

CORRECTIONS TO "DIRICHLET PROBLEM FOR MINIMAL SURFACE EQUATIONS IN A RIEMANNIAN MANIFOLD I"

By

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The above paper ([3]) contains errors. We correct them as follows:

p. 127, line 11 of Introduction, " $\sum_f = \{S(u); u \in F\}$ " should read "and we set $\sum_f = \{S(u); u \in F\}$ ".

p. 127, line 7 from bottom, "Supposing that..., in Section" should read "In Section".

p. 129, line 15, the term $-(\sum_{k=1}^n \rho_k p^k)/2\rho$ in $B(x, p)$ should be $-(\|p\|^2/2 + 1/\rho) \cdot (\sum_{k=1}^n \rho_k p^k)$.

p. 131, line 6 from bottom, "non-zero vector" should read "a non-zero vector".

p. 131, line 2 from bottom, $\{ \sum_{i,j,k=1}^n (g^{ij} - \sigma^i \sigma^j) \Gamma_{ij}^k \sigma_k \}$ should be

$$\{ \sum_{i,j,k=1}^n (g^{ij} - \sigma^i \sigma^j) \Gamma_{ij}^k \sigma_k - (\sum_{k=1}^n \rho_k \sigma^k)/2\rho \}.$$

p. 132, line 14, $\|p\| \geq 2c_1$ should read $p - p_0 = \|p - p_0\|v$ and $\|p\| \geq 2c_1$, $\|p - p_0\| - \|p\| \leq c_1$.

p. 133, line 3, $\mathcal{C}_0(\bar{x}, v)$ should be

$$\begin{aligned} \mathcal{C}_0(\bar{x}, v) &= \left\{ \sum_{i,j=1}^{n-1} g^{ij}(\bar{x}) \Gamma_{ij}^n(\bar{x}) - \frac{1}{2} \frac{\partial \log \rho}{\partial n}(\bar{x}) \right\} / \left(\sum_{k=1}^{n-1} g^{kk}(\bar{x}) \right) \\ &= \left\{ (n-1)H(\bar{x}) - \frac{1}{2} \frac{\partial \log \rho}{\partial n}(\bar{x}) \right\} / \left(\sum_{k=1}^{n-1} g^{kk}(\bar{x}) \right) \end{aligned}$$

where $\frac{\partial}{\partial n}$ denotes the inward unit normal vector to the boundary ∂M .

p. 133, line 6, $H \geq 0$ should read $2(n-1)H \geq \frac{\partial \log \rho}{\partial n}$.

p. 133, line 14, $(0 < r < d_1)$ should read $(0 < r < r_1)$.

p. 134, lines 1-2, "Assume that...everywhere" should read as follows: "Assume that the mean curvature H (with respect to the inward direction) of ∂M satisfies $2(n-1)H \geq \frac{\partial \log \rho}{\partial n}$ on ∂M ".

- p. 134, line 7, $\sup_{\partial M} |f| = c_0$ should read $\sup_M |f| = c_0$.
- p. 134, line 7, $m_1 = 2c_0$ should read $m_1 = 2c_0 + 1$.
- p. 134, line 8, (3.13) should read (3.14).
- p. 134, line 11, $f + 2c_0$ should read $f + m_1$.
- p. 134, line 7 from bottom, the term $-a^2(D\rho \cdot p)/2\rho$ in $B(x, p)$ should be $-(|p|^2/2 + a^2/\rho)(D\rho \cdot p)$.
- p. 135, line 2, $\mathcal{G}_0(x, \sigma)$ should be $\mathcal{G}_0(x, \sigma) = -\{(Da \cdot \sigma)/a + (D\rho \cdot \sigma)/2(n-1)\rho\}$.
- p. 136, line 7, $H \geq 0$ should read $2(n-1)H \geq \frac{\partial \log \rho}{\partial n}$.
- p. 136, line 14 from bottom, "assume that...everywhere" should read as follows:
 "assume that the mean curvature H (with respect to the inward direction) of $\partial\Omega$ satisfies $2(n-1)H \geq \frac{\partial \log \rho}{\partial n}$ on $\partial\Omega$."
- p. 137, line 12, the term $-a^2(D\rho \cdot Du)/2\rho$ in equation (5.4) should be $-(|Du|^2/2 + a^2/\rho)(D\rho \cdot Du)$.
- p. 137, lines 17–18, "Assume that...everywhere" should read as follows: "Assume that the mean curvature H (with respect to the inward direction) of $\partial\Omega$ satisfies $2(n-1)H \geq \frac{\partial \log \rho}{\partial n}$ on $\partial\Omega$ ".
- Finally we correct the errors in the papers [1], [2] as follows:
- p. 171, line 6 from bottom and p. 172, line 3 of [1], $(\Gamma_{ij}^\alpha + \Gamma_{in+1}^\alpha u_j)$ should read $(\Gamma_{ij}^\alpha + \Gamma_{in+1}^\alpha u_j + \Gamma_{jn+1}^\alpha u_i + \Gamma_{n+1n+1}^\alpha u_i u_j)$.
- p. 174, lines 12, 23 of [2], $(\Gamma_{ij}^k + \Gamma_{in+1}^k u_j)$ should read $(\Gamma_{ij}^k + \Gamma_{in+1}^k u_j + \Gamma_{jn+1}^k u_i)$.
- p. 180, lines 2, 11 of [2], $(\Gamma_{ij}^\alpha + \Gamma_{in+1}^\alpha u_j)$ should read $(\Gamma_{ij}^\alpha + \Gamma_{in+1}^\alpha u_j + \Gamma_{jn+1}^\alpha u_i + \Gamma_{n+1n+1}^\alpha u_i u_j)$.

References

- [1] R. Ichida: *On hypersurfaces in a homogeneous Riemannian manifold*. The Yokohama Math. J., **25**, 169–182 (1977).
- [2] R. Ichida: *On uniqueness for existence of minimal hypersurfaces a given boundary in a Riemannian manifold*. The Yokohama Math. J., **26**, 169–188 (1978).
- [3] R. Ichida: *Dirichlet problem for minimal surface equations in a Riemannian manifold*. The Yokohama Math. J., **27**, 127–139 (1979).

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