1 Test the isomath Package

Fontpackage: [utopia]{mathdesign}
Isomath called with options: [OMLmathrm,OMLmathbf,sfdefault=cmbr]
Default font families: serif `mdput` sans-serif `cmss`
isomath-serif `mdput` isomath-sf `cmbr`

1.1 Math alphabets

If there are ligatures (ff, fi, ...) or other "strange" symbols instead of small Greek letters in a math alphabet, it uses T1 or OT1 encoding instead of OML.

mathnormal	$A, B, C, \Gamma, \Delta, \Theta, \Lambda, \Xi, \Pi, \Sigma, \Upsilon, \Phi, \Psi, \Omega, \alpha, \beta, \nu, \omega, \upsilon, w, a, g,$
mathit	$A, B, C, \grave{}, \acute{}, \hat{}, \tilde{}, \ddot{}, \mathring{}, \check{}, \breve{}, \bar{}, \dot{}, ,, ¿, !, \upsilon, w, a, g,$
mathrm	$\mathrm{A, B, C, \Gamma, \Delta, \Theta, \Lambda, \Xi, \Pi, \Sigma, \Upsilon, \Phi, \Psi, \Omega, \alpha, \beta, \nu, \omega, v, w, a, g,}$
mathbf	$\mathbf{A, B, C, \Gamma, \Delta, \Theta, \Lambda, \Xi, \Pi, \Sigma, \Upsilon, \Phi, \Psi, \Omega, \alpha, \beta, \nu, \omega, v, w, a, g,}$
mathsf	$\mathsf{A, B, C, \grave{}, \acute{}, \hat{}, \tilde{}, \ddot{}, \mathring{}, \check{}, \breve{}, \bar{}, \dot{}, ,, ¿, !, v, w, a, g,}$
mathtt	$\mathtt{A, B, C, \grave{}, \acute{}, \hat{}, \tilde{}, \ddot{}, \mathring{}, \check{}, \breve{}, \bar{}, \dot{}, ,, ¿, !, v, w, a, g,}$

New alphabets bold-italic, sans-serif-italic, and sans-serif-bold-italic.

mathbold	$\boldsymbol{A, B, C, \Gamma, \Delta, \Theta, \Lambda, \Xi, \Pi, \Sigma, \Upsilon, \Phi, \Psi, \Omega, \alpha, \beta, \nu, \omega, \upsilon, w, a, g,}$
mathsans	mathsans not defined, use `OMLmathsans` option
mathboldsans	$\mathsfit{A, B, C, \Gamma, \Delta, \Theta, \Lambda, \Xi, \Pi, \Sigma, \Upsilon, \Phi, \Psi, \Omega, \alpha, \beta, \nu, \omega, v, w, a, g,}$

1.2 Vector symbols

Symbols for vectors are boldface italic: $\boldsymbol{\alpha} = \boldsymbol{e}_1 \cdot \boldsymbol{a}$

1.3 Matrix symbols

Symbols for matrices are boldface italic, i. e. typeset in the same face as vectors:[1] $\boldsymbol{\Gamma} = \boldsymbol{E} \cdot \boldsymbol{A}$.

1.4 Tensor symbols

Symbols for tensors are sans-serif bold italic,

$$\boldsymbol{\alpha} = \boldsymbol{e} \cdot \boldsymbol{a} \quad \Longleftrightarrow \quad \alpha_{ijl} = e_{ijk} \cdot a_{kl}.$$

The permittivity tensor describes the coupling of electric field and displacement:

$$\boldsymbol{D} = \epsilon_0 \boldsymbol{\epsilon}_\mathrm{r} \boldsymbol{E}$$

[1] However, matrix symbols are usually capital letters whereas vectors are small ones. Exceptions are physical Quantities like the force vector $\boldsymbol{F}$ or the electrical field $\boldsymbol{E}$.