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*Spoof odd perfect numbers.* Preliminary report.

Since the time of the Greeks, the problem of the existence of odd perfect numbers has remained intractable. There has been surprisingly little theoretical progress, though with the advent of computers, numerical results have made their existence seem increasingly unlikely. A less-known problem is to find spoof odd perfect numbers, a generalization of odd perfect numbers where quasi-prime factorizations are used for the computation of the  $\sigma$  function. For example, Descartes found that, if we treat 22021 as if it were prime, then  $198585576189 = 3^2 \cdot 7^2 \cdot 11^2 \cdot 13^2 \cdot 22021$  would be an odd perfect number. To our knowledge, no other spoof odd perfect numbers have been found. Using a computer search, we classify all spoof odd perfect numbers with a given number of distinct quasi-prime factors. This talk reports the results of our search. Our approach and the number-theoretic motivation will also be discussed. (Received December 01, 2011)