

# Test of the **overarrows** package with all options

Julien Labbé

February 15, 2023

## 1 Loading the package with many options

```
\usepackage[
old-arrows, esvecth, tikz, pstarrows, subscripts, allcommands, debug
]{overarrows}
```

## 2 Options old-arrows and allcommands

```
\TestOverArrow*{\overrightarrow}
```

Test of  $\overrightarrow$  and  $\overrightarrow*$  macros

$\overrightarrow$  for different math styles

$\backslash displaystyle$	$\backslash textstyle$	$\backslash scriptstyle$	$\backslash scriptscriptstyle$
$\overrightarrow{v}$	$\overrightarrow{v}$	$\overrightarrow{v}$	$\overrightarrow{v}$
$\overrightarrow{AB}$	$\overrightarrow{AB}$	$\overrightarrow{AB}$	$\overrightarrow{AB}$
$\overrightarrow{\text{grad}}$	$\overrightarrow{\text{grad}}$	$\overrightarrow{\text{grad}}$	$\overrightarrow{\text{grad}}$
$\overrightarrow{\text{my long vector}}$	$\overrightarrow{\text{my long vector}}$	$\overrightarrow{\text{my long vector}}$	$\overrightarrow{\text{my long vector}}$

$\overrightarrow$  kerning

$$\overrightarrow{t_{\overrightarrow{u}} \overrightarrow{v}} \quad \overrightarrow{i_0} \quad \overrightarrow{v} = \overrightarrow{v_x} + \overrightarrow{v_y} + \overrightarrow{v_z} = v_x \overrightarrow{i} + v_y \overrightarrow{j} + v_z \overrightarrow{k}$$

$\overrightarrow*$  kerning

$$\overrightarrow{t_{\overrightarrow{u}} \overrightarrow{v}} \quad \overrightarrow{i_0} \quad \overrightarrow{v} = \overrightarrow{v_x} + \overrightarrow{v_y} + \overrightarrow{v_z} = v_x \overrightarrow{i} + v_y \overrightarrow{j} + v_z \overrightarrow{k}$$

```
\NewOverArrowCommand{\amsvec}{\amsmath, end={\rightarrow}, shift left=2}
\TestOverArrow*{\amsvec}
```

### Test of `\amsvec` and `\amsvec*` macros

#### `\amsvec` for different math styles

<code>\displaystyle</code>	<code>\textstyle</code>	<code>\scriptstyle</code>	<code>\scriptscriptstyle</code>
$\vec{v}$	$\vec{v}$	$\vec{v}$	$\vec{v}$
$\overrightarrow{AB}$	$\overrightarrow{AB}$	$\overrightarrow{AB}$	$\overrightarrow{AB}$
$\overrightarrow{\text{grad}}$	$\overrightarrow{\text{grad}}$	$\overrightarrow{\text{grad}}$	$\overrightarrow{\text{grad}}$
$\overrightarrow{\text{my long vector}}$	$\overrightarrow{\text{my long vector}}$	$\overrightarrow{\text{my long vector}}$	$\overrightarrow{\text{my long vector}}$

#### `\amsvec` kerning

$$\vec{t}_{\vec{u}} \quad \vec{v}_0 \quad \vec{v} = \vec{v}_x + \vec{v}_y + \vec{v}_z = v_x \vec{i} + v_y \vec{j} + v_z \vec{k}$$

#### `\amsvec*` kerning

$$\vec{t}_{\vec{u}} \quad \vec{v}_0 \quad \vec{v} = \vec{v}_x + \vec{v}_y + \vec{v}_z = v_x \vec{i} + v_y \vec{j} + v_z \vec{k}$$

### 3 Option esvec

```
\NewOverArrowCommand{esvec}{esvect}
\TestOverArrow*{esvec}
```

#### Test of \esvec and \esvec\* macros

##### \esvec for different math styles

\displaystyle	\textstyle	\scriptstyle	\scriptscriptstyle
$\vec{v}$	$\vec{v}$	$\vec{v}$	$\vec{v}$
$\overrightarrow{AB}$	$\overrightarrow{AB}$	$\overrightarrow{AB}$	$\overrightarrow{AB}$
$\overrightarrow{\text{grad}}$	$\overrightarrow{\text{grad}}$	$\overrightarrow{\text{grad}}$	$\overrightarrow{\text{grad}}$
$\overrightarrow{\text{my long vector}}$	$\overrightarrow{\text{my long vector}}$	$\overrightarrow{\text{my long vector}}$	$\overrightarrow{\text{my long vector}}$

