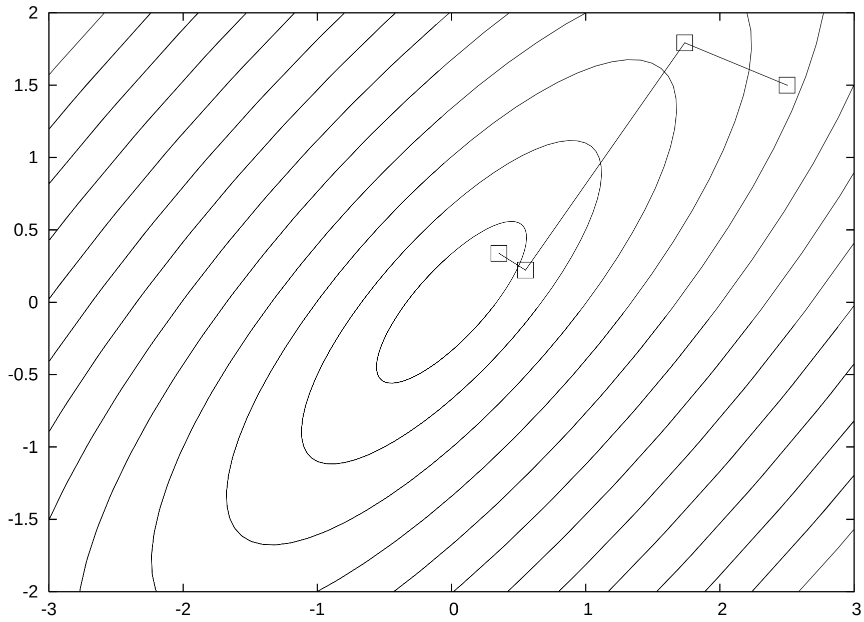
Symmetrisches Gauß-Seidel-Verfahren $\varrho = \texttt{0.250}$



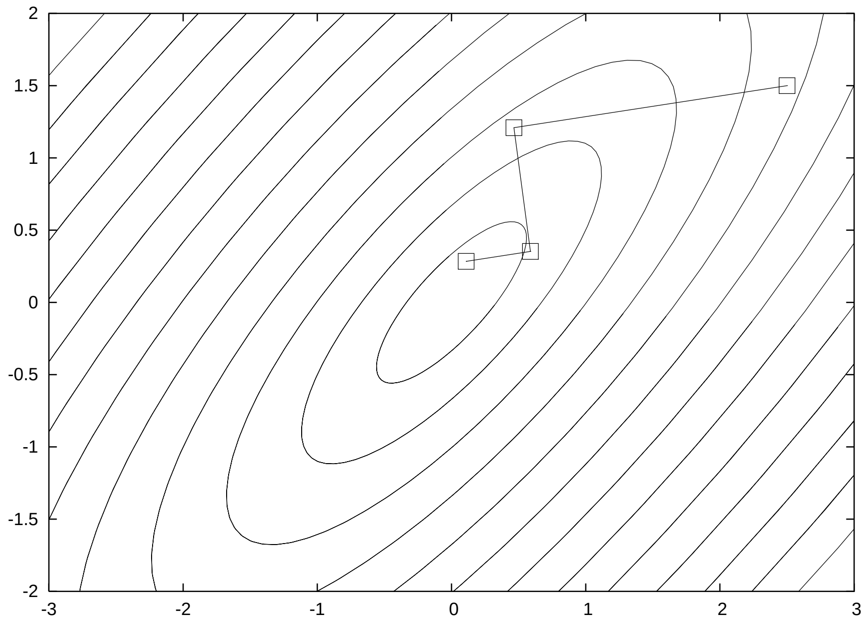
SOR-Verfahren $\varrho = \texttt{0.200}$, $\omega = \texttt{1.200}$



