

# **News - 2018**

## **new macros and bugfixes for the basic package pstricks**

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**Contents**

<b>I. pstricks – package</b>	<b>3</b>
<b>1. pstricks.sty – pstricks-pdf.sty</b>	<b>3</b>
<b>2. pstricks-tex.tex</b>	<b>3</b>
<b>3. pstricks.tex (v. 2.87 – 2018/12/11)</b>	<b>3</b>
3.1. PostScript Fonts . . . . .	3
3.2. Error message . . . . .	3
3.3. Random colors . . . . .	4
<b>4. pstricks.pro</b>	<b>5</b>
<b>References</b>	<b>6</b>

## Part I.

# pstricks – package

### 1. pstricks.sty – pstricks-pdf.sty

There is now a new optional argument for the package: `ckeckengine`, which will be used in later versions.

### 2. pstricks-tex.tex

This package collects all additional latex macros which must be defined when running PSTricks with tex. They all moved from the base `pstricks.tex` into this new file.

### 3. pstricks.tex (v. 2.87 – 2018/12/11)

Use the `\long` definition for `\@fornoop` to be compatible to the latest changes in L<sup>A</sup>T<sub>E</sub>X.

In old versions the macro `\rput` can't be used with the key-value setting. The latest version of `pstricks.tex` defines a modified `\rput` which checks first if a following optional argument has the old behaviour, eg `\rput[lb]{...}` or a key/value setting like `\rput[ref=lb,rot=...,](...)`. However, there should be no change in the output and, of course, it makes no sense to mix the old and new setting in *one* `\rput` macro.

#### 3.1. PostScript Fonts

This version of PSTricks uses the Ghostscript fonts from URW instead of the original base 14 fonts of PostScript. For example: instead of Helvetica we use NimbusSanL-Regu. The URW fonts are always embedded in the created ps or pdf output. This is not the default for the PostScript fonts. You change this setting with the optional argument to `pstricks.sty`.

#### 3.2. Error message

Using PSTricks with `pdflatex` will work only when using package `auto-pst-pdf` and running the T<sub>E</sub>X-file with

```
pdflatex -shell-escape <file>
```

otherwise you'll get an error message which was misleading in the past:

```
[...]
! Undefined control sequence.
<recently read> \c@lor@to@ps
```

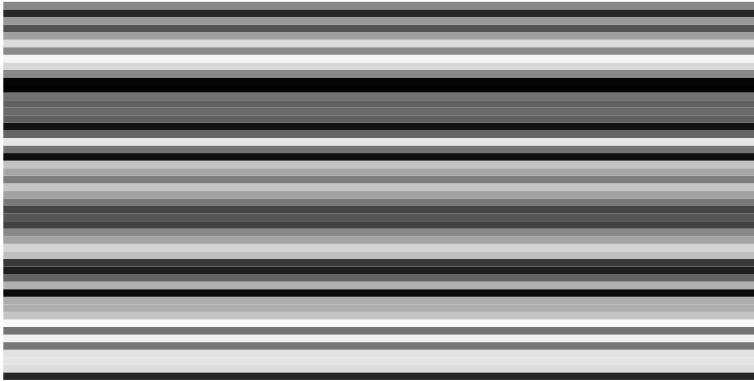
This changes now to

```
[...]
! Undefined control sequence.
\c@lor@to@ps ->\PSTricks
      _Not_Configured_For_This_Format
```

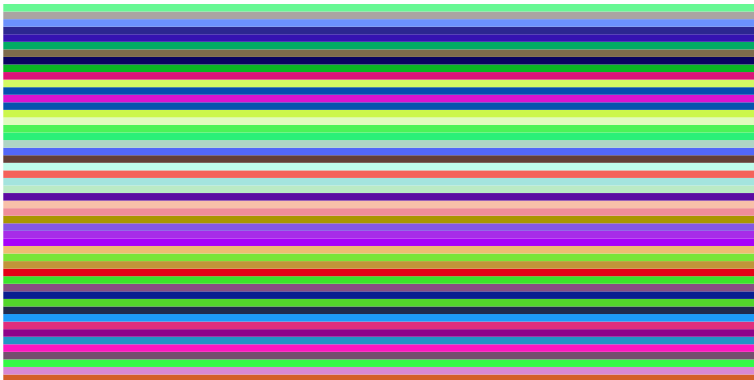
### 3.3. Random colors

There are now four predefined random “colors”:

```
\definecolor[ps]{randomgray}{gray}{Rand}%
\definecolor[ps]{randomrgb}{rgb}{Rand Rand Rand}%
\definecolor[ps]{randomcmyk}{cmyk}{Rand Rand Rand Rand}%
\definecolor[ps]{randomhsb}{hsb}{Rand Rand Rand}%
```



