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Foreword–Gary Doolen

This issue of the *Journal of Statistical Physics* contains 22 papers which were presented at the May 1984 Conference on Transport and Propagation in Nonlinear Systems held in Los Alamos, New Mexico. The conference was organized by the Center for Nonlinear Studies and was supported in part by the Program in Applied Mathematical Sciences of the Office of Basic Energy Science of the U. S. Department of Energy.

Several areas of active research were highlighted during the five-day conference: dynamo modeling in stars, convective motion in the earth's mantle, coherence in biological systems, mathematical modeling, stimulated Raman scattering, nonlinear optical systems, and ion acoustic turbulence. In most of these areas, the convergence of theory, experiment, and computer modeling has produced new insights which impact related and sometimes unrelated fields of research. A few of the papers contain new work which was completed after the conference and may be enjoyed by conference attendees and journal readers in general for the first time. I know that the serious reader can gain much from the papers presented in this issue.

The untimely death in 1984 of Mark Kac and Stan Ulam, both of whom had enormous influence on mathematics, in general, and the Center for Nonlinear Studies in particular, has motivated the dedication of this issue of the *Journal of Statistical Physics* to the memory of these two great men. It is quite appropriate that the recent interview by Mitchell Feigenbaum of these two "Polish Masters" be included in this memorial issue because it captures with insight the way that each viewed mathematics, the subject so central to our lives. Both have left foundations for the mathematics of the future. We miss them very much.

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