

CONTENTS

Preface	vii
Conference Photo	xiii
List of Participants	xv
List of Contributors	xix
Part One: Xunjing Li's Academic Life	
A Tribute in Memory of Professor Xunjing Li on His Seventieth Birthday	3
<i>Jin Ma and Yuncheng You</i>	
Publications of Xunjing Li	9
Students and Post-doctors Advised by Xunjing Li	17
Part Two: Stochastic Control, Mathematical Finance, and Backward Stochastic Differential Equations	
Axiomatic Characteristics for Solutions of Reflected Backward Stochastic Differential Equations	23
<i>Xiaobo Bao and Shanjian Tang</i>	
A Linear Quadratic Optimal Control Problem for Stochastic Volterra Integral Equations	44
<i>Shuping Chen and Jiongmin Yong</i>	
An Additivity of Maximum Expectations and Its Applications	67
<i>Zengjing Chen, Matt Davison, Mark Reesor, and Ying Zhang</i>	
Stochastic Control and BSDEs with Quadratic Growth	80
<i>Marco Fuhrman, Ying Hu, and Gianmario Tessitore</i>	
A Fundamental Theorem of Asset Pricing in Continuous Time with Square Integrable Portfolios	87
<i>Hanqing Jin and Xun Yu Zhou</i>	

Indifference Pricing of Universal Variable Life Insurance	107
<i>Jin Ma and Yuhua Yu</i>	
g_T -Expectations and the Related Nonlinear Doob–Meyer Decomposition Theorem	122
<i>Shige Peng and Mingyu Xu</i>	
Nonconvexity Phenomenon on Itô’s Integrals and on Stochastic Attainable Sets	141
<i>Shanjian Tang</i>	
Unique Continuation and Observability for Stochastic Parabolic Equations and Beyond	147
<i>Xu Zhang</i>	
Part Three: Deterministic Control Systems	
Design of Dynamic High-Gain Observers for a Class of MIMO Nonlinear Systems	163
<i>Hao Lei, Jianfeng Wei, and Wei Lin</i>	
Some Counterexamples in Existence Theory of Optimal Control	183
<i>Hongwei Lou</i>	
A Generalized Framework for Global Output Feedback Stabilization of Inherently Nonlinear Systems with Uncertainties	191
<i>Jason Polendo and Chunjiang Qian</i>	
A Linear Quadratic Constrained Optimal Feedback Control Problem	215
<i>Yashan Xu</i>	
On Finite-Time Stabilization of a Class of Nonsmoothly Stabilizable Systems	220
<i>Bo Yang and Wei Lin</i>	
The Algebraic Criterion for Delay-Independent Stability of Linear Systems ...	241
<i>Xin Yu, Chao Xu and Kangsheng Liu</i>	
Transformation Method of Solving a Time-Optimal Control Problem with Pointwise State Constraints	250
<i>Shangwei Zhu and Xunjing Li</i>	

Part Four: Dynamics and Optimal Control of Partial Differential Equations

Optimal Control of Quasilinear Elliptic Obstacle Problems	263
<i>Qihong Chen and Yuquan Ye</i>	
Controllability of a Nonlinear Degenerate Parabolic System with Bilinear Control	279
<i>Ping Lin, Hang Gao, and Xu Liu</i>	
Near-Optimal Controls to Infinite Dimensional Linear-Quadratic Optimal Control Problem	291
<i>Liping Pan and Qihong Chen</i>	
Shape Optimization of Stationary Navier–Stokes Equation	323
<i>Gengsheng Wang, Lijuan Wang, and Donghui Yang</i>	
Solution Map of Strongly Nonlinear Impulsive Evolution Inclusions	338
<i>Xiaoling Xiang, Yunfei Peng, and Wei Wei</i>	
Study on Repairable Series System with Two Components — A Semigroup Approach	354
<i>Hong Xu and Dinghua Shi</i>	
Finite Dimensional Reduction of Global Dynamics and Lattice Dynamics of a Damped Nonlinear Wave Equation	367
<i>Yuncheng You</i>	
Recent Progress on Nonlinear Wave Equations via KAM Theory	387
<i>Xiaoping Yuan</i>	