* Related Work:

1. In this research paper[1] they describe the design, analyze the structure, and evaluate the performance of SPDP, an automatically synthesized lossless compression algorithm for single- and double-precision floating-point data. It is the best-compressing out of the 9,400,320 possible four-stage algorithms that can be built from our set of 48 algorithmic components that does not include any bit-level coders. SPDP yields the highest compression ratio on eleven of the 26 tested datasets and outperforms all of the evaluated compressors except Zstd.

More importantly, their analysis represents a first step in a new direction aimed at improving their understanding of how to build effective domain-specific compression algorithms. First, by systematically generating candidates and analyzing the structure of the best resulting algorithm, they were able to gain insight into its operation and learned how to handle mixed precision datasets. Second, they were able to demonstrate that a competitive algorithm can be created based solely on transformations that do not process data at bit granularity.