

SCILAB - Kommandos und Keywords (Auswahl)

Download der Freeware

<http://www.scilab.org/products/scilab/download>

Einführungen

www.fh-htwchur.ch/uploads/media/Arbeiten_mit_Scilab_und_Scicos_v1_01.pdf

www.scilab.org/support/documentation/tutorials

Dort: [introscilab.pdf](#)

www.scilab.org/news/events/20100308

Dort: [livret_lycees_2010.pdf](#)

deutsch

englisch

französisch

Kommandos und Schlüsselwörter

[...] — matrix

[...]' — transposed matrix

, blank ; — matrix element separators

[1,3.2,6,sin(0.3)] — row vector, elements separated by comma

[1 3.2 6 sin(0.3)] — same vector, elements separated by blanks

[1;3.2;6;sin(0.3)] — same vector but transposed (column vector)

[] — empty matrix (e.g. to delete elements)

\$ — highest index of a matrix

// — rest of line is treated as comment information

0:0.25:10 — equally spaced row vector

%pi, %i, %e, %eps, %t, %f, %inf, %nan — predefined constants

A, a, ..., Z, z, %, _, #, !, \$, ? — variable name elements, case sensitive, type `help('names')`

abort — interrupt evaluation.

ans — answer

argn — Returns the number of input/output arguments in a function call

break — keyword to interrupt loops

case — keyword used in select

clear — kills variables

comments — A sequence of two consecutives slashes //

do — language keyword for loops

else — keyword in if-then-else

elseif — keyword in if-then-else

errcatch — error trapping, useful for debugging purposes

evstr — evaluation of expressions

exists — checks variable existence

Basics

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SCILAB - Kommandos und Keywords (Auswahl)

for — language keyword for loops	Scilab
format — number printing and display format	Scilab
global — Define global variable	Scilab
if then else — conditional execution	Scilab
matrix — reshape a vector or a matrix to a different size matrix	Scilab
mode — select a mode in exec file	Scilab
null — delete an element in a list	Scilab
pause — pause mode, invoke keyboard, extremely useful for debugging purposes.	Scilab
poly — polynomial definition	Scilab
resume — return or resume execution and copy some local variables	Scilab
return — return or resume execution and copy some local variables	Scilab
then — keyword in if-then-else	Scilab
varn — symbolic variable of a polynomial	Scilab
what — list the Scilab primitives	Scilab
while — while keyword	Scilab
who — listing of variables	Scilab
whos — listing of variables in long form	Scilab
integrate — integration of an expression by quadrature	Differential Equations, Integration
intg — definite integral	Differential Equations, Integration
ode — ordinary differential equation solver	Differential Equations, Integration
abs — absolute value, magnitude	Elementary Functions
acos — element wise cosine inverse	Elementary Functions
acosh — hyperbolic cosine inverse	Elementary Functions
acot — computes the element-wise inverse cotangent of the argument.	Elementary Functions
acoth — element wise hyperbolic cotangent inverse.	Elementary Functions
& — logical and operator	Elementary Functions
asin — sine inverse	Elementary Functions
asinh — hyperbolic sine inverse	Elementary Functions
atan — 2-quadrant and 4-quadrant inverse tangent	Elementary Functions
atanh — hyperbolic tangent inverse	Elementary Functions
binomial — binomial distribution probabilities	Elementary Functions

SCILAB - Kommandos und Keywords (Auswahl)

execstr — execute Scilab code in strings
function — opens a function definition
varargin — variable numbers of arguments in an input argument list
varargout — variable numbers of arguments in an output argument list
nargin — number of arguments in an input argument list

chdir — changes Scilab current directory

find — find indices of boolean vector or matrix true elements
bool2s — convert boolean matrix to a zero one matrix.

axis_properties — description of the axis entity properties
bar — bar histogram
captions — draw graph captions
clf — clear or reset the current graphic figure (window) to default values
color — returns the color id of a color
colormap — using colormaps
contour — level curves on a 3D surface
contour2d — level curves of a surface on a 2D plot
delete — delete a graphic entity and its children.
drawlater — makes axes children invisible.
drawnow — draw hidden graphics entities.
figure_properties — description of the graphics figure entity properties
gca — Return handle of current axes.
gce — Get current entity handle.
gcf — Return handle of current graphic window.
getcolor — opens a dialog to show colors in the current colormap
graphics_entities — description of the graphics entities data structures
hist3d — 3D representation of a histogram
histplot — plot a histogram
isoview — set scales for isometric plot (do not change the size of the window)
legend — draw graph legend
LineSpec — to quickly customize the lines appearance in plot(...)

