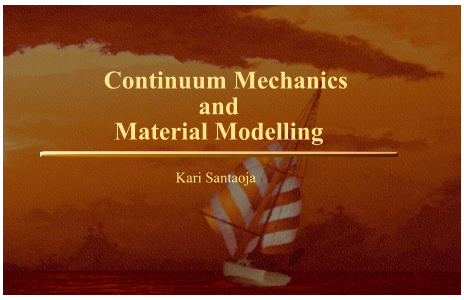
Continuum Mechanics and Material Modelling 2021
MEC-E8002 P (5 cr)

Errata

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

Changes after January 26 in red.
From the second red all the comments are after January 26.



Page or position	Incorrect notation	Correct notation
P. 20, P. 189, P. 209 Fig. 3, P. 264 last line P.267 last line of 2nd paragraph P. 280 line after Eq. (59) P. 287 second line P. 310 after Eq. (11) P. 311 after Eq. (13)	Maximal rate of entropy production (This terminology is due to Ziegler. Since it is difficult or even impossible to understand the physical meaning of "entropy production" in solid matter, I have replaced it with "dissipation".	Maximum dissipation
P. 45 Eq. (2.76)	$\mathbf{c} := c_{ts}...$	$\mathbf{c} := c_{st}...$
P. 77 8th line after Fig. 3	and in the initial position of the system m^{b}	delete the text
P. 130 below Eq. (57)	... in Expression (56)	... in Expression (55)
P. 164 Eq. (5.41)	On the right side there is variable $\vec{b}$	Should be $\vec{v}$
P. 167 Eq. (5.54)	On the right side there is variable $\vec{t}$	Should be $\vec{v}$
P. 176 Eq. (5.98)	On the right side material derivative operator is missing	In Equation (5.99) the material time derivative is as should be in Eq. (5.98)
P. 177 end of 4th paragraph	... positions where point $\underline{P}(t)$ was before the application of loading.	... geometry the system m^{b} hade before deformation took place.
p. 235 Eq. (9.1) 2nd term	$\rho(\underline{x}(t),t)$	remove density $\rho(\underline{x}(t),t)$
P. 259 between Eqs (11.17) and (11.18)	specific heat c	specific heat capacity c
P. 270 Eq. (13.15)	Φ	θ
P. 333 Eq. (20.54)	$\frac{\partial}{\partial \vec{a}}\left[\frac{1}{2}\vec{a}\cdot\mathbf{c}\cdot\vec{a}\right] = 2\,\mathbf{c}\cdot\vec{a}\,.$	$\frac{\partial}{\partial \vec{a}}\left[\frac{1}{2}\vec{a}\cdot\mathbf{c}\cdot\vec{a}\right] = \mathbf{c}\cdot\vec{a}\,.$
P. 333 next line	$\vec{u} = \vec{q}$ and $\varsigma = [\gamma(T)]^{-1}$	$\vec{a} = \vec{q}$ and $\mathbf{c} = [\gamma(T)]^{-1}$
Sections 22.1 and 22.2		I have rewritten them. They do not belong to the course.
P. 420 Eq. (55)	RVE = RVE x bar	Nothing
P. 420 last line	$(46)_2$ and $(47)_2$	$(56)_2$ and $(57)_2$
P. 427 second line from the bottom	Figure 10	Figure 9

Problem 4.2 Eq. (3)	$\boldsymbol{\sigma}^{\mathrm{q}} = \rho_0 \frac{\partial u(\boldsymbol{\varepsilon} - \boldsymbol{\varepsilon}^{\mathrm{i}}, \boldsymbol{\alpha}, s, h(\vec{X}))}{\partial(\boldsymbol{\varepsilon} - \boldsymbol{\varepsilon}^{\mathrm{i}})}$	$\boldsymbol{\sigma}^{\mathrm{q}} = \rho_0 \frac{\partial u(\boldsymbol{\varepsilon} - \boldsymbol{\varepsilon}^{\mathrm{i}}, \boldsymbol{\alpha}, s)}{\partial(\boldsymbol{\varepsilon} - \boldsymbol{\varepsilon}^{\mathrm{i}})}$