Manual for Package: auxiliar
Revision 21M

Karl Kästner

March 1, 2023

Contents

1 @Compute_Map **1**
- 1.1 Compute_Map . . . 1
- 1.2 key . . . 1

2 auxiliar **1**
- 2.1 Container . . . 1
- 2.2 Expanding_Double . . . 1

3 adaptor **2**
- 3.1 Constant . . . 2
- 3.2 GSD . . . 2
- 3.3 Keller . . . 2
- 3.4 MMesh . . . 2
- 3.5 SMesh . . . 2
- 3.6 Slg . . . 2

4 auxiliar **2**
- 4.1 addpath_recursive . . . 2
- 4.2 arabic2roman . . . 2
- 4.3 autocat . . . 3
- 4.4 bplus . . . 3
- 4.5 btimes . . . 3
- 4.6 centre_axis . . . 3
- 4.7 circshift_fractional . . . 3
- 4.8 cmap_rolling . . . 3
- 4.9 colormap3 . . . 3
- 4.10 colormap_byr . . . 3
- 4.11 copy_fields . . . 3
- 4.12 copyfields_deep . . . 3

4.13 count_occurence . . . 4
4.14 cummax . . . 4
4.15 cummean . . . 4
4.16 cumstd . . . 4
4.17 cumvar . . . 4
4.18 cvec . . . 4
4.19 dependencies_determine . . . 4
4.20 dependencies_fetch . . . 4
4.21 diag3 . . . 4
4.22 diffn . . . 5
4.23 dspace . . . 5
4.24 field_range . . . 5
4.25 fieldnames_deep . . . 5
4.26 finite . . . 5
4.27 fixnan3 . . . 5
4.28 flat . . . 5
4.29 folder_name_from_parameters . . . 5
4.30 frac . . . 5
4.31 getfield_deep . . . 6
4.32 getout . . . 6
4.33 hash_float . . . 6
4.34 hash_str . . . 6
4.35 hashcode . . . 6
4.36 imagesc_ . . . 6
4.37 innerspace . . . 6
4.38 int2byte . . . 6

5 io/@IniFile **6**
5.1 IniFile . . . 6

6 io **7**
6.1 Stream . . . 7
6.2 catXML . . . 7
6.3 csv2cell . . . 7
6.4 filewrite . . . 7

7 io/netcat **7**
7.1 nc . . . 7
7.2 nc_read_row . . . 7
7.3 nc_read_sequential . . . 7
7.4 nc_read_sequential_column . . . 7
7.5 nc_readall . . . 7
7.6 nc_writeall . . . 8

8 io **8**
8.1 parseXML . . . 8
8.2 printdef . . . 8
8.3 printf . . . 8
8.4 save_ . . . 8
8.5 xml2struct . . . 8

9 auxiliar **8**
9.1 isfield_deep . . . 8
9.2 isfieldorprop . . . 8
9.3 isprop_deep . . . 8
9.4 issym . . . 9
9.5 iterate_cell . . . 9
9.6 jmemory . . . 9
9.7 labelline . . . 9
9.8 leftdiff . . . 9
9.9 leftmean . . . 9
9.10 limits . . . 9
9.11 linspace_man . . . 9
9.12 linspace_man2 . . . 9
9.13 logspace_trimmed . . . 9
9.14 matlab_messages . . . 10
9.15 maxid . . . 10
9.16 memsize . . . 10
9.17 mlint_all . . . 10
9.18 myhot . . . 10
9.19 none . . . 10
9.20 objcopy . . . 10

10 plot **10**
10.1 addx . . . 10
10.2 addy . . . 10
10.3 adjust_quiver_arrowhead_size . . . 11
10.4 area_man . . . 11
10.5 arrow . . . 11
10.6 axis_equal_man . . . 11
10.7 candlestick_man . . . 11
10.8 circle . . . 11
10.9 cmap . . . 11
10.10 colormap_man . . . 11
10.11 colormap_man2 . . . 11
10.12 colormap_man_old . . . 11
10.13 columnlegend . . . 12
10.14 copyaxes . . . 12

