

ERRATUM

Erratum to: Smale's Fundamental Theorem of Algebra Reconsidered

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Erratum to: Found Comput Math (2014) 14:85–114
DOI 10.1007/s10208-013-9155-y

The proof of Lemma 11-(ii), for $p > 1$ is incorrect. Consequently:

1. Theorem 3 is unproven.
2. Theorem 2 is incorrect for $p > 1$.
3. The assertion of the introduction that the homotopies

$$f_t = f - (1 - t)\Delta \left(\frac{\langle \cdot, \xi \rangle^{d_i}}{\langle \zeta, \xi \rangle^{d_i}} \right) f(\zeta),$$

lead to an average polynomial time algorithm to find approximate zeros for $f \in \mathcal{H}_{(d)}$ when the Bézout number is polynomial in the input dimension, including the case $n = 1$ and $D > n^{1+\varepsilon}$, is unproven.

4. The integral in footnote 1 is infinite. The proof is like Lemma 11-(i).

The online version of the original article can be found under doi:[10.1007/s10208-013-9155-y](https://doi.org/10.1007/s10208-013-9155-y).

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