Correction to: Qualitative Theory in Structural Mechanics

Correction to:
D. Wang et al., *Qualitative Theory in Structural Mechanics*,
https://doi.org/10.1007/978-981-13-1376-9

The following corrections have been now updated in the book:

The updated version of the book can be found at
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Chap No.	Page No.	Location	Original	Revision
1	5	The 2nd row from the bottom	*as their limit point, and*	*as their sole limit point, and*
2	37	Rows 1–2 above Eq. (2.3.1)	n), $b_i = -a_{i,i+1}$, $c_i = -a_{i+1,i}$ ($i = 1, 2, \ldots, n-1$), and then **J** may be expressed as	n); while let $b_i = -a_{i,i+1}$ and $c_i = -a_{i+1,i}$ ($i = 1, 2, \ldots, n-1$). Then $\boldsymbol{J}$ may be expressed as
2	84	Rows 3–7 from the bottom	In order to prove Eq. (2.11.3), notice again that Eq. (2.11.1) may be viewed as the equation of vibration of a one-dimensional discrete system, and thus $\boldsymbol{R}$ can be viewed as the flexibility matrix of the system. Then, based on the concept of flexibility coefficients, the physical interpretation of its limit $G(x, s)$ shows that this should be the Green's function of the corresponding continuous system.	Next, we turn to Eq. (2.11.3). Notice again that Eq. (2.11.1) may be regarded as the equation of vibration of a one-dimensional discrete system while $\boldsymbol{R}$ can be viewed as the flexibility matrix of the system. Thus, based on the concept of flexibility coefficients and the result of $G(x, s)$ being the limit of these coefficients, $G(x, s)$ should be physically interpreted as the Green's function of the related continuous system.
3	103	Last row, i.e., Eq. (3.3.8)	$\boldsymbol{w}^{(q+1)}$	$\boldsymbol{u}^{(q+1)}$
5	197	The 10th row from the bottom	As for the subinterval $(0, \xi_1)$,	As for the subinterval $[0, \xi_1)$,
5	197	The 5th row from the bottom	a similar conclusion regarding the interval (ξ_j, l).	a similar conclusion regarding the interval $(\xi_j, l]$.

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7	294	Last row	as shown in the top four subfigures of Fig. 7.8.	as shown in the top four subfigures of Fig. 7.8. These conditions are also explicitly given below:
7	297	Rows 1–4 below Eq. (7.2.29)	Equation (7.2.29) shows that the r-th group of mode shape $\boldsymbol{u}^{(r)}$ for the whole structure, which is a vector of the size $(n \times p)$, depends only on the mode shape component $\boldsymbol{q}_r$ at one substructure, which is a p dimensional vector.	Eq. (7.2.29) shows that $\boldsymbol{u}^{(r)}$, the $(n \times p)$ -dimensional vector representing a mode shape in the r-th group of the whole structure, depends solely on $\boldsymbol{q}_r$, the p-dimensional vecotr denoting the mode shape of just one substructure.
7	312	Rows 1–2 above the heading of Sect. 7.6	on a plane passing through the center axis, along the meridian, or at a point for a three-, two-, or one-dimensional problem, respectively.	on a plane passing through the center axis, along the meridian, and at a point for three-, two-, and one-dimensional problems, respectively.
7	318	The 2nd row	the required system inputs $\boldsymbol{v}_1$ and $\boldsymbol{v}_4$.	the required feedback inputs $\boldsymbol{v}_1$ and $\boldsymbol{v}_4$.
7	323	The 3rd row below Eq. (7.8.15)	After the decoupled vector $\boldsymbol{q}_r$ is determined,	After the decoupled vector $\boldsymbol{q}_k$ is determined,
8	332	Rows 4–6	its classical solution belongs to the function set of comparison displacements[2]; while the generalized solution only needs to have a minimum of	its classical solution belongs to the comparison function set[2]; while the generalized solution is from the admissable function set and only needs to have at least

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Chap No.	Page No.	Location	Original	Revision
8	332	The last row in the footnote of this page	have k-th classical derivatives and satisfy the displacement boundary conditions only.	have k-th generalized derivatives and satisfy the displacement boundary conditions only.
8	346	The 2nd row below Eq. (8.3.17)	shapes serve as base functions.	shapes serve as the basis functions.
8	364	The last three rows in the 2nd paragraph below the heading of Sect. 8.6.1	The approach and its outcome provide a basis that supports further research work, including characterization of models in structural theories, checking of their validity, etc.	The approach and its outcome natually lead to a deeper understanding of models and valid models in structural theories, as covered in the next a few paragraphs.
8	369	The 2nd row below Eq. (8.6.9b)	It has been proved that under boundary conditions listed on the right column of	It has been proved that under boundary conditions listed in the third column of
8	369	Rows 4–5 below Eq. (8.6.9b)	Thus, under the boundary conditions tabulated on the left column of Table 8.1,	Thus, under boundary conditions tabulated in the second column of Table 8.1,