

# PSTricks

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## **News – 2021**

**new macros and bugfixes for the basic package.**

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## Part I.

### *pstricks* – package

This version of the News was run with *lua<sup>A</sup>TeX* *without* using Ghostscript. The PDF file was created in a direct way by Lua. If you want to try it, then look at <https://github.com/zauguin/luapstricks>.

#### 1. *pstricks.sty*

The optional argument `gsfonts` can be used to load only the symbol font from GhostScript. Otherwise the one from URW or the system is used, which is the default.

#### 2. *pstricks.tex* (v. 3.08 – 2021/09/10)

##### 2.1. Colors

There are two new macros to get the color values:

```
\psgetRGBColorValues{<color macro>}
\psgetCMYKColorValues{<color macro>}
```

An Example:

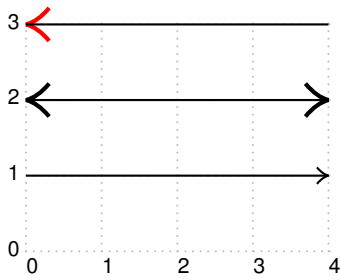
```
1 0.6 0.6
0.4 0.4 0 0
```

```
\psset{linecolor=red!40}
\psgetRGBColorValues{\pslinecolor}

\colorlet{Blue}[cmyk]{blue}
\psset{linecolor=Blue!40}
\psgetCMYKColorValues{\pslinecolor}
```

## 2.2. Arrows

There are new arrow types and a new optional argument `tipcolor`:



```
\begin{pspicture}[showgrid](4.2,3.25)
\psline{-T>}(0,1)(4,1)
\psline[arrowscale=2]{<T-T>}(0,2)(4,2)
\psline[tipcolor=red,arrowscale=2]{<T-}(0,3)(4,3)
\end{pspicture}
```

`psstricks` defines the following "arrows":

Value	Example	Name
-	—	None
<->	↔	Arrowheads.
>-<	↠	Reverse arrowheads.
<<->>	↔↔	Double arrowheads.
>>-<<	↠↠	Double reverse arrowheads.
-	⌊ — ⌋	T-bars, flush to endpoints.
* -   *	⌊ — ⌋	T-bars, centered on endpoints.
[ - ]	[ — ]	Square brackets.
] - [	] — [	Reversed square brackets.
( - )	( — )	Rounded brackets.
) - (	) — (	Reversed rounded brackets.
o - o	○ — ○	Circles, centered on endpoints.
* - *	● — ●	Disks, centered on endpoints.
oo - oo	○ — ○	Circles, flush to endpoints.
** - **	● — ●	Disks, flush to endpoints.
<->	⌊ ↔ ⌋	T-bars and arrows.
>-<	⌊ ↠ ⌋	T-bars and reverse arrows.
h - h	↵	left/right hook arrows.
H - H	↺	left/right hook arrows.
v - v	↕	left/right inside vee arrows.
V - V	↗	left/right outside vee arrows.
f - f	↔	left/right inside filled arrows.
F - F	↔	left/right outside filled arrows.
t - t	↗	left/right inside slash arrows.
T - T	↗	left/right outside slash arrows.
<D-D>	↪	curved arrows.
<D<D-D>D>	↪↪	curved doubled arrows.
D>-<D	↪	curved arrows, tip inside.
<T-T>	↪	curved lines.

With version 3.04 all arrow specific base code is moved to the file `psstricks-arrows`, which is not of interest for the default user..

### 2.3. Symbolfont

Use by default the URW or system symbol font for `\psdot`. This can be changes by using the optional argument `gsfonts`:

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

TeX-users have to define the switch and

```
\newif\ifpstGSfonts
```

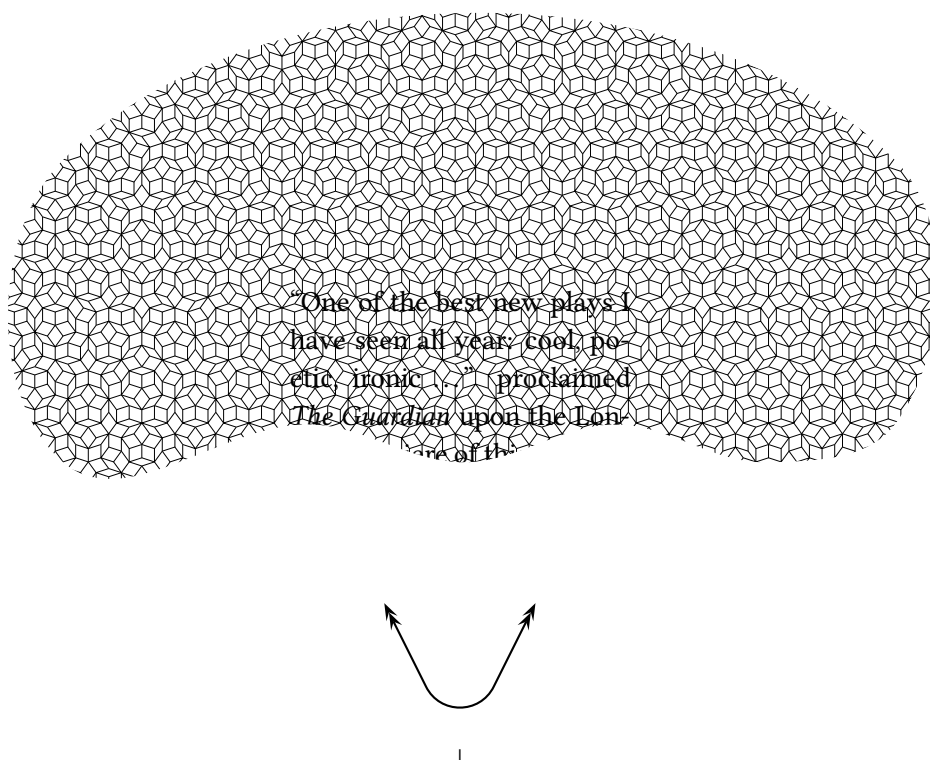
```
\pstGSfontsfalse % or true for using GS font
```

```
\input pstricks
```

```
...
```

### 2.4. Fillstyle **penrose**

There was a bug if this fillstyle was used together with a line sequence.



```
\pspicture[showgrid=false](-0.5\linewidth,-4.5)(0.5\linewidth,5)
\rput(0,0){\parbox{4.5cm}{%
\psclip{\psccurve[linestyle=none,fillstyle=penrose,psscale=.2](-3,-2)
```

```
(0.3,-1.5)(2.3,-2)(4.3,-1.5)(6.3,-2)(8,-1.5)(8,2)(-3,2)}
‘‘One of the best new plays I have seen all year: cool, poetic,
ironic \ldots’’ proclaimed \emph{The Guardian} upon the London
premiere of this extraordinary play about a Czech director and
his actress wife, confronting exile in America.
\endpsclip}}%
\psline[lineararc=0.5cm,showpoints=true,dotstyle=|]{<->}(-1,-2)(0,-4)(1,-2)
\endpspicture
```

### 3. Lua<sup>A</sup>T<sub>E</sub>X

Currently one has to use package `auto-pst-pdf-lua` if a document with PSTricks-code should be run *directly* with Lua<sup>A</sup>T<sub>E</sub>X, without using GhostScript. This version has experimental basic support for the lua package `luapstricks.lua`, available from <https://github.com/zauguin/luapstricks>.

### 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.
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- [4] Herbert Voß. “Die mathematischen Funktionen von Postscript”. In: *DTK* 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.
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- [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.
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