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ERRATUM TO "SUBORDINATION PRINCIPLE AND DISTORTION THEOREMS ON HOLOMORPHIC MAPPINGS IN THE SPACE C^n"

BY

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1. Matrix inequalities (1) and (4) on p. 330 of [1] should be replaced by the following determinant inequalities:

$$|J_\phi(t)|^2 = |\det(\partial\phi/\partial t)|^2 \le 1, \tag{1'}$$

$$|J_f(t)|^2 \le |J_F(t)|^2, \tag{4'}$$

respectively. The second paragraph of Theorem 2 [1, p. 330] including inequality (5) may now be deleted. The proof of Lemma 2 can be repaired by substituting the second half of the proof beginning from the line right below inequality (3) by the following:

Thus, $AA^* \le aM^2 I_n$, where $A = (\partial\phi/\partial z)_t$. Since $\phi(t) = t$, it holds that $A^k A^{*k} \le aM^2 I_n$ for every positive integer k. Let $\mu_1, \cdots, \mu_n$ be the characteristic roots of A. There exists a unitary matrix U such that $A = U\Gamma U^*$, where

$$\Gamma = \begin{pmatrix} \mu_1 & & * \\ & \ddots & \\ 0 & & \mu_n \end{pmatrix}$$

is an upper triangular matrix. Since

$$\Gamma^k = \begin{pmatrix} \mu_1^k & & * \\ & \ddots & \\ 0 & & \mu_n^k \end{pmatrix},$$

we have $\Gamma^k \Gamma^{*k} \le aM^2 I_n$. Thus, for each k, $|\mu_j|^{2k} \le aM^2$ which implies $|\mu_j| \le 1$. So $|J_\phi(t)|^2 \le 1$.

2. In the statements of Theorem 6, p. 334, and Corollary 3, p. 335, "$f \in \mathcal{S}(t)$" and "$f \in \mathcal{S}(0)$" should be replaced by "f is a biholomorphic mapping on D" and "f is a biholomorphic mapping on R_ν", respectively.

3. Inequalities (11), (14) and (15) should be replaced by

$$|J_f(z)| \le (d_w/r_0(D))^n [T_D(z, \bar{z})/T_D(0, 0)]^{1/2} = (d_w/r_0(D))^n |J_z(0)|^{-1}, \tag{11'}$$

$$|J_f(z)| \leq (d_w/r_\nu)^{p_\nu}[\det(I - zz^*)]^{-l_\nu/2}, \tag{14'}$$

$$|J_f(z)| \leq (d_w/r_{\mathrm{IV}})^n[1 + |zz'| - 2\bar{z}z']^{-n/2}. \tag{15'}$$

In the proof of Theorem 6, the function $g(z)$ should be defined by

$$g(z) = (f(z) - f(t))/[J_f(t)]^{1/n};$$

proceeding as in [1] we obtain corrected formulas (11′), (14′) and (15′).

4. (3.14) on line 5, p. 334, should be replaced by (3.1).

REFERENCE

1. K. T. Hahn, *Subordination principle and distortion theorems on holomorphic mappings in the space* C^n, Trans. Amer. Math. Soc. 162 (1971), 327–336.

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