##### \esvec kerning

$$\vec{t}_{\vec{u}\vec{v}} \quad \vec{i}_0 \quad \vec{v} = \vec{v}_x + \vec{v}_y + \vec{v}_z = v_x \vec{i} + v_y \vec{j} + v_z \vec{k}$$

##### \esvec\* kerning

$$\vec{t}_{\vec{u}\vec{v}} \quad \vec{i}_0 \quad \vec{v} = \vec{v}_x + \vec{v}_y + \vec{v}_z = v_x \vec{i} + v_y \vec{j} + v_z \vec{k}$$

## 4 Option tikz

```
\NewOverArrowCommand[tikz]{tikzvec}{}
\TestOverArrow*{tikzvec}
```

### Test of \tikzvec and \tikzvec\* macros

#### \tikzvec for different math styles

\displaystyle	\textstyle	\scriptstyle	\scriptscriptstyle
$\vec{v}$	$\vec{v}$	$\vec{v}$	$\vec{v}$
$\overrightarrow{AB}$	$\overrightarrow{AB}$	$\overrightarrow{AB}$	$\overrightarrow{AB}$
$\overrightarrow{\text{grad}}$	$\overrightarrow{\text{grad}}$	$\overrightarrow{\text{grad}}$	$\overrightarrow{\text{grad}}$
$\overrightarrow{\text{my long vector}}$	$\overrightarrow{\text{my long vector}}$	$\overrightarrow{\text{my long vector}}$	$\overrightarrow{\text{my long vector}}$

#### \tikzvec kerning

$$\vec{t}_{\vec{u}} \quad \vec{t}_0 \quad \vec{v} = \vec{v}_x + \vec{v}_y + \vec{v}_z = v_x \vec{i} + v_y \vec{j} + v_z \vec{k}$$

#### \tikzvec\* kerning

$$\vec{t}_{\vec{u}} \quad \vec{t}_0 \quad \vec{v} = \vec{v}_x + \vec{v}_y + \vec{v}_z = v_x \vec{i} + v_y \vec{j} + v_z \vec{k}$$

```
\NewOverArrowCommand[tikz]{thinnertikzvec}{%
  thinner,
}
\NewOverArrowCommand[tikz]{thickertikzvec}{%
  line thickness={2\overarrowthickness},
}

 $\thinnertikzvec{v}$  \quad  $\tikzvec{v}$  \quad  $\thickertikzvec{v}$ 
```

$$\vec{v} \quad \vec{v} \quad \vec{v}$$

```

\NewOverArrowCommand[tikz]{tikzoptvec}{%
  tikz options={line width=2\overarrowthickness},
  path options={arrows={<->}},
  path={ (0,0)--(0.5,0.05)},
}
\TestOverArrow*{tikzoptvec}

```

### Test of \tikzoptvec and \tikzoptvec\* macros

#### \tikzoptvec for different math styles

\displaystyle	\textstyle	\scriptstyle	\scriptscriptstyle
$\overrightarrow{v}$	$\overrightarrow{v}$	$\overrightarrow{v}$	$\overrightarrow{v}$
$\overrightarrow{AB}$	$\overrightarrow{AB}$	$\overrightarrow{AB}$	$\overrightarrow{AB}$
$\overrightarrow{\text{grad}}$	$\overrightarrow{\text{grad}}$	$\overrightarrow{\text{grad}}$	$\overrightarrow{\text{grad}}$
$\overrightarrow{\text{my long vector}}$	$\overrightarrow{\text{my long vector}}$	$\overrightarrow{\text{my long vector}}$	$\overrightarrow{\text{my long vector}}$

#### \tikzoptvec kerning

$$\overrightarrow{t} \overrightarrow{u} \overrightarrow{v} \quad \overrightarrow{i_0} \quad \overrightarrow{v} = \overrightarrow{v_x} + \overrightarrow{v_y} + \overrightarrow{v_z} = v_x \overrightarrow{i} + v_y \overrightarrow{j} + v_z \overrightarrow{k}$$

