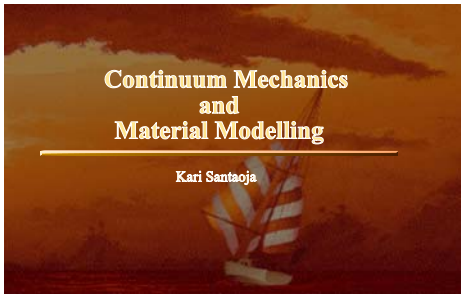
Continuum Mechanics and Material Modelling 2023
MEC-E8002 P (5 cr)

Errata



The present document gives a list of the errors in the course book "Lecture Notes on Continuum Thermodynamics; 2023".

January 19, 2023.

Columns added after January 19, 2023 are shown by red colour.

Page or position	Incorrect notation	Correct notation
P. 45 below Eq. (2.52)	I was informed that the text was difficult to understand. The person who gave the remark is satisfied with the new text. Hopefully it is fine for everyone.	The notation $\circ\ \circ\circ$ represents any set of scalar components (*ScalComp*) and/or base vectors. In Expression (52) the scalar component (*ScalComp*) is first moved to the right and then the double-dot product operator : is allowed to operate. The last two base vectors of the former tensor form the first pair and the first two base vectors of the latter tensor form the second pair. There is a dot product between the first base vectors of these pairs and another dot product between the second base vectors of the pairs. This can be seen in the second line of Equation (52).
P. 62 below Eq. (166)	... , Definition (165) ...	..., Definition (166) ...
P. 77 5th paragraph	In solid mechanics it is usually called the reference coordinate system.	Remove this sentence. There are different definitions to "reference" in literature. This term is out from the book.
P. 79 below Figure 2.	denoted by $\underline{P}(t)$ and is expressed by the coordinates $\underline{x}_i(t)$.	denoted by $\underline{P}(t)$ and is expressed mainly by the coordinates $\underline{x}_i(t)$.
P. 87 below Eq. (3.20)	since, the velocity $\vec{v}(\vec{\underline{x}}(t),t)$ is connected to the movement of the matter, it does not have the second time-dependency as the other quantities do.	The velocity $\vec{v}(\vec{\underline{x}}(t),t)$ is connected to the movement of the matter.
Eq. $(3.124)_1$	...: = $\frac{1}{2}\left[\vec{v}(\vec{\underline{x}}(t))\overleftarrow{\nabla}(\vec{\underline{x}}) + \vec{\nabla}(\vec{\underline{x}})\vec{v}(\vec{\underline{x}}(t))\right]$	... = $\frac{1}{2}\left[\vec{v}(\vec{\underline{x}}(t),t)\overleftarrow{\nabla}(\vec{\underline{x}}) + \vec{\nabla}(\vec{\underline{x}})\vec{v}(\vec{\underline{x}}(t),t)\right]$
Eq. $(3.125)_1$	... = $\frac{1}{2}\left[\vec{v}(\vec{\underline{x}}(t))\overleftarrow{\nabla}(\vec{\underline{x}}) - \vec{\nabla}(\vec{\underline{x}})\vec{v}(\vec{\underline{x}}(t))\right]$	... = $\frac{1}{2}\left[\vec{v}(\vec{\underline{x}}(t),t)\overleftarrow{\nabla}(\vec{\underline{x}}) - \vec{\nabla}(\vec{\underline{x}})\vec{v}(\vec{\underline{x}}(t),t)\right]$
P. 123	Since there is no particular fundamental unit for density $\varrho(\vec{\underline{x}}(t),t)$, $\mathrm{kg/m^3}$ adopted to be a fundamental unit.	There is no particular fundamental unit for density $\varrho(\vec{\underline{x}}(t),t)$. Density $\varrho(\vec{\underline{x}}(t),t)$ has a unit $\mathrm{kg/m^3}$ which is a combination of two fundamental units.
P. 412 above Eq. (42)	Equation (42) has the form of the constitutive equation aimed at, i.e.	The goal is to derive a constitutive equation having the form

P. 433 last sentence before 27.5 Extended ...	... symmetric..	... symmetric.