

## Errata to "A Sufficient Condition for the Existence of Periodic Points of Homeomorphisms on Surfaces"

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The main theorem needs the additional assumption that  $0 \notin \partial \text{Conv}(\rho_1, \rho_2, \dots, \rho_N) - \{\rho_1, \rho_2, \dots, \rho_N\}$ , and so the revised theorem is as follows:

**THEOREM.** *Let  $M$  be a connected orientable closed surface of genus  $g > 1$ , and let  $f: M \rightarrow M$  be a homeomorphism isotopic to the identity. Let  $x_1, x_2, \dots, x_N$  be periodic points of  $f$ , where  $N = 2g + 1$ , and let  $\rho_1, \rho_2, \dots, \rho_N$  be rotation vectors for these periodic points. Set  $P = \{x_1, x_2, \dots, x_N\}$ .*

*Assume that  $\text{Conv}(\rho_1, \rho_2, \dots, \rho_N)$  does not include 0 on its boundary except vertices and has an interior point  $\rho_0$  corresponding to a periodic point of the blowing up homeomorphism  $\hat{f}: M_P \rightarrow M_P$  belonging to an  $mk(P)$ -Nielsen class of non-zero index for some  $m > 0$ . Then*

- i)  *$f$  is isotopic to a generalized pseudo-Anosov homeomorphism,*
- ii) *there exists a dense subset of  $\text{Conv}(\rho_1, \rho_2, \dots, \rho_N)$  that consists of rotation vectors for periodic points.*

The quite same proof as given in the original publication works to prove this revised theorem.

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