#### \tikzoptvec\* kerning

$$\overrightarrow{t} \overrightarrow{u} \overrightarrow{v} \quad \overrightarrow{i_0} \quad \overrightarrow{v} = \overrightarrow{v_x} + \overrightarrow{v_y} + \overrightarrow{v_z} = v_x \overrightarrow{i} + v_y \overrightarrow{j} + v_z \overrightarrow{k}$$

```

\NewOverArrowCommand[tikz]{tikzadoptvec}{%
  add tikz options={blue},
  add path options={thick},
  arrows={->>}, min length=20,
}
\TestOverArrow*{tikzadoptvec}

```

### Test of \tikzadoptvec and \tikzadoptvec\* macros

#### \tikzadoptvec for different math styles

\displaystyle	\textstyle	\scriptstyle	\scriptscriptstyle
$\overrightarrow{v}$	$\overrightarrow{v}$	$\overrightarrow{v}$	$\overrightarrow{v}$
$\overrightarrow{AB}$	$\overrightarrow{AB}$	$\overrightarrow{AB}$	$\overrightarrow{AB}$
$\overrightarrow{\text{grad}}$	$\overrightarrow{\text{grad}}$	$\overrightarrow{\text{grad}}$	$\overrightarrow{\text{grad}}$
$\overrightarrow{\text{my long vector}}$	$\overrightarrow{\text{my long vector}}$	$\overrightarrow{\text{my long vector}}$	$\overrightarrow{\text{my long vector}}$

#### \tikzadoptvec kerning

$$\overrightarrow{t} \quad \overrightarrow{t_0} \quad \overrightarrow{v} = \overrightarrow{v_x} + \overrightarrow{v_y} + \overrightarrow{v_z} = v_x \overrightarrow{i} + v_y \overrightarrow{j} + v_z \overrightarrow{k}$$

#### \tikzadoptvec\* kerning

$$\overrightarrow{t} \quad \overrightarrow{t_0} \quad \overrightarrow{v} = \overrightarrow{v_x} + \overrightarrow{v_y} + \overrightarrow{v_z} = v_x \overrightarrow{i} + v_y \overrightarrow{j} + v_z \overrightarrow{k}$$













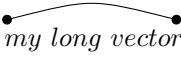
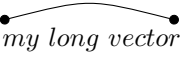
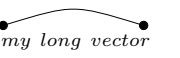

```

\NewOverArrowCommand[tikz]{tikcodevec}{%
  tikz command={\draw[Circle-Circle](0,0).. controls (0.5,0.3).. (1,0);},
  shift left=-2, space after arrow=0.2ex,
}
\TestOverArrow*{tikcodevec}

```

### Test of `\tikcodevec` and `\tikcodevec*` macros

#### `\tikcodevec` for different math styles

<code>\displaystyle</code>	<code>\textstyle</code>	<code>\scriptstyle</code>	<code>\scriptscriptstyle</code>
			
			
			
			

#### `\tikcodevec` kerning

$$\begin{array}{c} t \\ u \\ v \end{array} \quad i_0 \quad v = v_x + v_y + v_z = v_x i + v_y j + v_z k$$

#### `\tikcodevec*` kerning

$$\begin{array}{c} t \\ u \\ v \end{array} \quad i_0 \quad v = v_x + v_y + v_z = v_x i + v_y j + v_z k$$

## 5 Option pstarrows

```
\NewOverArrowCommand[picture]{picvec}{}
\TestOverArrow*{picvec}
```

### Test of \picvec and \picvec\* macros

#### \picvec for different math styles

\displaystyle	\textstyle	\scriptstyle	\scriptscriptstyle
$\vec{v}$	$\vec{v}$	$\vec{v}$	$\vec{v}$
$\overrightarrow{AB}$	$\overrightarrow{AB}$	$\overrightarrow{AB}$	$\overrightarrow{AB}$
$\overrightarrow{\text{grad}}$	$\overrightarrow{\text{grad}}$	$\overrightarrow{\text{grad}}$	$\overrightarrow{\text{grad}}$
$\overrightarrow{\text{my long vector}}$	$\overrightarrow{\text{my long vector}}$	$\overrightarrow{\text{my long vector}}$	$\overrightarrow{\text{my long vector}}$

