1041-33-80 **Mark W Coffey*** (mcoffey@mines.edu), Department of Physics, 16th and Illinois Streets, Golden, CO 80401. *An efficient algorithm for the Hurwitz zeta and related functions.*

A simple class of algorithms for the efficient computation of the Hurwitz zeta and related special functions is presented [1]. The algorithms also provide means of computing fundamental mathematical constants to arbitrary precision. A number of extensions as well as numerical examples are briefly described. The algorithms are easy to implement and compete with Euler-Maclaurin summation-based methods. Remarks will also be given on very recently constructed series representations of the Hurwitz zeta function.

[1] to appear in J. Comput. Appl. Math. (2008). (Received August 04, 2008)