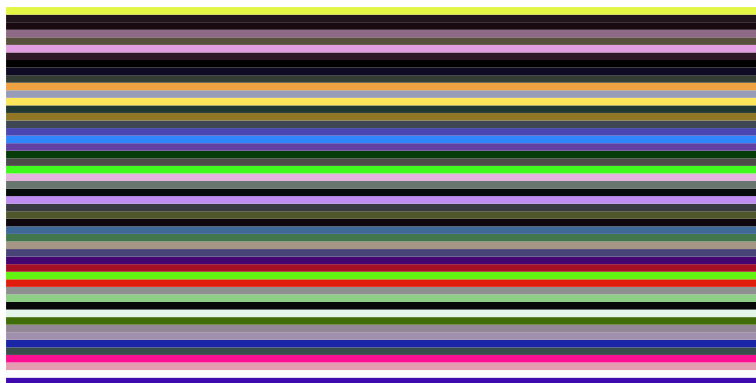
```
\begin{pspicture}(10,5)
\multido{\rA=0.0+0.1}{50}{\psline[linecolor=randomgray,linewidth=1mm](0,\rA)(10,\rA)}
\end{pspicture}
```



```
\begin{pspicture}(10,5)
\multido{\rA=0.0+0.1}{50}{\psline[linecolor=randomrgb,linewidth=1mm](0,\rA)(10,\rA)}
\end{pspicture}
```



```
\begin{pspicture}(10,5)
\multido{\rA=0.0+0.1}{50}{\psline[linecolor=randomcmyk,linewidth=1mm](0,\rA)(10,\rA)}
\end{pspicture}
```

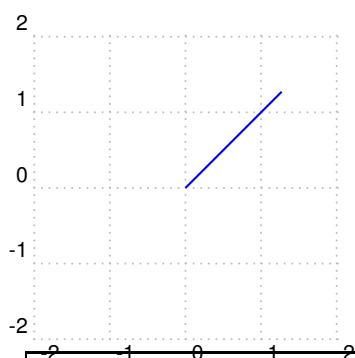


```
\begin{pspicture}(10,5)
\multido{\rA=0.0+0.1}{50}{\psline[linecolor=randomhsb,linewidth=1mm](0,\rA)(10,\rA)}
\end{pspicture}
```

The random counter can be initialized with `\pstVerb{rrand srand}`.

#### 4. pstricks.pro

A full circle has by default an angle of 360 degrees. Setting the circle with `\degrees[17]` to another value doesn't work for the PostScript function PtoC (Polat to Cartesian –  $(r, \phi) \rightarrow (x, y)$ ). Now there is a PtoCrel for the new definition which now takes the setting of `\pst@angleunit` into account.



```
\degrees[16]
\begin{pspicture}[showgrid](-2,-2)(2,2)
\psline[linecolor=blue](!1.8 2 PtoCrel)% 45 degrees
\end{pspicture}
```

The command `\framed` was build by clockwise line sequence. Now it is the other way round to get the same behaviour as for all other commands with closed lines.

There are some new PS functions

```
/AnytoDeg { pst@angleunit } def
/DegtoAny { 1 pst@angleunit div } def
/AnytoRad { AnytoDeg DegtoRad } def
/RadtoAny { RadtoDeg DegtoAny } def
```

See pst-node documentation for an example.

## References

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## Index

auto-pst-pdf, 3

ckeckengine, 3

\degrees, 5

File

    pstricks.tex, 3

\framed, 5

\long, 3

Macro

    \degrees, 5

    \framed, 5

    \long, 3

    \rput, 3

Package

    auto-pst-pdf, 3

    pst-node, 5

    pstricks.sty, 3

Package option

    ckeckengine, 3

pdflatex, 3

Program

    pdflatex, 3

pst-node, 5

pstricks.sty, 3

pstricks.tex, 3

\rput, 3