able to determine precisely f. (When $l = 1$, the method is essentially the Aitken acceleration procedure.) Of course, one stops far short of $2l$ iterations to obtain a good approximation to f.

Therefore the extrapolation procedure consists of the following two steps:

1. Compute Gauss–Seidel iterations, $f^1, \ldots, f^{2p}$, forcing f^i to lie in the kernel of $\hat{P}$.
2. Extrapolate the iterates using the ε-algorithm to get an improved approximation to f.

We have used the above algorithm on various problems with relatively good success. A first data set which was given to us by the authors turned out to be incompatible and as a result of our calculations an error in a spline fitting program was detected! A second set of data was provided where Gauss–Seidel converged slowly and the application of the above algorithm yielded very satisfactory results.

Conclusion. Using the ε-algorithm to accelerate convergence of a basic iteration for linear systems with nonsymmetric matrices seems to be a very promising approach.

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REFERENCES

[1] GEKELER, E. (1972). On the solution of systems of equations by the epsilon algorithm of Wynn. *Math. Comp.* **26** 472–436.

[2] GOLUB, G. H. and DE PILLIS, J. (1988). Toward an effective two-parameter SOR method. Presented at the Conference on Iterative Methods for Large Linear Systems, October 19–21, 1988, Austin, Texas.

[3] GOLUB, G. H. and VAN LOAN, C. F. (1983). *Matrix Computations*. Johns Hopkins Univ. Press, Baltimore, Md.

[4] ISAACSON, E. and KELLER, H. B. (1966). *Analysis of Numerical Methods*. Wiley, New York.

[5] KELLER, H. B. (1965). On the solution of singular and semidefinite linear systems by iteration. *SIAM J. Numer. Anal.* **B2** 281–290.

[6] VARGA, R. S. (1962). *Matrix Iterative Analysis*. Prentice-Hall, Englewood Cliffs, N.J.

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We would like to congratulate the authors for a stimulating paper. Additive models for approximating high-dimensional regression problems have been around for quite some time, but a number of important problems have remained