

PLOTS OF COMPRESS, SAG, AND ROTATE LEFT

Below are 3D plots of $\text{compress}(x, m)$, $\text{SAG}(x, m)$, and rotate left ($x \lll r$) as functions of integers x , m , and r . These plots were produced by Mathematica. For each function, two plots are shown, one for a word size of three bits and the other for a word size of five bits.

For compress and SAG, m is a mask. For compress, bits of x selected by m are extracted and compressed to the right, with 0-fill on the left. For SAG, bits of x selected by m are compressed to the left, and the unselected bits are compressed to the right.

This material was suggested by Guy Steele.

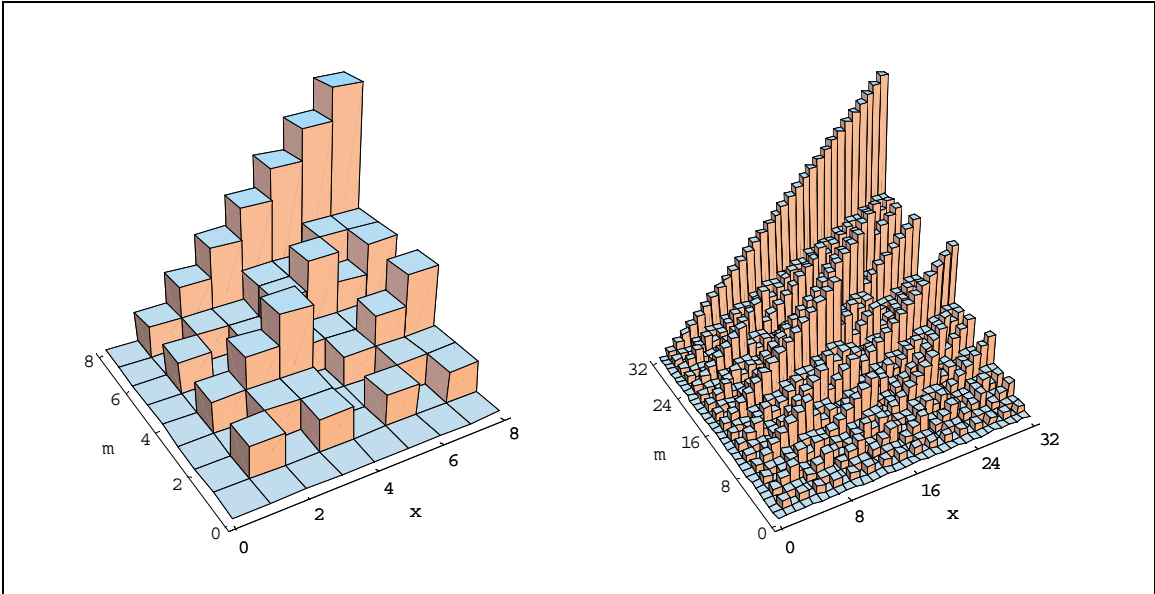


FIGURE 1. Plots of the generalized extract, or $\text{compress}(x, m)$ function.