#### \picvec kerning

$$\vec{t}_{\vec{u}\vec{v}} \quad \vec{i}_0 \quad \vec{v} = \vec{v}_x + \vec{v}_y + \vec{v}_z = v_x \vec{i} + v_y \vec{j} + v_z \vec{k}$$

#### \picvec\* kerning

$$\vec{t}_{\vec{u}\vec{v}} \quad \vec{i}_0 \quad \vec{v} = \vec{v}_x + \vec{v}_y + \vec{v}_z = v_x \vec{i} + v_y \vec{j} + v_z \vec{k}$$





## 6 Option subscripts

```
\NewOverArrowCommand{subvec}{min length=30}
\NewOverArrowCommand{nosubvec}{min length=30, detect subscripts=false}
\TestOverArrow*{subvec}
\TestOverArrow*{nosubvec}
```

### Test of \subvec and \subvec\* macros

#### \subvec for different math styles

\displaystyle	\textstyle	\scriptstyle	\scriptscriptstyle
$\overrightarrow{v}$	$\overrightarrow{v}$	$\overrightarrow{v}$	$\overrightarrow{v}$
$\overrightarrow{AB}$	$\overrightarrow{AB}$	$\overrightarrow{AB}$	$\overrightarrow{AB}$
$\overrightarrow{\text{grad}}$	$\overrightarrow{\text{grad}}$	$\overrightarrow{\text{grad}}$	$\overrightarrow{\text{grad}}$
$\overrightarrow{\text{my long vector}}$	$\overrightarrow{\text{my long vector}}$	$\overrightarrow{\text{my long vector}}$	$\overrightarrow{\text{my long vector}}$

#### \subvec kerning

$$\overrightarrow{t} \overrightarrow{u} \overrightarrow{v} \quad \overrightarrow{i} \overrightarrow{o} \quad \overrightarrow{v} = \overrightarrow{v}_x + \overrightarrow{v}_y + \overrightarrow{v}_z = v_x \overrightarrow{i} + v_y \overrightarrow{j} + v_z \overrightarrow{k}$$

#### \subvec\* kerning

$$\overrightarrow{t} \overrightarrow{u} \overrightarrow{v} \quad \overrightarrow{i} \overrightarrow{o} \quad \overrightarrow{v} = \overrightarrow{v}_x + \overrightarrow{v}_y + \overrightarrow{v}_z = v_x \overrightarrow{i} + v_y \overrightarrow{j} + v_z \overrightarrow{k}$$

### Test of \nosubvec and \nosubvec\* macros

#### \nosubvec for different math styles

\displaystyle	\textstyle	\scriptstyle	\scriptscriptstyle
$\overrightarrow{v}$	$\overrightarrow{v}$	$\overrightarrow{v}$	$\overrightarrow{v}$
$\overrightarrow{AB}$	$\overrightarrow{AB}$	$\overrightarrow{AB}$	$\overrightarrow{AB}$
$\overrightarrow{\text{grad}}$	$\overrightarrow{\text{grad}}$	$\overrightarrow{\text{grad}}$	$\overrightarrow{\text{grad}}$
$\overrightarrow{\text{my long vector}}$	$\overrightarrow{\text{my long vector}}$	$\overrightarrow{\text{my long vector}}$	$\overrightarrow{\text{my long vector}}$

#### \nosubvec kerning

$$\overrightarrow{t} \overrightarrow{u} \overrightarrow{v} \quad \overrightarrow{i} \overrightarrow{o} \quad \overrightarrow{v} = \overrightarrow{v}_x + \overrightarrow{v}_y + \overrightarrow{v}_z = v_x \overrightarrow{i} + v_y \overrightarrow{j} + v_z \overrightarrow{k}$$

#### \nosubvec\* kerning

$$\overrightarrow{t} \overrightarrow{u} \overrightarrow{v} \quad \overrightarrow{i} \overrightarrow{o} \quad \overrightarrow{v} = \overrightarrow{v}_x + \overrightarrow{v}_y + \overrightarrow{v}_z = v_x \overrightarrow{i} + v_y \overrightarrow{j} + v_z \overrightarrow{k}$$