

Numerische Optimierung

Resultat 3

Das Programm NLSCON liefert (auszugsweise) die folgende Ausgabe:

```
N L S C O N ***** V e r s i o n 2 . 3 . 2 ***  
  
Gauss-Newton-Method for the solution of nonlinear least squares problems  
  
Number of parameters to be estimated (N) :      5  
Number of data to fitted, e.g. observations (MFIT) :    52  
Number of equality constraints (MCON) :      0  
  
Prescribed relative precision (RTOL) :    0.10D-04  
  
The Jacobian is supplied by a user subroutine  
Automatic row scaling of the Jacobian is allowed  
  
Rank-1 updates are inhibited  
Problem is specified as being highly nonlinear  
Bounded damping strategy is off  
Maximum permitted number of iteration steps :      50  
  
Internal parameters:  
  
Starting value for damping factor FCSTART =  0.10D-01  
Minimum allowed damping factor FCMIN =  0.10D-01  
Rank-1 updates decision parameter SIGMA =  0.10D+04  
Initial Jacobian pseudo-rank IRANK =      5  
Maximum permitted subcondition COND =  0.90D+16
```

```

*****
It      Normf      Normx      Damp.Fct.  New      Rank
0      0.9635305D-01  0.360D+01  0.010      0        5
1      0.9568278D-01  0.330D+01  0.049      0        5
2      0.1049238D+00  0.308D-01  1.000      0        4
3      0.9439976D-01  0.280D+01  0.017      0        5
4      0.9439507D-01  0.274D+01  0.062      0        5
5      0.9505712D-01  0.163D+01  0.176      0        5
6      0.9998426D-01  0.839D-01  0.647      0        5
7      0.9405202D-01  0.907D-02  1.000      0        5
8      0.9404549D-01  0.477D-02  1.000      0        5
9      0.9404541D-01  0.271D-02  1.000      0        5
10     0.9404538D-01  * 0.395D-05  1.000      0        5
11     0.9404538D-01  * 0.395D-05  1.000      0        5
*****

```

Solution of nonlinear least squares problem obtained
within 11 iteration steps

Incompatibility factor kappa 0.576D+00

Achieved relative accuracy 0.367D-02

Subcondition (1, 5) of least squares part 0.494D+03

Sensitivity (lsq) 0.323D+02

Solution data:

```

0.9694294352D+00  0.2928843742D+01  0.2451052347D+00
0.4798490729D-01  0.7252597319D+01

```