

# **News - 2019**

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

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**Contents**

<b>I. pstricks – package</b>	<b>3</b>
1. pstricks.sty – pstricks-pdf.sty	3
2. pstricks-tex.tex	3
3. pstricks.tex (v. 2.94 – 2019/01/07)	3
3.1. Error message . . . . .	4
3.2. Optional argument xetex . . . . .	4
4. pstricks.pro	4
<b>References</b>	<b>5</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

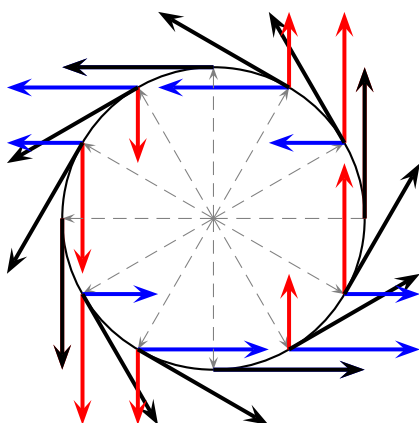
This package collects all additional latex macros which must be defined when running PSTricks with tex. They all moved from the base pstricks.tex into this new file.

#### 3. pstricks.tex (v. 2.94 – 2019/01/07)

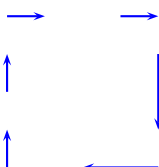
There is a new macro called `\psLine` (uppercase L!) which can have only one or two pairs of coordinates. Remember that `\psline` can have more. With `\psLine` and an defined arrow you'll get nothing for something like `\psLine{->}{1,1}(1,1)`, whereas `\psline` will output the arrowtip! This behaviour of `\psLine` maybe helpful for animations where a speedvector or a vector is shown with its components and one do not really knows the coordinates.

```
\psLine [Options] [ (x0, y0) ] (x1, y1)
\psLineSegments [Options] (x0, y0) (x1, y1) ... (xn-1, yn-1) (xn, yn)
```

If  $P_0$  is missing for `\psLine` then  $(0,0)$  as first point is assumed. `\psLineSegments` expects always pairwise coordinates.



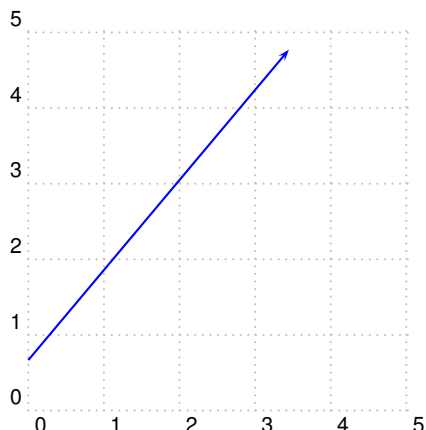
```
\psset{unit=2cm}
\begin{pspicture}(-1,-1)(1,1)
\degrees[12]
\pscircle{1}
\multido{\iA=0+1,\iB=3+1}{12}{%
\pnode(1;\iA){R}
\psLine[linecolor=gray,linestyle=dashed,
linewidth=0.4pt](R)
\psset{arrows=->,arrowscale=1.5,linewidth=1.5pt}
\rput(R){%
\psLine[linecolor=blue]({1;\iB}|0,0)
\psLine[linecolor=red](0,0|{1;\iB})
\psLine(1;\iB)}%
}
\end{pspicture}
```



```
\psset{unit=0.5cm}
\begin{pspicture}(6,6)
\psLineSegments[linecolor=blue]{->}(0,0)(0,1)(0,2)(0,3)(0,4)(1,4)%
(3,4)(4,4)(4,3)(4,1)(4,0)(2,0)
\end{pspicture}
```

There is a new experimental feature, which allows algebraic notation for coordinates. It needs

```
\usepackage[useCalc]{pstricks}
```



```
\begin{pspicture}[showgrid](5,5)
\psline[linecolor=blue]{->}%
(0,4/3*0.5)(0.6*sqrt{33}, sqrt{20+0.3})
\end{pspicture}
```

### 3.1. Error message

Using PSTricks with pdf<sub>l</sub>at<sub>e</sub>x 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
```

### 3.2. Optional argument xetex

The output driver xdvipdfmx for using X<sub>Y</sub>T<sub>E</sub>X or X<sub>Y</sub>L<sub>A</sub>T<sub>E</sub>X is not fully compatible to dvips. Especially some node operations will not work. If the L<sub>A</sub>T<sub>E</sub>X package detects a programm run with X<sub>Y</sub>L<sub>A</sub>T<sub>E</sub>X it automatically loads the file pstricks-xetex.def which defines some macros with a new name to keep the existing ones. By now there is only \NCput, which is the same as \ncput, but works with X<sub>Y</sub>L<sub>A</sub>T<sub>E</sub>X.

If someone wants to use these macros though he/she runs not X<sub>Y</sub>L<sub>A</sub>T<sub>E</sub>X then these macros are available too by using the optional argument xetex:

```
\usepackage[xetex]{pstricks}
```

## 4. pstricks.pro

## References

- [1] Michel Goossens et al. *The L<sup>A</sup>T<sub>E</sub>X Graphics Companion*. 2nd ed. Reading, Mass.: Addison-Wesley Publishing Company, 2007.
- [2] Laura E. Jackson and Herbert Voß. “Die Plot-Funktionen von pst-plot”. In: *Die T<sub>E</sub>Xnische Komödie* 2/02 (June 2002), pp. 27–34.
- [3] Nikolai G. Kollok. *PostScript richtig eingesetzt: vom Konzept zum praktischen Einsatz*. Vaterstetten: IWT, 1989.
- [4] Herbert Voß. “Die mathematischen Funktionen von Postscript”. In: *Die T<sub>E</sub>Xnische Komödie* 1/02 (Mar. 2002), pp. 40–47.
- [5] Herbert Voß. *PSTricks – Grafik für T<sub>E</sub>X und L<sup>A</sup>T<sub>E</sub>X*. 7th ed. Heidelberg and Berlin: DANTE – Lehmanns Media, 2016.
- [6] Herbert Voß. *PSTricks – Graphics for L<sup>A</sup>T<sub>E</sub>X*. 1st ed. Cambridge/UK: UIT, 2011.
- [7] Herbert Voß. *PSTricks Support for pdf*. 2002. URL: <http://PSTricks.tug.org/main.cgi?file=pdf/pdfoutput>.
- [8] Herbert Voß. *L<sup>A</sup>T<sub>E</sub>X Quick Reference*. 1st ed. Cambridge/UK: UIT, 2011.
- [9] Herbert Voß. *L<sup>A</sup>T<sub>E</sub>X Referenz*. 3rd ed. Heidelberg and Berlin: DANTE – lehmanns media, 2014.
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## Index

auto-pst-pdf, 4

ckeckengine, 3

dvips, 4

### File

pstricks-xetex.def, 4

### Macro

\NCput, 4

\ncput, 4

\psLine, 3

\psline, 3

\psLineSegments, 3

\NCput, 4

\ncput, 4

### Package

auto-pst-pdf, 4

### Package option

ckeckengine, 3

xetex, 4

pdflatex, 4

### Program

dvips, 4

pdflatex, 4

xdvipdfmx, 4

\psLine, 3

\psline, 3

\psLineSegments, 3

pstricks-xetex.def, 4

xdvipdfmx, 4

xetex, 4