Hauptachsentransformatioh

$$A := A_r - \lambda E$$

$$AX = (A_r - \lambda E)X = 0$$

$$|A_r - \lambda E| = 0, \qquad \lambda_1, \lambda_2, \ldots, \lambda_n$$

Sturm-Liouvillesches Randwertproblem

$$(13) \quad L := L_r + \lambda w(x), \qquad w(x) > 0.$$

$$(14) \quad L_r := d/dx(p(x)\, d/dx) + q(x)$$

$$(15) \quad L\,\phi_n(x) = (L_r + \lambda_n w(x))\phi_n(x) = 0.$$

$$a\phi_n + b\, \partial\phi_n/\partial n = 0.$$

$$\lambda_1, \lambda_2, \ldots, \lambda_n, \ldots$$