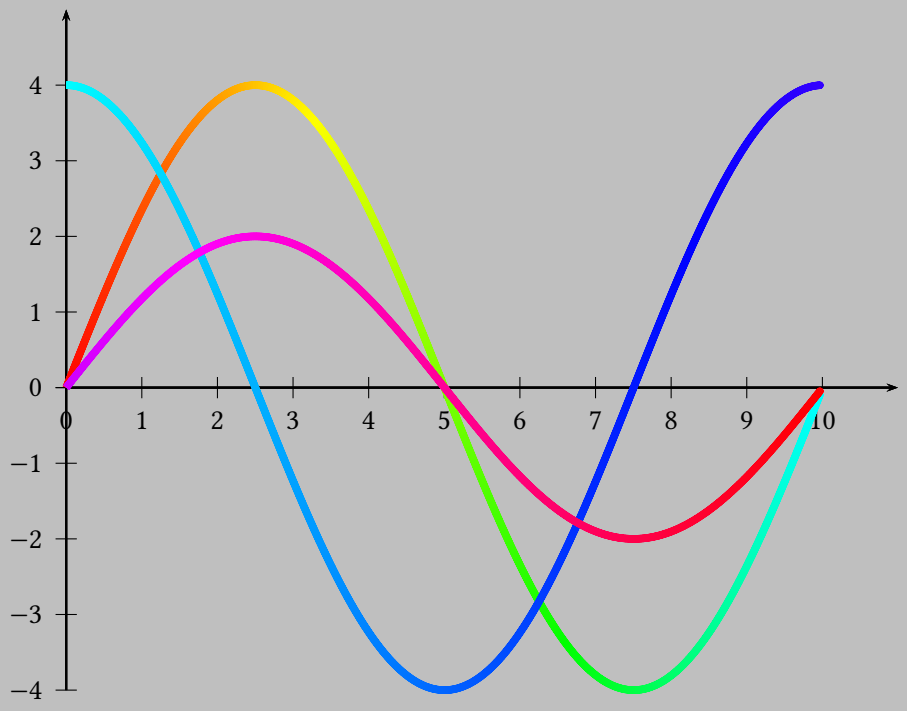
PSTricks

pst-hsb

Curves with continoues color; v.0.02

December 16, 2021



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This package defines the macros \pslineHSB \parametricplotHSB for curves with a continous color.

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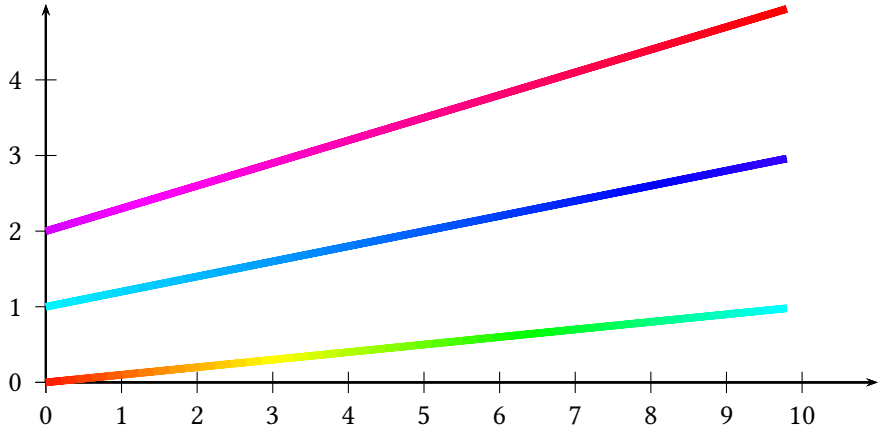
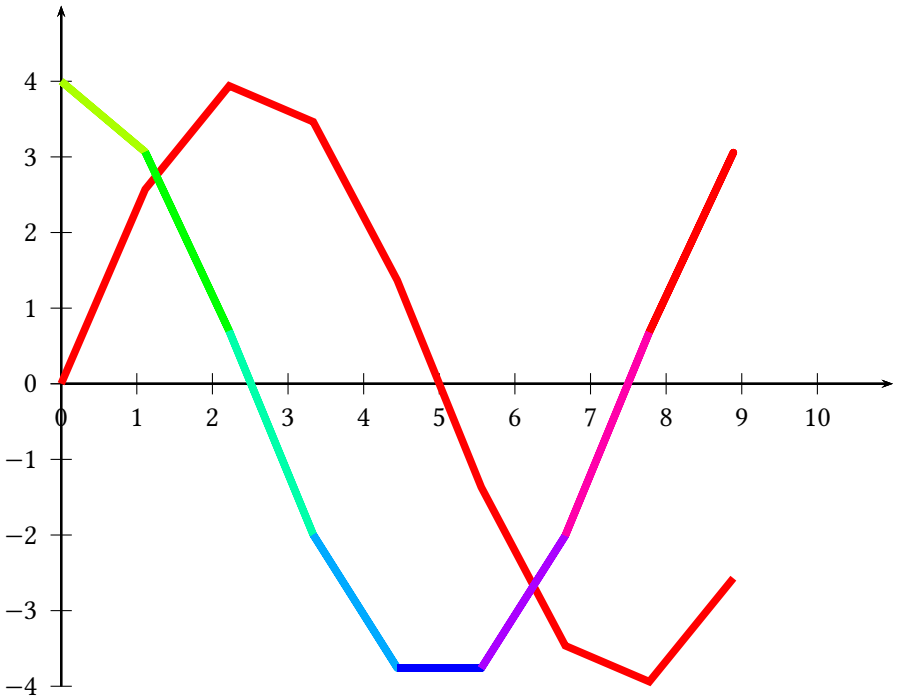
1 Examples

