Acknowledgements

To begin, I wish to thank Katja Lindenberg for inviting me to write this book for the Springer INLS Series. The first edition of this book, which appeared in 1992, was the result of lectures on classical and quantum chaos theory that I gave at the Institute for Nonlinear Science, University of California, San Diego, in 1987, and later at Guangxi Normal University in Guilin, China, and at the University of Texas in Austin, Texas. The first edition focused on classical chaos theory and the manifestations of chaos in bounded quantum systems. This new edition contains selected material from the first edition but also discusses the manifestations of chaos in open systems, which has been a major focus of the field in recent years. The new edition also contains a thorough grounding in random matrix theory and supersymmetry techniques, which have become essential for analyzing properties of quantum systems whose classical counterpart is chaotic.

As before, I have attempted to write the book both as a textbook and as a research resource. Because it was necessary to keep the book a reasonable length, I have made a judgment about the material that I use to illustrate ideas, but at the same time I have tried to reference all other relevant work that I know about.

This book has benefited from discussions with many colleagues and students in the fields of classical and quantum chaos over the years. I hope I have done justice to the contributions they have all made to this important field of dynamics.

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