

数学与系统科学研究院

计算数学所学术报告

报告人: Prof. Clóvis Caesar  
Gonzaga  
(Federal University of Santa  
Catarina, Brazil)

报告题目: Interior point methods  
in Mathematical Programming

邀请人: 袁亚湘研究员

报告时间: 2009年8月11日(周二)  
下午 4:30—5:30

报告地点: 科技综合楼三层 311  
计算数学所报告厅

Abstract: Huard centers, barrier functions  
and Dikin ellipsoids were used before the 1980's for  
searching optimizers through what we now call

**“interior points”. