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## Preface

The concept for this volume originated at the *Symposium on New Trends in Nonlinear Dynamics and Control, and their Applications*. The symposium was held October 18-19, 2002, at the Naval Postgraduate School in Monterey, California and was organized in conjunction with the 60th birthday of Professor Arthur J. Krener, a pioneer in nonlinear control theory. The symposium provided a wonderful opportunity for control theorists to review major developments in nonlinear control theory from the past, to discuss new research trends for the future, to meet with old friends, and to share the success and experience of the community with many young researchers who are just entering the field.

In the process of organizing this international symposium we realized that a volume on the most recent trends in nonlinear dynamics and control would be both timely and valuable to the research community at large. Years of research effort have revealed much about the nature of the complex phenomena of nonlinear dynamics and the performance of nonlinear control systems. We solicited a wide range of papers for this volume from a variety of leading researchers in the field, some of the authors also participated in the symposium and others did not. The papers focus on recent trends in nonlinear control research related to bifurcations, behavior analysis, and nonlinear optimization. The contributions to this volume reflect both the mathematical foundations and the engineering applications of nonlinear control theory. All of the papers that appear in this volume underwent a strict review and we would like to take this opportunity to thank all of the contributors and the referees for their careful work. We would also like to thank the Air Force Office of Scientific Research and the National Science Foundation for their financial support for this volume.

Finally, we would like to exercise our prerogative and thank many of the people involved with the symposium at this time. In particular, we would like to thank Jhoie Passadilla and Bea Champaco, the staff of the Department of Applied Mathematics of the Naval Postgraduate School, for their support in organizing the symposium. Furthermore, we extend our special thanks to

VI Preface

CAPT Frank Petho, USN, whose dedication to the core mission of the Naval Postgraduate School allowed him to cut through the bureaucratic layers. Without his vision and support the symposium might never have happened. Most importantly, we would like to express our deepest gratitude to the Air Force Office of Scientific Research and the National Science Foundation, for the financial support which made the symposium possible.

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