

Preface

The optimal control of cooperating and collaborating systems has continued to see increased research across the military domain. Much of autonomous unmanned vehicle research is presently geared toward cooperative control problems. Other domains (e.g., medical, homeland security, manufacturing, etc.) are also devising strategies for solving cooperative control problems. There have been some novel solutions proposed over the years for solving problems in cooperative control. However, in light of decentralized systems, and the sharing of meaningful information to the participants in the system, cooperative control continues to be one of the most difficult in the applied sciences. Only the continued dedicated research in this area will allow for novel solutions applicable to the current and future problems of cooperative control. This present volume, as well as volumes from previous years, clearly illustrate innovative solutions from some of the best and brightest cooperative control and optimization researchers.

This volume represents the most recent in a series of publications dealing with recent research and challenges in the field of optimal cooperative control. Most of the chapters in this book were presented at the Eighth International Conference on Cooperative Control and Optimization, which took place in Gainesville, Florida, January 30 – February 1, 2008. It is our belief that this book will be an invaluable resource to faculty, researchers, and students in the fields of optimization, control theory, electrical engineering, computer science, applied mathematics, and robotics.

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