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Colin Defant*, 18434 Hancock Bluff Rd., Dade City, FL 08540, and **Kai Zheng**. *Stack-Sorting with Consecutive-Pattern-Avoiding Stacks*.

We introduce consecutive-pattern-avoiding stack-sorting maps SC_σ , which are natural generalizations of West's stack-sorting map s and natural analogues of the classical-pattern-avoiding stack-sorting maps s_σ recently introduced by Cerbai, Claesson, and Ferrari. We characterize the patterns σ such that $\text{Sort}(SC_\sigma)$, the set of permutations that are sortable via the map $s \circ SC_\sigma$, is a permutation class, and we enumerate the sets $\text{Sort}(SC_\sigma)$ for $\sigma \in \{123, 132, 321\}$. We also study the maps SC_σ from a dynamical point of view, characterizing the periodic points of SC_σ for all $\sigma \in S_3$ and computing $\max_{\pi \in S_n} |SC_\sigma^{-1}(\pi)|$ for all $\sigma \in \{132, 213, 231, 312\}$. In addition, we characterize the periodic points of the classical-pattern-avoiding stack-sorting map s_{132} , and we show that the maximum number of iterations of s_{132} needed to send a permutation in S_n to a periodic point is $n - 1$. The new concepts introduced in this paper lead to several open problems and conjectures that we will discuss. (Received August 25, 2020)