

# Bucket Sort When You Know The Distribution.

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## Abstract

We propose a new simple construction based on Tanner Codes, which yields a good LDPC code with testability query complexity of  $\Theta(n^{1-\varepsilon})$  for any  $\varepsilon > 0$ .

**The problem.** Let  $f : [0, 1] \rightarrow [0, 1]$  a fixed distribution function. Write an algorithm that sort  $n$  draws  $x_1 \dots x_n$  at linear expectation time.