10.15 datetick_man . . . 12
10.16 daytick . . . 12
10.17 dcolormap . . . 12
10.18 dots . . . 12
10.19 errorarea . . . 12
10.20 errorarea2 . . . 12
10.21 errorbar_man . . . 12
10.22 errorlines . . . 12
10.23 fetchsubplot . . . 13
10.24 fillmarker . . . 13
10.25 get_coordinates . . . 13
10.26 hatch . . . 13
10.27 hline . . . 13
10.28 hold_color . . . 13
10.29 hourspace . . . 13
10.30 hourtick . . . 13
10.31 interpplot . . . 13
10.32 legendtitle . . . 13
10.33 line_fewer_markers . . . 14
10.34 monthspace . . . 14
10.35 monthtick . . . 14
10.36 mycolourmap . . . 14
10.37 namedfigure . . . 14
10.38 nansurf . . . 14
10.39 nmcolormap . . . 14
10.40 patch_man . . . 14
10.41 pdfprint . . . 15
10.42 percenttick . . . 15
10.43 plot2svg . . . 15
10.44 plot_ellipse . . . 16
10.45 plot_style . . . 16
10.46 plotshaded . . . 16
10.47 ploty4 . . . 16
10.48 plotyyy . . . 16
10.49 quadsurf . . . 16
10.50 quadsurf2 . . . 17
10.51 quadsurf3 . . . 17
10.52 quiver3_man . . . 17
10.53 quiver_man . . . 17
10.54 quiver_man2 . . . 17
10.55 quiver_man3 . . . 17
10.56 rectangles . . . 17
10.57 scaleplot . . . 17
10.58 setfontsize . . . 17

10.59 shade_night . . . 17
10.60 splitfigure . . . 18
10.61 turtle . . . 18
10.62 velplot . . . 18
10.63 vline . . . 18
10.64 vline_man . . . 18
10.65 weekspace . . . 18
10.66 weektick . . . 18
10.67 xtick . . . 18
10.68 xticklabel . . . 18
10.69 ytick . . . 19
10.70 yticklabel . . . 19

11 auxiliar **19**
11.1 relpos . . . 19
11.2 reshape_conditional . . . 19
11.3 rightdiff . . . 19
11.4 rmfield_deep . . . 19
11.5 rmfield_optional . . . 19
11.6 rvec . . . 19
11.7 select . . . 19
11.8 setfield_behind . . . 20
11.9 setfield_deep . . . 20
11.10 setfields . . . 20
11.11 sign2str . . . 20
11.12 signs . . . 20
11.13 simplifyignore . . . 20
11.14 str_cell_reverse_index . . . 20

12 strings **20**
12.1 chomp . . . 20
12.2 chomp1 . . . 20
12.3 num2str_log10 . . . 21
12.4 num2str_power_10 . . . 21
12.5 strjoin . . . 21
12.6 strsplit_man . . . 21
12.7 suffix . . . 21

13 auxiliar **21**
13.1 struct2obj . . . 21
13.2 struct_avg . . . 21
13.3 struct_flat . . . 21
13.4 structcopy_deep . . . 21
13.5 structfun_deep . . . 22

13.6 sub2ind_man . . . 22
13.7 subsall . . . 22
13.8 swap . . . 22

14 system **22**
14.1 alloc . . . 22
14.2 basename . . . 22
14.3 cbrt . . . 22
14.4 dirname . . . 22
14.5 head . . . 23
14.6 head_str . . . 23
14.7 tail . . . 23
14.8 tail_str . . . 23

15 auxiliar **23**
15.1 table2struc_man . . . 23
15.2 table2tex . . . 23
15.3 toInt32 . . . 23
15.4 unique_columnwise . . . 23
15.5 unpack_struct . . . 23
15.6 unwrap_periodic . . . 24
15.7 zoomaxis . . . 24

