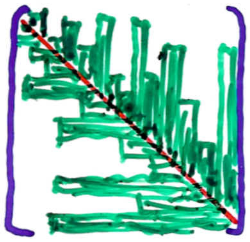
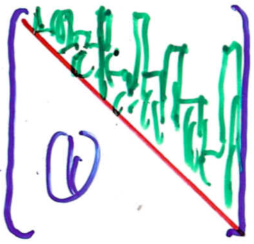
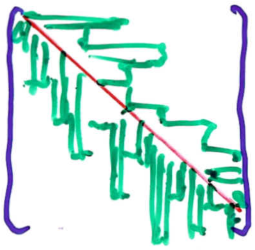
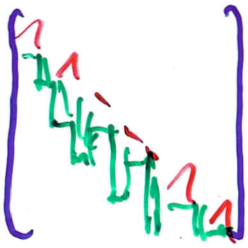
Profilmatrizen:

$A =$  $= LU =$  

$A =$  $= \tilde{U}\tilde{L} =$  

Profil überträgt sich <u>entsprechend</u> auf Faktoris.!

Symmetrische Matrizen ($A = A^T$): LDL^T

$\Rightarrow$ LDL^T - Zerlegung

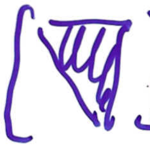
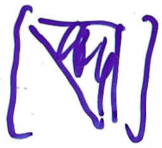
$$A = L \underbrace{D L^T}_{= U} = \tilde{U} \underbrace{\tilde{D} \tilde{U}^T}_{= \tilde{L}}$$

mit $D = \begin{bmatrix} \ddots \end{bmatrix}$, $\tilde{D} = \begin{bmatrix} \ddots \end{bmatrix}$ Diagonalmatrizen

$$\tilde{U} = \begin{bmatrix} 1 & \cdots \\ 0 & 1 \end{bmatrix}$$

SPD - Matrizen ($A = A^T > 0$):

$\Rightarrow$ Cholesky - Zerlegung

$A = U^T U = \tilde{U} \tilde{U}^T$ mit $U =$ , $\tilde{U} =$ 

Cholesky - Zerlegung ($A = S^T S = R R^T$)
siehe Skriptum S. 148 - 154.