

<<退化抛物方程>>

图书基本信息

书名：<<退化抛物方程>>

13位ISBN编号：9787510004766

10位ISBN编号：7510004764

出版时间：2010-1

出版时间：世界图书出版公司

作者：德贝内代托

页数：387

版权说明：本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问：<http://www.tushu007.com>

<<退化抛物方程>>

内容概要

数学真正意义上研究退化和奇异抛物偏微分方程是近些年才开始的，起源于60年代中叶DeGiorgi, Moser, Ladyzenskaja和Ural'tzeva这些人的工作。

本书是近些年来该领域的进展的综述。

其基本思想来自上个世纪90年代作者在波恩大学的Lipschitz讲义。

目次：函数空间；弱解和局部能量估计；退化抛物方程的Holder连续性；奇异抛物方程解的Holder连续性；弱解有界性；Harnack估计： $p \geq 2$ ；Harnack估计和；退化和奇异抛物系统；抛物 p 系统： Du 的Holder连续性；抛物 p 系统：边界奇异； T 中的非负解： $p \geq 2$ ； T 中的非负解： $1 \leq p < 2$ 。

本书适用于数学专业的研究生和科研人员。

<<退化抛物方程>>

书籍目录

Preface1. Elliptic equations : Harnack estimates and Holder continuity ...2. Parabolic equations : Hamack estimates and holder continuity ..3. Parabolic equations and systems4. Main resultsI. Notation and function spaces1. Some notation2. Basic facts about3. Parabolic spaces and embeddings4. Auxiliary lemmas5. Bibliographical notesII. Weak solutions and local energy estimates1. Quasilinear degenerate or singular equations2. Boundary value problems3. Local integral inequalities4. Energy estimates near the boundary5. Restricted structures : the levels k and the constant 76 . Bibliographical notesIII. Holder continuity of solutions of degenerate parabolic equations1. The regularity theorem2. Preliminaries3. The main proposition4. The first alternative5. The first alternative continued6. The first alternative concluded7. The second alternative8. The second alternative continued9. The second alternative concluded10. Proof of Proposition 3.111. Regularity up to $t = 0$ 12. Regularity up to ST . Dirichlet data13. Regularity at ST . Variational data14. Remarks on stability15. Bibliographical notesIV. Holder continuity of solutions of singular parabolic equations1. Singular equations and the regularity theorems2. The main proposition3. Preliminaries4. Rescaled iterations5. The first alternative6. Proof of Lemma 5.1. Integral inequalities7. An auxiliary proposition8. Proof of Proposition 7.1 when (7.6) holds9. Removing the assumption (6.1) 10. The second alternative11. The second alternative concluded12. Proof of the main proposition13. Boundary regularity14. Miscellaneous remarks15. Bibliographical notesV. Boundedness of weak solutions1. Introduction2. Quasilinear parabolic equations3. Sup-bounds4. Homogeneous structures. The degenerate case $1 < p > 25$. Homogeneous structures. The singular case $1 < p < 26$. Energy estimates7. Local iterative inequalities8. Local iterative inequalities9. Global iterative inequalities10. Homogeneous structures and 111. Proof of Theorems 3.1 and 3.212. Proof of Theorem 4.113. Proof of Theorem 4.2..14. Proof of Theorem 4.315. Proof of Theorem 4.516. Proof of Theorems 5.1 and 5.217. Natural growth conditions18. Bibliographical notesVI. Harnack estimates : the case $p > 2$ 1. Introduction2. The intrinsic Hamack inequality3. Local comparison functions4. Proof of Theorem 2.15. Proof of Theorem 2.26. Global versus local estimates7. Global Hamack estimates8. Compactly supported initial data9. Proof of Proposition 8.110. Proof of Proposition 8.1 continued11. Proof of Proposition 8. i concluded12. The Cauchy problem with compactly supported initial data13. Bibliographical notesVII. Hamack estimates and extinction profile for singular equations1. The Harnack inequality2. Extinction in finite time (bounded domains) 3. Extinction in finite time (in R^N) 4. An integral Hamack inequality for all5. Sup-estimates for6. Local subsolution.7. Time expansion of positivity8. Space-time configurations9. Proof of the Hamack inequality10. Proof of Theorem 1.211. Bibliographical notesVIII. Degenerate and singular parabolic systems1. Introduction2. Boundedness of weak solutions3. Weak differentiability of Du and energy estimates for IOu 4. Boundedness of IOu . Qualitative estimates5. Quantitative sup-bounds of6. General structures7. Bibliographical notesIX. Parabolic p -systems : Hholder continuity of Du 1. The main theorem2. Estimating the oscillation of Du 3. Hlder continuity of Du (the case $p > 2$) 4. HOlder continuity of Du (the case $1 < p < 2$) 5. Some algebraic Lemmas6. Linear parabolic systems with constant coefficients7. The perturbation lemma8. Proof of Proposition I.1- (i) 9. Proof of Proposition 1.1- (ii) 10. Proof of Proposition 1.1- (iii) 11. Proof of Proposition 1.1 concluded12. Proof of Proposition13. Proof of Proposition 1.2 concluded14. General structures15. Bibliographical notesX. Parabolic p -systems : boundary regularity1. Introduction2. Flattening the boundary3. An iteration lemma4. Comparing w and v (the case $p > 2$) 5. Estimating the local average of IDw (the case $p > 2$) 6. Estimating the local averages of w (the case $p > 2$) 7. Comparing w and v (the case $\max 1$

<<退化抛物方程>>

版权说明

本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问:<http://www.tushu007.com>