

THE CHAOS AVANT-GARDE
MEMORIES OF THE EARLY DAYS OF CHAOS THEORY

WORLD SCIENTIFIC SERIES ON NONLINEAR SCIENCE

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Preface

In 1998 we decided to put together this volume of memoirs of chaos pioneers, before they disappear. After some thought, we decided to invite only the avant-garde, the people who had struggled with chaos concepts before the acceptance of the new paradigm. We limited the time span of this period to 1959-1974. The terminus was the attachment of the word *chaos* to dynamical systems theory, early in 1974, by Li and Yorke, which coincided with the beginning of Rössler's writings on the significance of the word *chaos* in this context.

We wrote to these individuals in the Spring of 1999, almost all responded with a memoir or two, which are published here, many for the first time. One exception is Ed Lorenz, who did not respond to our letter. We have included a short piece by him, taken from his own book, *The Essence of Chaos*. Another is David Ruelle, who replied, "I now leave it to other people to think and write about the early days of chaos theory." Finally, Robert May declined, due to pressures on his time.

The order of the pieces in this collection is our rough approximation to the actual sequence of events. Various permutations might have been chosen equally.

We apologize to the many pioneers not represented here. We hope that this volume is just the first of a sequence. Finally, we are grateful to Professors Akamatsu and Inagaki, former students of Professor Ueda, for suggesting this project.

Ralph Abraham
Yoshisuke Ueda
Santa Cruz, March 6, 2000

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