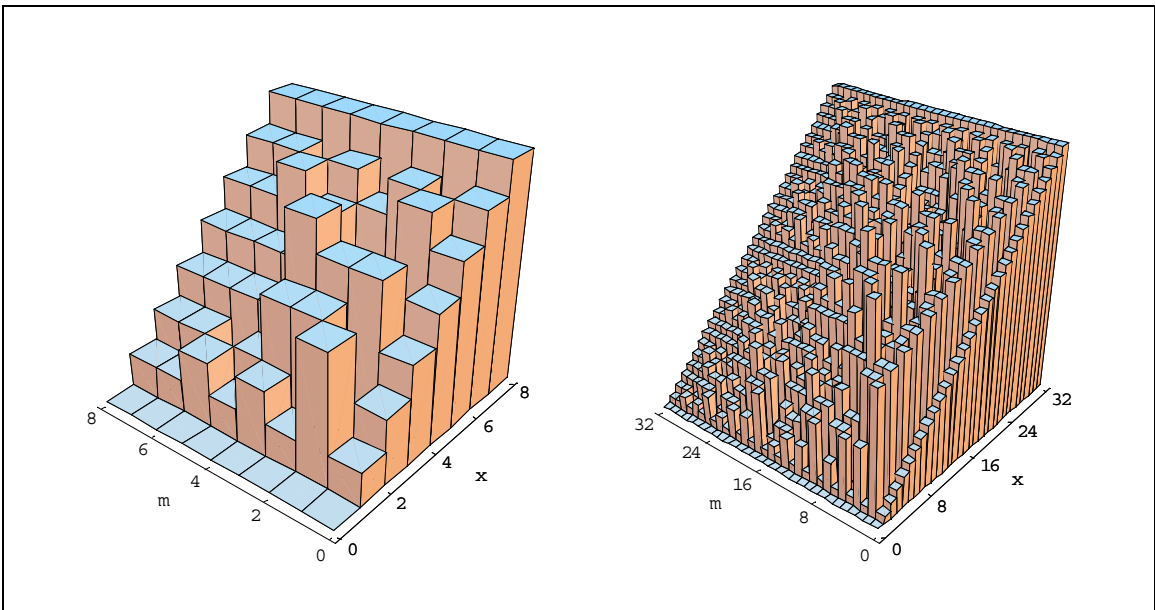


FIGURE 2. Plots of the Sheep and Goats function $\text{SAG}(x, m)$.

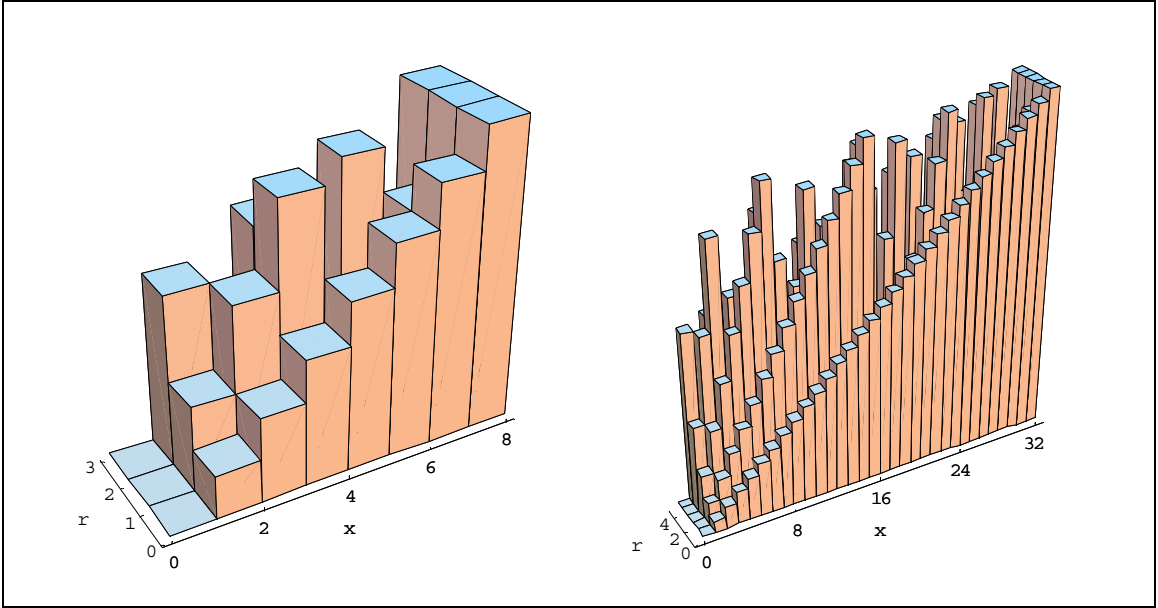


FIGURE 3. Plots of the rotate left function $x \ll r$.