

# The `hhtensor` package\*

Harald Harders  
h.harders@tu-bs.de

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## Abstract

This package provides commands for vectors, matrices, and tensors with different styles (arrows as the L<sup>A</sup>T<sub>E</sub>X default, underlined, and bold).

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## 1 Load the package

To use this package place

```
\usepackage[style]{hhtensor}
```

in the preamble of your document. The *style* is `arrow`, `bold`, or `uline` for arrow style, bold symbols, resp. underlined symbols. Default is `arrow`.

## 2 Usage

<code>\vec</code>	Vectors are printed as usual using the <code>\vec{symbol}</code> command. Depending on the style, they are printed $\vec{\alpha}$ , $\boldsymbol{\alpha}$ , resp. $\underline{\alpha}$ .
<code>\matr</code>	Matrices are printed using <code>\matr{symbol}</code> : $\vec{\alpha}$ , $\boldsymbol{\alpha}$ , resp. $\underline{\alpha}$ .
<code>\tens</code>	Tensors are a little bit different. They take two arguments while the first one is the symbol, while the second is the step: <code>\tens{symbol}{step}</code> . This leads to $\alpha_4$ , $\boldsymbol{\alpha}$ , resp. $\underline{\alpha}$ .

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In the bold style, it is not distinguished between vectors, matrices, and tensors. I would like to use upright symbols but then you cannot use all symbols because there is no full upright bold math alphabet.

`\dcdot`     The `\dcdot` command produces a double dot for double scalar products, e.g.,  
 $\vec{\sigma} = \vec{A} \cdot \cdot \vec{\varepsilon}$ .

`\trans`     `\trans` produces a transposed sign:  $\vec{A}^T = \vec{B}$ .