

Corrections and clarifications to
Nonlinear Potential Theory on Metric Spaces,
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- p. **6**, l. **–7**. Replace “ ε -net” by “ 5ε -net”.
- p. **21**, l. **13–14**. Replace “Then there exist upper gradients g_j so that” by “Then there is $\tilde{\rho} \in L^p(X)$ such that $g_j := g + \tilde{\rho}/j$, $j = 1, 2, \dots$, are upper gradients. If moreover $g < \infty$ a.e., then”.
- p. **21**, l. **20–21**. Replace the last two sentences by “Let finally $\tilde{\rho} = \rho + \infty \chi_{g' \neq g}$ and $g_j = g + \tilde{\rho}/j$. Then g_j is an upper gradient of f . If moreover $g < \infty$ a.e., then (1.6) holds.”
- p. **36**. Add the sentence “Proposition 1.14 is from Cheeger [91].”
- p. **39**, l. **9, 10, –4**. Replace f_{j_k} by f_{l_k} .
- p. **46**, l. **20**. Delete “minimal”.
- p. **46**, l. **21**. Add the sentence “Moreover, $|\varphi' \circ u|g_u$ is a minimal p -weak upper gradient of $\varphi \circ u$, provided that φ is Lipschitz, $\varphi \circ u \in D^p(X)$ or $|\varphi' \circ u|g_u \in L^p(X)$.”
- p. **47**, l. **1**. After 2.14 add “, where the last inequality is only required to hold if $\varphi \circ u \in D^p(X)$ ”.
- p. **47**, l. **8–9**. Replace these lines by “Lemma 2.14 and (2.5) imply that $|\varphi' \circ u|g_u$ is a p -weak upper gradient of $\varphi \circ u$. Hence $|\varphi' \circ u|g_u \geq g_{\varphi \circ u}$ a.e. if $\varphi \circ u \in D^p(X)$, which in particular holds if $|\varphi' \circ u|g_u \in L^p(X)$, which in turn is true if φ is Lipschitz. To show the minimality in this case, observe that (2.5) and (2.4) yield”
- p. **47**, l. **17–18**. Replace sentence by “Then g_u/u is a p -weak upper gradient of $v = \log u$, which is minimal if $v \in D^p(X)$ or $g_u/u \in L^p(X)$.”
- p. **61**, l. **10**. Insert “and $p > 1$ ” after “space”.
- p. **62**, l. **13, 15**. To avoid confusion between g_1, g_2 and g_j , replace g_j by \tilde{g}_j .
- p. **64**, l. **14–15**. Replace sentence by “Lemma 2.37 for open E appeared in [45].” (When [49] was finalized the proof of Lemma 2.37 was omitted, and so the book is the original reference for Lemma 2.37 in the general form.)
- p. **88** l. **–3**. Replace by

$$\begin{aligned} \infty &= \left(\int_B |u - u_B|^q d\mu \right)^{1/q} = \lim_{j \rightarrow \infty} \left(\int_B \min\{j, |u - u_B|^q\} d\mu \right)^{1/q} \\ &= \lim_{j \rightarrow \infty} \lim_{k \rightarrow \infty} \left(\int_B \min\{j, |u_k - (u_k)_B|^q\} d\mu \right)^{1/q} \leq C \operatorname{diam}(B) \left(\int_{\lambda B} g^p d\mu \right)^{1/p}, \end{aligned}$$

Alternatively Fatou’s lemma can be used.

- p. **107**, l. **–2**. Replace “complete” by “proper”.
- p. **131**, l. **5**. Replace $u \geq \frac{1}{2}$ by $u(x) \geq \frac{1}{2}$.
- p. **145**, l. **15**. Replace $\|g_u^p\|_{L^p(X)}$ by $\|g_u\|_{L^p(X)}^p$.
- p. **145**, l. **–8**. Replace $C(r^p + 1)$ by $C(r^p + 1)\mu(2B)$.
- p. **155**, l. **19**. Replace “Lemma 1.39” by “Corollary 1.39”.
- p. **159**, l. **–8**. Insert “Assume that $\operatorname{supp} \mu$ is locally compact.” before “If”.
- p. **169**, l. **1**. Replace 6.7 (xi) by 6.19 (x).
- p. **182**, l. **–7**. Replace “open” by “bounded open”.
- p. **246**, l. **–12**. Replace [46] by [45].
- p. **259**, l. **5**. Insert “Let $h_j = \max\{f_j, \psi_j\}$. As $h_j - f_j = (\psi_j - f_j)_+ \in N_0^{1,p}(\Omega)$, by Proposition 7.4, we have $h_j \in \mathcal{K}_{\psi_j, f_j}$.” before “Let”.

p. 259, l. 9–10. Replace by

$$\begin{aligned} \|w_j\|_{N^{1,p}(X)} &\leq C\|g_{w_j}\|_{L^p(\Omega)} \leq C(\|g_{u_j}\|_{L^p(\Omega)} + \|g_{f_j}\|_{L^p(\Omega)}) \\ &\leq C(\|g_{h_j}\|_{L^p(\Omega)} + \|g_{f_j}\|_{L^p(\Omega)}) \leq C(\|f_j\|_{N^{1,p}(\Omega)} + \|\psi_j\|_{N^{1,p}(\Omega)}) \leq C \end{aligned}$$

p. 259, l. 12. Replace by

$$\|u_j\|_{N^{1,p}(\Omega)} \leq \|w_j\|_{N^{1,p}(\Omega)} + \|f_j\|_{N^{1,p}(\Omega)} \leq C(\|f_j\|_{N^{1,p}(\Omega)} + \|\psi_j\|_{N^{1,p}(\Omega)}) \leq C.$$

p. 278, l. 18 Replace “ $\sup_{\partial B'}$ ” by $\sup_{\partial B'} u$ ”.

p. 345, l. 6 Replace “ $1 < p \leq n < q$ ” by “ $1 < q \leq n < p$ ”.

p. 345, l. 18–19 Replace \mathbf{R}^n by \mathbf{R}^2 twice.

p. 348, l. 9 Insert “ $l_\gamma \leq Ad(x, y)$ and” after “such that”.

p. 371, [44] Add “on metric spaces” after “obstacle problem”.

p. 371, [45] Add “on metric spaces” after “obstacle problem”.

p. 372, [56] Add “in metric spaces” after “functions”.