

Correction to the paper “Entire functions of slow growth whose Julia set coincides with the plane”

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In our paper [1], in the proof of Proposition 1, we implicitly assume that the polynomial P is monic, though later we apply this Proposition to polynomials which are not monic. The following corrections should be made in the proof of Proposition 1.

Equation (6) has to be replaced by

$$|P^n(z_k)| > \max \left\{ \frac{4}{\gamma}(R+1), \frac{2e(d+1)}{|a|} \right\}, \quad (6)$$

where $a := \lim_{z \rightarrow \infty} z^{-d}P(z)$.

Equation (8) has to be replaced by

$$|a^{-1}z^{-d}P(z) - 1| < \gamma. \quad (8)$$

Equation (13) has to be replaced by

$$Q_1(z) = az^d \left(1 - \frac{z}{P^n(z_k)} \right), \quad z \in \Delta(2r), \quad (13)$$

and the definition of h_1 in the next line should be $h_1(z) = a^{-1}z^{-1}P(z) - 1$.

Finally, the last sentence before (ii) should be “Furthermore, $Q_1(w) = aw^d/(d+1) \in U$ in view of (6), so the Q_1 -orbit of w also tends to infinity.”

We thank David Boyd for pointing out this mistake.

References

- [1] W. Bergweiler and A. Eremenko, Entire functions of slow growth whose Julia set coincides with the plane, *Ergodic Theory Dynamical Systems* ???