1 @Compute_Map

1.1 Compute_Map

```
container class to store multiple scenarios
```

1.2 key

```
key for storing a scenario

function [key obj] = key(obj,varargin)
```

2 auxiliar

2.1 Container

2.2 Expanding_Double

3 adaptor

```
adators for backward compatibility for renamed files
```

3.1 Constant

3.2 GSD

3.3 Keller

3.4 MMesh

3.5 SMesh

3.6 Slg

4 auxiliar

4.1 addpath_recursive

```
recursively add a directory and sub-directories to the Matlab
    search path
call restoredefaultpath to undo this
```

4.2 arabic2roman

4.3 autocat

4.4 bplus

4.5 btimes

4.6 centre_axis

4.7 circshift_fractional

4.8 cmap_rolling

4.9 colormap3

4.10 colormap_byr

4.11 copy_fields

4.12 copyfields_deep

4.13 count_occurence

4.14 cummax

4.15 cummean

4.16 cumstd

4.17 cumvar

4.18 cvec

```
make vector a column vector
```

4.19 dependencies_determine

```
determine dependencies of a matlab function
function dependencies_determine(dep_filename,profile_filename,
    func_C)
```

4.20 dependencies_fetch

```
fetch the dependencies stored in other repositories
```

4.21 diag3

4.22 diffn

4.23 dspace

4.24 field_range

4.25 fieldnames_deep

4.26 finite

4.27 fixnan3

4.28 flat

```
reshape a (hyper)-matrix into a column vector
```

4.29 folder_name_from_parameters

4.30 frac

4.31 getfield_deep

```
function value = getfield_deep(s,fieldname)
```

4.32 getout

4.33 hash_float

4.34 hash_str

```
hash a string into a single number
```

4.35 hashcode

4.36 imagesc_

4.37 innerspace

```
linearly increasing vector sampled at mid-intervals
```

4.38 int2byte

5 io/@IniFile

5.1 IniFile

6 io

6.1 Stream

6.2 catXML

6.3 csv2cell

6.4 filewrite

7 io/netcat

7.1 nc

7.2 nc_read_row

7.3 nc_read_sequential

7.4 nc_read_sequential_column

7.5 nc_readall

7.6 nc_writeall

8 io

8.1 parseXML

8.2 printdef

8.3 printf

```
print values to standard output
```

8.4 save_

8.5 xml2struct

9 auxiliar

9.1 isfield_deep

9.2 isfieldorprop

9.3 isprop_deep

9.4 issym

```
return true of variable is symbolic
```

9.5 iterate_cell

9.6 jmemory

9.7 labelline

9.8 leftdiff

9.9 leftmean

9.10 limits

9.11 linspace_man

9.12 linspace_man2

9.13 logspace_trimmed

9.14 matlab_messages

9.15 maxid

```
index of maximum
if value is not required (e.g. use in other functions such as
    accummarray)
```

9.16 memsize

9.17 mlint_all

9.18 myhot

9.19 none

9.20 objcopy

10 plot

10.1 addx

10.2 addy

10.3 adjust_quiver_arrowhead_size

10.4 area_man

10.5 arrow

10.6 axis_equal_man

10.7 candlestick_man

10.8 circle

10.9 cmap

10.10 colormap_man

10.11 colormap_man2

10.12 colormap_man_old

10.13 columnlegend

10.14 copyaxes

10.15 datetick_man

10.16 daytick

10.17 dcolormap

10.18 dots

10.19 errorarea

10.20 errorarea2

```
plot area around a curve
```

10.21 errorbar_man

10.22 errorlines

10.23 fetchsubplot

10.24 fillmarker

10.25 get_coordinates

10.26 hatch

10.27 hline

```
plot a horizontal line
```

10.28 hold_color

10.29 hourspace

10.30 hourtick

10.31 interpplot

10.32 legendtitle

10.33 line_fewer_markers

```
 find marker spec in varargin and remove it; extract special params:
      LockOnMax,Spacing
 input size check
 a) once only the line with all points with the style
 b) last time the markers, using fewer points with style
 c) once with a visible handle, only the first point, using the
     complete style you specified
'x' -> marker delta-x constant; 'curve' : spacing constant along the
     curve length
```

