

## DIFFEOLGY BOOK — ERRATA

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ref. <http://math.huji.ac.il/~piz/documents/DBlog-Errata.pdf>

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This is the list of the errata<sup>1</sup> for the textbook “Diffeology” [DBook]. It will be updated as and when I find (or I am informed of) an error.

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Erratum 1 (Apr. 19, 2013). Page 324, art. 9.23 – proof, the line before the last line: read  $2\pi/4$  (ok  $\pi/2$ ) instead of  $2\pi/3$ .

Erratum 2 (Apr. 23, 2013). Page 355, Solution to Exercise 2, line 9: read “the axiom D2 is satisfied” instead of “the axiom D2’ is satisfied”.

Erratum 3 (Jul. 9, 2013). Page 353, Figure 9.3: read “Symplectic irrational tori” instead of “Irrational tori” in the up-left quadrant.

Erratum 4 (Nov. 5, 2013). Pages 74-75, Exercise 72 and p. 387 Solution to Exercise 72: The theorem attributed to Boman is actually a generalization of the Boman’s theorem due to Richard Hain and Alfred Frölicher in:

- (1) Richard M. Hain, *A characterization of smooth functions defined on a Banach Space*, Proc. Amer. Math. Soc. 77 (1979), pp. 63–67.
- (2) Alfred Frölicher, *Applications lisses entre espaces et variétés de Fréchet*, C. R. Acad. Sc. t. 293, Paris 1981.

Erratum 5 (Oct. 4, 2013). Page 365, Solution to Exercise 24, line 14: read “ $\lim_{x \rightarrow 0} f(x) = 0$ ” instead of “ $\lim_{x \rightarrow 0} = 0$ ”.

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<sup>1</sup>I distinguish typos from errata. I will not list the typos, but they will be fixed when the book will be reprinted.

Erratum 6 (Nov. 11, 2013). Page 410, Solution to Exercise 120, expression of  $\sigma(t)(X(\theta))$ , the minus sign ( $-$ ) in the matrix of rotation  $2\pi t$  is misplaced, read:

$$\sigma(t)(X(\theta)) = \begin{pmatrix} \cos(2\pi t) & -\sin(2\pi t) \\ \sin(2\pi t) & \cos(2\pi t) \end{pmatrix} \begin{pmatrix} \cos(\theta) \\ \sin(\theta) \end{pmatrix} = \begin{pmatrix} \cos(2\pi t + \theta) \\ \sin(2\pi t + \theta) \end{pmatrix}.$$

Erratum 7 (Dec. 10, 2013). Page 134, lines 5, 6 and 7, read:

$$\begin{aligned} ab &= k \sum_{\sigma' \in \mathfrak{S}_{p+q}} \frac{\text{sgn}(\sigma')}{\text{sgn}(\epsilon)} \times B(x_{\sigma'(1)}) \cdots (x_{\sigma'(q)}) \times A(x_{\sigma'(q+1)}) \cdots (x_{\sigma'(q+p)}) \\ &= \frac{k}{\text{sgn}(\epsilon)} \sum_{\sigma' \in \mathfrak{S}_{p+q}} \text{sgn}(\sigma') \times B(x_{\sigma'(1)}) \cdots (x_{\sigma'(q)}) \times A(x_{\sigma'(q+1)}) \cdots (x_{\sigma'(q+p)}) \\ &= \text{sgn}(\epsilon) \times ba. \end{aligned}$$

Erratum 8 (Dec. 23, 2013). Page 293, lines 4, read:  $\text{class}_\omega^*(\lambda) = \mathcal{K}\omega$  instead of  $\text{class}^*(\lambda) = \mathcal{K}\omega$ .

Erratum 9 (Feb. 24, 2014). Page 34, art. 1.57, line 5: read " $\mathcal{C}^\infty(X, X')$ " instead of " $\mathcal{C}^\infty(X, Y)$ ".

Erratum 10 (Mar. 15, 2014). Page 17, art. 1.32 – proof, line 7: read " $f^*(\mathcal{D}') \subset \mathcal{D}$ " instead of " $\mathcal{D} \subset f^*(\mathcal{D}')$ ".

## References

[DBook] Patrick Iglesias-Zemmour *Diffeology*, Mathematical Surveys and Monographs, 185. Am. Math. Soc., Providence, 2012.  
<http://www.ams.org/bookstore-getitem/item=SURV-185>

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