

Correction to On the Applicability of Elastic Network Normal Modes in Small-Molecule Docking

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We present the following corrections to the paper “On the Applicability of Elastic Network Normal Modes in Small-Molecule Docking”. The corrections remove errors that do not change or invalidate the results of the original paper.

- Page 845. Equation 1 should read as follows:

$$V(\mathbf{R}) = \frac{1}{2} \sum_{i=1}^N \sum_{j=i+1}^N k(|\mathbf{R}_i^0 - \mathbf{R}_j^0| - (|\mathbf{R}_i - \mathbf{R}_j| - |\mathbf{R}_i^0 - \mathbf{R}_j^0|)^2) \quad (1)$$

- Page 845. Equation 2 and the preceding sentence “Taylor Expansion of $V(\mathbf{R})$ around the minimum \mathbf{R}^0 up to second order yields” should more precisely read as follows: To apply NMA to an ENM, one assumes that $V(\mathbf{R})$ can be approximated by quadratic Taylor Expansion around \mathbf{R}^0 :

$$V(\mathbf{R}) \approx \frac{1}{2} (\mathbf{R} - \mathbf{R}^0)^T \mathbf{H} (\mathbf{R} - \mathbf{R}^0) \quad (2)$$

- Page 845. Equation 3 should read as follows:

$$\mathbf{H} = \mathbf{U} \mathbf{\Lambda} \mathbf{U}^T \quad (3)$$

- Page 847. Equation 7 and the preceding sentence “Given the space \mathbf{S} spanned by such a subset,” should read as follows: Let \mathbf{S} be the matrix containing the first m modes,

$$\mathbf{S} = [\mathbf{U}_1 \mathbf{U}_2 \dots \mathbf{U}_m] \quad (7)$$

- Page 847. Equation 8 should read as follows:

$$\mathbf{P} = \mathbf{S}^T (\mathbf{R}_H - \mathbf{R}_A) \quad (8)$$

- Page 847. Equation 10 should read as follows:

$$\mathbf{R}_H^* = \mathbf{R}_A + \mathbf{S} \mathbf{A} \quad (10)$$