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TOPOLOGY PROCEEDINGS

Volume 54, 2019

Pages 125–137

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by

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Electronically published on December 21, 2018

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Topology Proceedings

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Mail:	Topology Proceedings Department of Mathematics & Statistics Auburn University, Alabama 36849, USA
E-mail:	topolog@auburn.edu
ISSN:	(Online) 2331-1290, (Print) 0146-4124

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Volume 54 (2019)
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E-Published on December 21, 2018

FORCING AMONG PATTERNS WITH NO BLOCK STRUCTURE

ALEXANDER BLOKH AND MICHAŁ MISIUREWICZ

Dedicated to the memory of our colleague and dear friend Sergiy Kolyada

Abstract. Define the following order among all natural numbers except for 2 and 1:

$$4 \gg 6 \gg 3 \gg \cdots \gg 4n \gg 4n+2 \gg 2n+1 \gg 4n+4 \gg \dots$$

Let f be a continuous interval map. We show that if $m \gg s$ and f has a cycle with no division (no block structure) of period m, then f has also a cycle with no division (no block structure) of period s. We describe possible sets of periods of cycles of f with no division and no block structure.

1. Introduction and Statement of the Results

The simplest type of limit behavior of a trajectory is periodic; studying periodic orbits (cycles) is one of the central topics in one-dimensional dynamics. To some extent this can be explained by a remarkable result, the Sharkovsky Theorem, proved by A. N. Sharkovsky in the 1960s ([13]; see [14] for its English translation). To state it, let us first recall the

2010 *Mathematics Subject Classification.* Primary 37E15; Secondary 37E05, 37E45.

Key words and phrases. cyclic patterns, forcing relation, Sharkovsky order.

Research of Blokh was partially supported by NSF grant DMS–1201450.

Research of Misiurewicz was partially supported by grant number 426602 from the Simons Foundation.

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