1.1 Lines

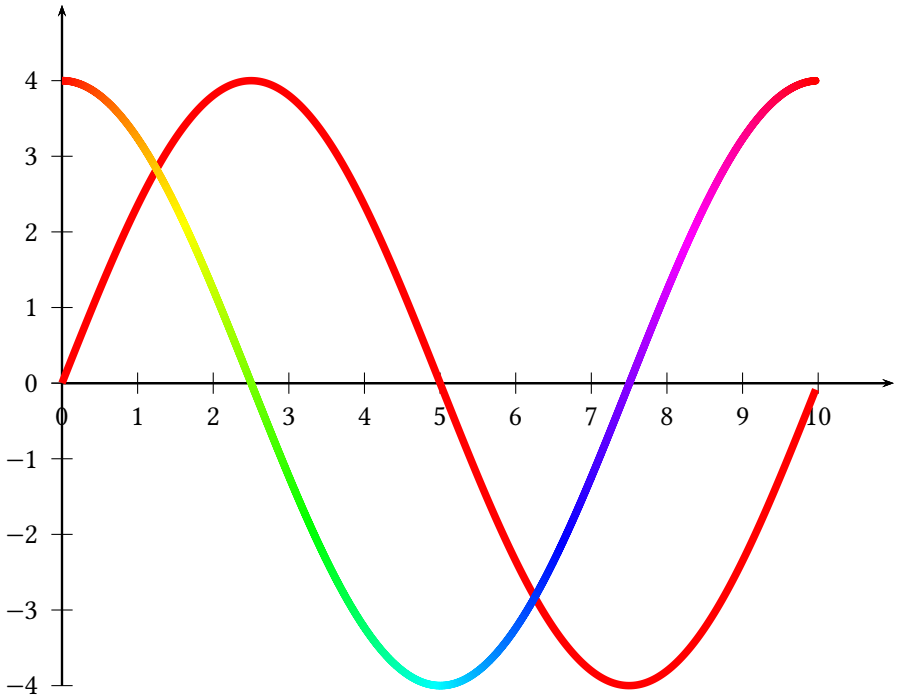



```
\begin{pspicture}(-0.5,-0.5)(11,5)
% \psgrid(0,-4)(10,4)
\psaxes{->}(0,0)(11,5)
\pslineHSB[linewidth=1mm,HueBegin=0,HueEnd=0.5](0,0)(10,1)
\pslineHSB[linewidth=1mm,HueBegin=0.5,HueEnd=0.7](0,1)(10,3)
\pslineHSB[linewidth=1mm,HueBegin=0.8,HueEnd=1](0,2)(10,5)
\end{pspicture}
```

