数理解析研究所講究録1287

微分方程式の粘性解とその周辺

京都大学数理解析研究所 2002年9月

Preface

This volume contains the proceedings of the lectures delivered at the conference, Viscosity Solutions of Differential Equations and Related Topics, held at the Research Institute for Mathematical Sciences, Kyoto University, during October 9–12, 2001. It also contains a paper presented by the authors who were invited to the conference but could not come because of the difficult situation of the world. All the papers are concerned with recent developments in the theory of viscosity solutions and related topics in differential equations.

The conference was possible by support from the Research Institute for Mathematical Sciences. Also, financial support from the Japan Society for the Promotion of Science through its Grants-in-Aid for Scientific Research was helpful for making the conference successful. I wish to thank the Research Institute for Mathematical Sciences and the Japan Society for the Promotion for their support and all those who cooperated to publish this volume.

Hitoshi Ishii (Waseda University)

August, 2002

微分方程式の粘性解とその周辺 Viscosity Solutions of Differential Equations and Related Topics 研究集会報告集

2001年10月9日~10月12日 研究代表者 石井 仁司(Hitoshi Ishii)

目 次

1.	On fully nonlinear PDEs with quadratic nonlinear	arity		
·	埼玉大・理	小池 茂昭(Shigeaki Koike)		
2.	A level set method for a growth of a crystal by	screw dislocations		
	北大・理学	大塚 岳(Takeshi Ohtsuka)		
3.	DYNAMIC BOUNDARY CONDITIONS FOR	HAMILTON-JACOBI		
	EQUATIONS			
	金沢大・理	後藤 俊一(Shun'ichi Goto)		
4.	GEOMETRIC ASPECTS OF HÖLDER AND L	P ESTIMATES		
	The Univ. of Iowa	Lihe Wang		
5.	SINGULARITIES OF VISCOSITY SOLUTION			
	ELLIPTIC EQUATIONS			
	ETH - Zentrum	Denis A. Labutin		
6.	VISCOSITY SOLUTIONS OF FULLY NONLINEAR STOCASTIC			
	PARTIAL DIFFERENTIAL EQUATIONS			
	Univ. de Paris-Dauphine			
	The Univ. of Texas	P. E. Souganidis		
7.	THE EQUIVALENCE OF WEAK SOLUTIONS AND ENTROPY			
	SOLUTIONS AND APPLICATIONS			
	早大・教育	小林 和夫(Kazuo Kobayasi)		
8.	Long time averaged reflection force and homog			
	Neumann boundary conditions			
	東北大・情報科学	有澤 真理子(Mariko Arisaw		
9.				
	· · · · · · · · · · · · · · · · · · ·	三上 敏夫(Toshio Mikami)		
0.	Some formulae related to Hamilton-Jacobi equa			
	Univ. di Roma "La Sapienza"			
1.	On minimal vertical singular diffusion preventing			
	北大・理	儀我 美保(Mi-Ho Giga)		
	y	儀我 美一(Yoshikazu Giga)		

12.	Ergodic control problems arising from portfolio	optimizat	ion for factor models	127
	阪大・基礎工学	長井	英生(Hideo Nagai)	
13.	The Hopf - Lax solution for state dependent Ha	milton - J	acobi equations	143
	Univ. di Roma "La Sapienza"	Italo	Capuzzo Dolcetta	
14.	Nonlinear second order elliptic equations with s	subdifferen	tial terms	155
	神戸商船大	石井	克幸(Katsuyuki Ishii)	
15.	Fully Nonlinear Oblique Derivative Problems for	or Singulaı	Degenerate	
	Parabolic Equations			164
	早大・教育	石井	仁司(Hitoshi Ishii)	