Aniekan A. Ebiefung* (aniekan-ebiefung@utc.edu), 615 Mccallie Ave, Chattanooga, TN 37403. A Block Principal Pivoting Algorithm for the Vertical Generalized Linear Complementarity Problem (VGLCP) with a Vertical Block P-matrix.

A block principal pivoting algorithm for the VGLCP, when the associated matrix is a P-matrix, is provided. We are motivated by the efficiency of this method when applied to large scale problems in linear complementarity problems (LCPs), especially that problems involving the VGLCP are likely to be larger and more complex than what we have for the LCP. The algorithm is very efficient and a numerical example shows that it reduces the number of iterations needed to solve the VGLCP when compared to other available algorithms. (Received September 17, 2019)