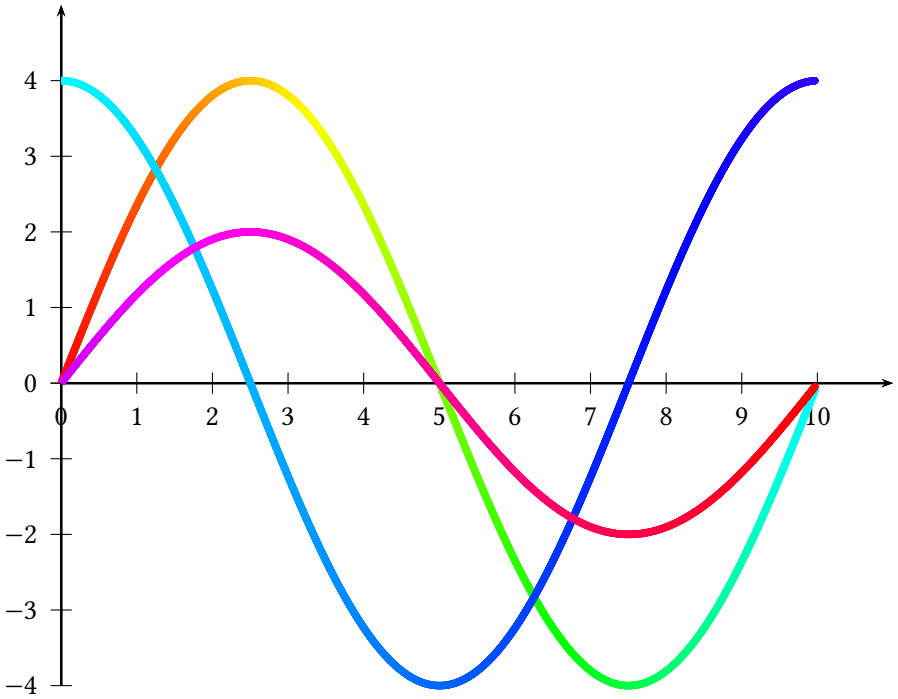
1.2 Parametric plot



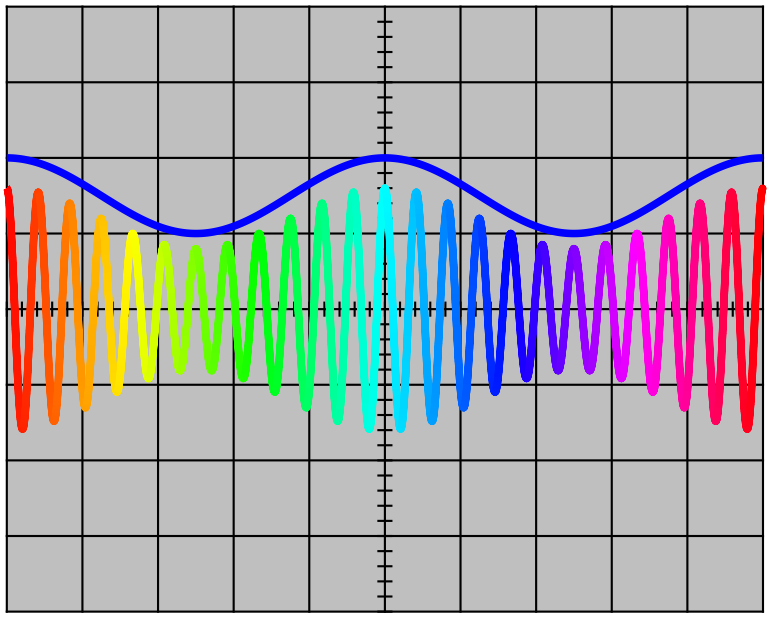

```
\begin{pspicture}(0,-5)(11,5)
% \psgrid(0,-4)(10,4)
\psaxes{->}(0,0)(0,-4)(11,5)
\psset{plotpoints=10}%
\psparametricplotHSB[linewidth=1mm,HSB=false,linecolor=red]{0}{360}{t 36 div t sin 4 mul}
\psparametricplotHSB[linewidth=1mm,algebraic]{0}{6.28}{t/0.628 | cos(t)*4}
\end{pspicture}
```




```
\begin{pspicture}(0,-5)(11,5)
% \psgrid(0,-4)(10,4)
\psaxes{->}(0,0)(0,-4)(11,5)
\psset{plotpoints=300}%
\psparametricplotHSB[linewidth=1mm,HSB=false,linecolor=red]{0}{360}{t 36 div t sin 4 mul}
\psparametricplotHSB[linewidth=1mm,algebraic]{0}{6.28}{t/0.628 | cos(t)*4}
\end{pspicture}
```




```
\begin{pspicture}(0,-5)(11,5)
% \psgrid(0,-4)(10,4)
\psaxes{->}(0,0)(0,-4)(11,5)
\psset{plotpoints=300,algebraic}%
\psparametricplotHSB[linewidth=1mm,HueBegin=0,HueEnd=0.5]{0}{6.28}{t/0.628 | sin(t)*4}
\psparametricplotHSB[linewidth=1mm,HueBegin=0.5,HueEnd=0.7]{0}{6.28}{t/0.628 | cos(t)*4}
\psparametricplotHSB[linewidth=1mm,HueBegin=0.8,HueEnd=1]{0}{6.28}{t/0.628 | sin(t)*2}
\end{pspicture}
```



```
\begin{pspicture}(-5,-5)(5,5)
 \psframe*[linecolor=lightgray](-5,-4)(5,4)
 \psgrid[gridlabels=0,subgriddiv=0](-5,-4)(5,4)
 \multido{\nxDiv=-5+0.2}{50}{%
 \psline(\nxDiv,-.1)(\nxDiv,0.1)}
 \multido{\nyDiv=-4.0+0.2}{40}{%
 \psline(-0.1,\nyDiv)(0.1,\nyDiv)}
 \psset{linewidth=1mm}%
 \psparametricplotHSB[plotpoints=2000,linecolor=blue,HSB=false,yunit=0.5]{-5}{5}{%
 /temps t 2e-3 mul def
 /frequence2 100 def
 frequence2 360 mul temps mul cos
 1 mul 3 add
 }