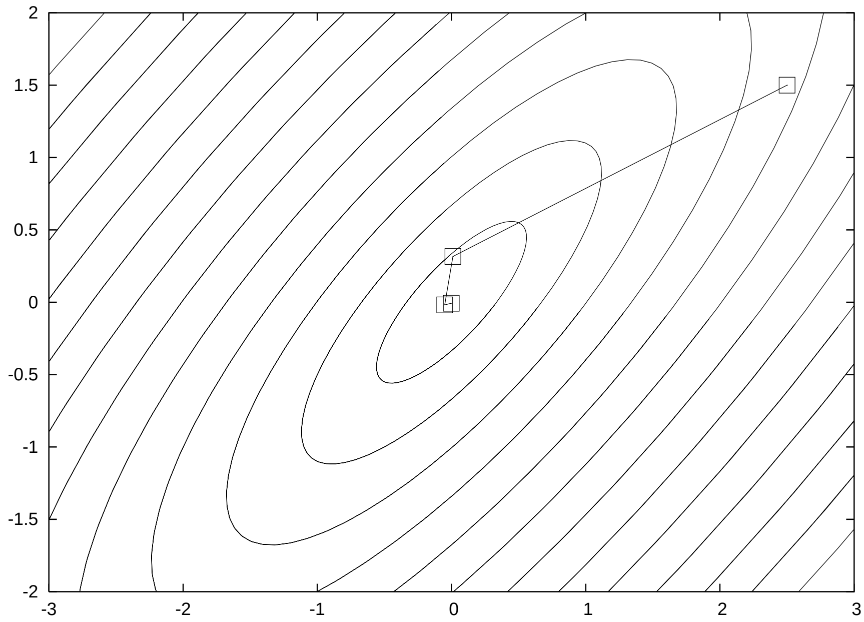
Gradienten-Verfahren $\varrho = \texttt{0.703}$



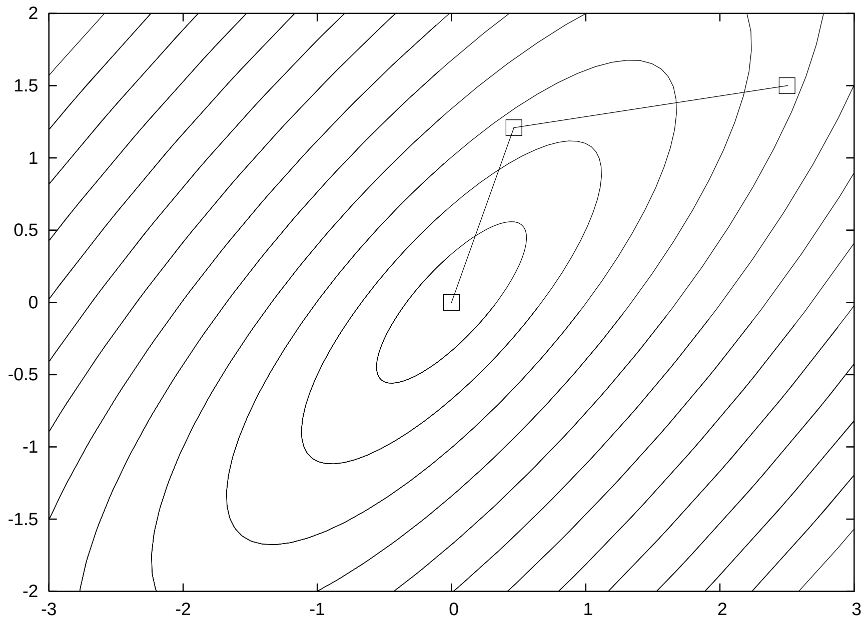
Gedämpftes Gradienten-Verfahren $\varrho = \texttt{0.492}$, $\alpha = \texttt{0.900}$