10.34 monthspace

10.35 monthtick

10.36 mycolourmap

10.37 namedfigure

```
 create a figure and set its window title
```

10.38 nansurf

10.39 nmcolormap

10.40 patch_man

10.41 pdfprint

```
 print a pdf-file for a figure
```

10.42 percenttick

10.43 plot2svg

```
" height="100%%" viewBox="0 0 %0.3f %0.3f" ',paperpos(3),paperpos(4)
    );
            fprintf(fid,' <filter x="%0.3f%%" y="%0.3f%%" width="%0.3
                f%%" height="%0.3f%%" id="%s">\n', 0, 0, 100, 100,
                filterId);
            %    fprintf(fid,' <filter x="%0.3f%%" y="%0.3f%%" width
                ="%0.3f%%" height="%0.3f%%" id="%s">\n', -(offset *
                100), -(offset * 100), 100 + (offset * 200), 100 + (
                offset * 200), filterId);
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%% SUBFUNCTIONS %%%%%
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

 Octave keeps s, d, p and h in the HandleGraphics object, for the
     square, diamond, pentagram, and hexagram markers, respectively
     -- Jakob Malm
 Octave keeps s, d, p and h in the HandleGraphics object, for the
     square, diamond, pentagram, and hexagram markers, respectively
     -- Jakob Malm
%%%%%%%%%%%%%%%%%%%
```

%%%

10.50 quadsurf2

10.51 quadsurf3

10.52 quiver3_man

10.53 quiver_man

10.54 quiver_man2

10.55 quiver_man3

10.56 rectangles

10.57 scaleplot

10.58 setfontsize

10.59 shade_night

10.60 splitfigure

```
combined figure and subplot
```

10.61 turtle

10.62 velplot

10.63 vline

```
plot a vertical line
```

10.64 vline_man

10.65 weekspace

10.66 weektick

10.67 xtick

10.68 xticklabel

10.69 ytick

```
wrapper for setting yticks
```

10.70 yticklabel

11 auxiliar

11.1 relpos

11.2 reshape_conditional

11.3 rightdiff

11.4 rmfield_deep

11.5 rmfield_optional

11.6 rvec

```
reshape input vector to a column vector
```

11.7 select

```
select columns of a vector along dimension dim
```

11.8 setfield_behind

11.9 setfield_deep

```
set values of a struct or object, fieldnames can have sub-fields
    indicated by dots
```

11.10 setfields

11.11 sign2str

11.12 signs

11.13 simplifyignore

11.14 str_cell_reverse_index

12 strings

12.1 chomp

12.2 chomp1

12.3 num2str_log10

12.4 num2str_power_10

12.5 strjoin

```
join a cell array of strings
```

12.6 strsplit_man

12.7 suffix

13 auxiliar

13.1 struct2obj

13.2 struct_avg

13.3 struct_flat

13.4 structcopy_deep

13.5 structfun_deep

13.6 sub2ind_man

13.7 subsall

13.8 swap

14 system

```
emulate POSIX and BASH functions
```

14.1 alloc

14.2 basename

```
 strip the directory from a filename
```

14.3 cbrt

14.4 dirname

```
 strip file-name from path
```

14.5 head

14.6 head_str

14.7 tail

14.8 tail_str

15 auxiliar

15.1 table2struc_man

15.2 table2tex

15.3 toInt32

15.4 unique_columnwise

15.5 unpack_struct

15.6 unwrap_periodic

15.7 zoomaxis