 \psparametricplotHSB[plotpoints=2000,yunit=1]{-5}{5}{%
 /temps t 2e-3 mul def
 /frequence1 1200 def
 /frequence2 100 def
 frequence2 360 mul temps mul cos
 1 mul 3 add
 frequence1 360 mul temps mul cos
 4 mul
 mul
 0.1 mul
 }
\end{pspicture}
```

2 List of all optional arguments for pst-hsb

Key	Type	Default
HueBegin	ordinary	[none]
HueEnd	ordinary	[none]
HSB	boolean	true

References

[1] Denis Girou. “Présentation de PSTricks”. In: *Cahier GUTenberg* 16 (Apr. 1994), pp. 21–70.

[2] Michel Goosens et al. *The LaTeX Graphics Companion*. 2nd ed. Reading, Mass.: Addison-Wesley Publishing Company, 2007.

[3] Alan Hoenig. *TeX Unbound: LaTeX & TeX Strategies, Fonts, Graphics, and More*. London: Oxford University Press, 1998.

[4] Nikolai G. Kollock. *PostScript richtig eingesetzt: vom Konzept zum praktischen Einsatz*. Vaterstetten: IWT, 1989.

[5] Frank Mittelbach and Michel Goosens et al. *The LaTeX Companion*. 2nd ed. Boston: Addison-Wesley Publishing Company, 2004.

[6] Herbert Voß. *PSTricks Grafik für TeX und LaTeX*. 7th ed. Heidelberg/Berlin: DANTE and Lehmanns, 2016.

[7] Herbert Voß. *PSTricks Graphics for LaTeX*. 1st ed. Cambridge: UIT, 2011.

[8] Timothy Van Zandt. *multido.tex - a loop macro, that supports fixed-point addition*. CTAN:/graphics/pstricks/generic/multido.tex, 1997.

[9] Timothy Van Zandt. *PSTricks - PostScript macros for generic TeX*. http://www.tug.org/application/PSTricks, 1993.

[10] Timothy Van Zandt and Denis Girou. “Inside PSTricks”. In: *TUGboat* 15 (Sept. 1994), pp. 239–246.

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