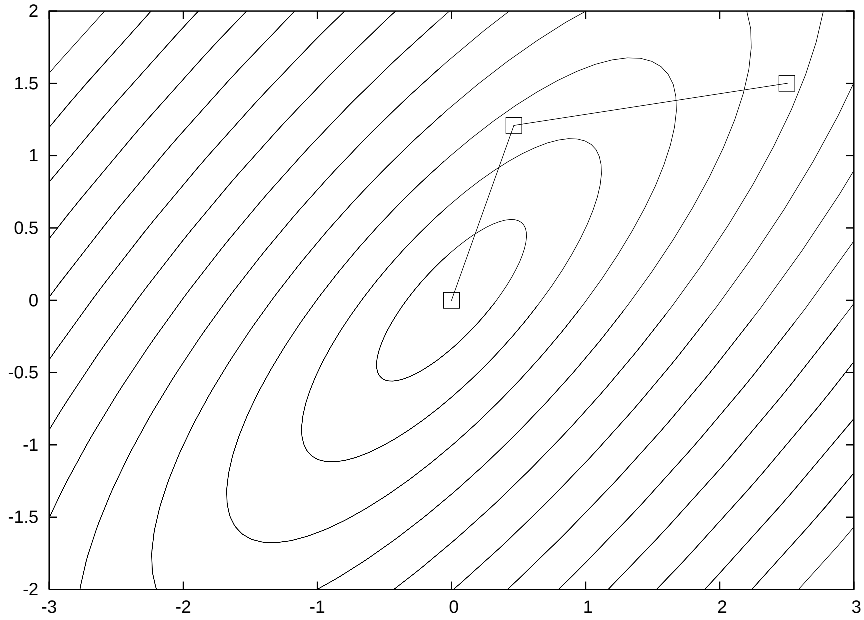
Gradienten-Verfahren bezüglich der Energie-Norm $\varrho = \texttt{0.485}$



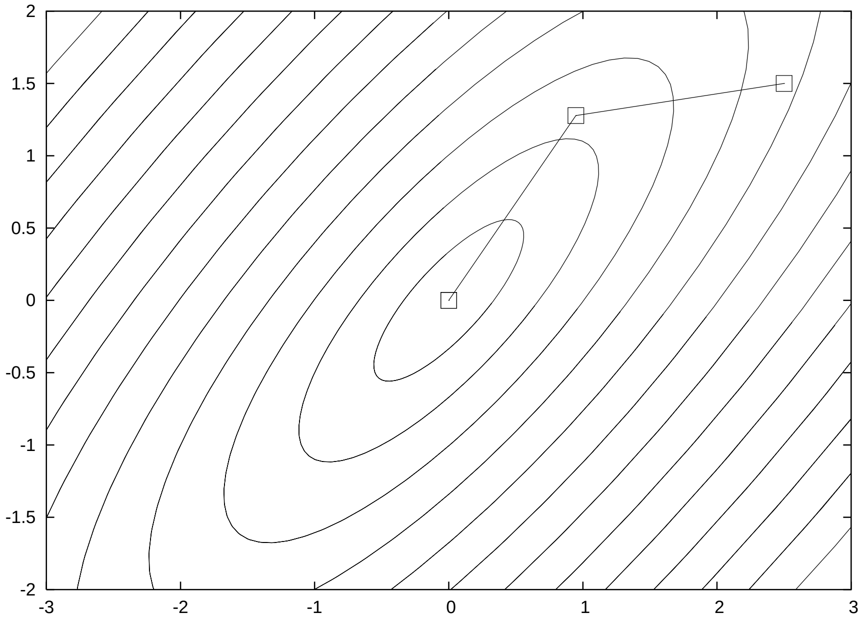
ADI-Verfahren $\varrho = \texttt{0.143}$, $\gamma = \texttt{1.000}$



CG-Verfahren $\varrho = \texttt{0.000}$



Arnoldi-Verfahren $\varrho = \texttt{0.000}$



GMRES-Verfahren $\varrho = \mathtt{0.000}$

Abbildung 2

Typisches Verhalten von iterativen Verfahren zur Lösung von $Ax = b$