

2021椭圆方程的边界正则性研讨会

2021年6月19日（绅泰大酒店四楼海棠厅）

主持人	杜力力（四川大学）
9:00-9:50	<p>李东升（西安交通大学）</p> <p>Interior L^p estimates for Stokes equations</p> <p>In this talk, we will prove interior L^p estimate for D^2u of Stokes equation in non-divergence form. Since Stokes equation has no regularity in t direction, there will be no L^p estimate for u_t and counterexamples will be given to show this. To prove the conclusion, we estimate the decay of distribution function of Δu. We will also discuss the interior L^p estimate for Du of Stokes equation in divergence form, where the decay of distribution function of $\operatorname{curl} u$ is considered.</p>
9:50-10:40	<p>唐岚（华中师范大学）</p> <p>Boundary $C^{1, \alpha}$ Regularity for generalized solutions to the Dirichlet problem of Degenerate Monge-Ampère Equations</p> <p>In our work, we establish global $C^{1, \alpha}$ regularity for generalized solutions in the sense of Alexandrov to the Dirichlet problem of a class of degenerate Monge-Ampère Equations with optimal boundary conditions. This is joint work with Prof. Luis Caffarelli and Prof. Xu-Jia Wang.</p>
10:40-11:00	茶歇
主持人	张光辉（华中科技大学）
11:00-11:50	<p>杜式忠（汕头大学）</p> <p>On Bernstein Theorem of Affine Maximal Equation</p> <p>This talk will present some known and new results for Bernstein type theorem of Affine Maximal Equation.</p>
12:00-14:00	午餐（绅泰大酒店四楼瑞香餐厅）
主持人	张凯（上海交通大学）
14:00-14:50	<p>张超（哈尔滨工业大学）</p> <p>Two Recent Results on The Double Phase Equations</p> <p>In this talk, we first review some regularity results for the double phase problems. Then we present a result on the equivalence between weak solutions and viscosity solutions for double-phase equations. Moreover, we report a new Campanato type estimate for the weak solutions of multi-phase equations.</p>
14:50-15:40	<p>韦韡（复旦大学）</p> <p>The Neumann Problem for a Type of Fully Nonlinear Complex Equations</p> <p>In this talk, we study the Neumann problem for a type of fully nonlinear second order elliptic partial differential equations on domains in \mathbb{C}^n without any curvature assumptions on the domain.</p>
15:40-16:10	茶歇
主持人	何躡（四川大学）
16:10-17:00	<p>李志夙（西北大学）</p> <p>Global Harnack Inequalities of Elliptic Equations and Their Applications</p> <p>In this talk, we will present our recent studies on two elementary methods toward global Harnack inequalities of harmonic functions, while the second one also applies to general linear and nonlinear elliptic equations in flat or curved spaces. Both methods are all based on some elementary covering arguments & iterative techniques. Some applications of the global Harnack inequalities will also be presented.</p>
17:00-17:50	<p>廉媛媛（上海交通大学）</p> <p>A Note on The BMO and Calderon-Zygmund Estimate</p> <p>In this talk, we give a simple proof of the BMO estimate for Poisson's equation. Then the Calderon-Zygmund estimate follows by the interpolation and duality.</p>
18:00	晚餐（绅泰大酒店四楼瑞香餐厅）