

# ANDERSON ACCELERATION: ALGORITHMS AND IMPLEMENTATIONS

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Recent joint work with A. P. Lott, C. S. Woodward, and U. M. Yang has shown that a method for accelerating general fixed-point iterations originating in work of D. G. Anderson [J. Assoc. Comput. Machinery, 12 (1965), 547-560] can be effective in improving the performance of a modified Picard method in variably saturated flow simulations. This talk will begin with brief review of the Anderson method, its applications, and its relation to other acceleration methods. It will then address considerations for implementing the method and conclude with an outline of a stable and efficient implementation.