Functions
Functions
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Functions

Files : Input/Output functions

Boolean
Boolean

Graphics Library
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SCILAB - Kommandos und Keywords (Auswahl)

param3d — 3D plot of a parametric curve	Graphics Library
plot — 2D plot	Graphics Library
plot2d — 2D plot	Graphics Library
plot3d — 3D plot of a surface	Graphics Library
polarplot — Plot polar coordinates	Graphics Library
polyline_properties — description of the Polyline entity properties	Graphics Library
rotate — rotation of a set of points	Graphics Library
show_pixmap — send the pixmap buffer to the screen (animation)	Graphics Library
subplot — divide a graphics window into a matrix of sub-windows	Graphics Library
surf — 3D surface plot	Graphics Library
title — display a title on a graphic window	Graphics Library
xarrows — draw a set of arrows	Graphics Library
xdel — delete a graphics window	Graphics Library
xgrid — add a grid on a 2D plot	Graphics Library
xrect — draw a rectangle	Graphics Library
xstring — draw strings	Graphics Library
xtitle — add titles on a graphics window	Graphics Library
list — Scilab object and list function definition	Data Structures
struct — create a struct	Data Structures
clc — Clear Command Window	Shell
lines — rows and columns used for display	Shell
completion — returns words that start with the text you pass as parameter.	Completion
interp — cubic spline evaluation function	Interpolation
interp1 — one_dimension interpolation function	Interpolation
splin — cubic spline interpolation	Interpolation
halt — stop execution	Input/Output functions
input — prompt for user input	Input/Output functions
load — Load a saved variable or a serie of variables	Input/Output functions

SCILAB - Kommandos und Keywords (Auswahl)

save — Save a variable or a serie of variables in a binary file
getcolor — opens a dialog to show colors in the current colormap

disp — displays variables
printf — Emulator of C language printf function

det — determinant
expm — square matrix exponential
inv — matrix inverse
linsolve — linear equation solver
lsq — linear least square problems.
pinv — pseudoinverse
spec — eigenvalues of matrices and pencils

fminsearch —Unconstr. min. of given function with the Nelder-Mead algorithm.
optimset — Configures and returns an optimization data structure.
NDcost — generic external for optim computing gradient using finite differences
fsolve — find a zero of a system of n nonlinear functions
leastsq — Solves non-linear least squares problems
optim — non-linear optimization routine

clean — cleans matrices (round to zero small entries)
coeff — coefficients of matrix polynomial
derivat — rational matrix derivative
horner — polynomial/rational evaluation
roots — roots of polynomials

besseli — Modified Bessel functions of the first kind (I sub alpha).
beta — beta function
erf — The error function.
gamma — The gamma function.

blanks — Create string of blank characters

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Input/Output functions
Input/Output functions

Output functions
Output functions

Linear algebra
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Linear algebra

Optimisation
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Polynomials
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Special functions
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Special functions

Strings

SCILAB - Kommandos und Keywords (Auswahl)

grep — find matches of a string in a vector of strings	Strings
length — length of object	Strings
part — extraction of strings	Strings
strcat — concatenate character strings	Strings
strcmp — compare character strings	Strings
string — conversion to string	Strings
strsplit — split a string into a vector of strings	Strings
strsplit — split a string into a vector of strings	Time and Date
clock — Return current time as date vector	Time and Date
date — Current date as date string	Time and Date
datenum — Convert to serial date number	Time and Date
datevec — Date components	Time and Date
etime — Elapsed time	Time and Date
getdate — get date and time information	Time and Date
now — Return current date and time	Time and Date
sleep — suspend Scilab	Time and Date
tic — start a stopwatch timer	Time and Date
toc — Read the stopwatch timer	Time and Date
weekday — Return day of week	Time and Date
cdfbin — cumulative distribution function Binomial distribution	Statistics
cdfnor — cumulative distribution function normal distribution	Statistics
cdfpoi — cumulative distribution function poisson distribution	Statistics
cdft — cumulative distribution function Student's T distribution	Statistics
orrel — correlation of two variables	Statistics
covar — covariance of two variables	Statistics
mean — mean (row mean, column mean) of vector/matrix entries	Statistics
median — median (row median, column median,...) of vector/matrix/array entries	Statistics
moment — non central moments of all orders	Statistics
regress — regression coefficients of two variables	Statistics
st_deviation — standard deviation (row or column-wise) of vector/matrix entries	Statistics
variance — variance of the values of a vector or matrix	Statistics

SCILAB - Kommandos und Keywords (Auswahl)

read_csv — Read comma-separated value file (e.g. Excel file *.xls)

apropos — searches keywords in Scilab help

completion — returns words that start with the text you pass as parameter.

help — on-line help command

Spreadsheet

Online help management

Online help management

Online help management