Preface

This book reports the Proceedings of the interdisciplinary School on "Space Time Chaos: Characterization, Control and Synchronization," which was held at the University of Navarra, Pamplona, Spain, on June 19–23, 2000, under the direction of the Editors.

The School was organized by the Institute of Physics of the University of Navarra and was intended to cover subjects related to complex spatiotemporal phenomena from both theoretical and experimental points of view, focusing especially on the recent advancements in the fields of control, synchronization and characterization of complex space-extended systems. Many topics have been object of lectures, among which we recall the analysis of experimental data, the diffusion limited aggregation and Laplacian growth problems, communication using chaotic carriers, noise effects in spatially extended systems, control and synchronization of chaos, riddling and on-off intermittency, the problem of a definition of complexity. In this framework, we wish to thank all lecturers, who have contributed substantially to train the audience toward the new perspectives in the respective fields, as well as to create a charming atmosphere and highly stimulating scientific discussions with the participants.

We would like to acknowledge the other members of the School Scientific Committee, namely F. T. Arecchi (Italy), C. Grebogi (Brazil), J. Kurths (Germany), I. Procaccia (Israel), K. Showalter (USA) and L. Vázquez (Spain) for their fruitful advice and cooperation in the organization of the School. Furthermore we would like to acknowledge the financial support from the Spanish Ministerio de Educación y Ciencia, the European Commission (DG XII, contract number: HPRN-CT-2000-00158), the USA Fulbright Program and the University of Navarra, which made it possible to award grants and facilitate the participation of students and contributors from all the world.

Besides lecturers, the School saw the participation of more than one hundred PhD or postdoc students coming from very different fields, whom we gratefully thank for their contribution with talks, poster presentations or

simply with their presence, and for having profusely discussed the different presented subjects from very diverse points of view: from applied mathematics, to engineering, laser physics, chemistry, biophysics and ecology, statistical mechanics, electronics. We believe that this event has considerably contributed to bring together different skills and expertises, emphasizing the common achievements and pointing out future directions in the respective fields of interest.

Finally, we feel indebted to C. Ceccarini and G. Sottile for their valuable contribution as secretaries of the School during its whole duration, and we would like to thank all members of the Department of Physics and Applied Mathematics of the University of Navarra, as well as all the staff of the University of Navarra, who have contributed to guarantee the pleasantness of those days.

The Editors

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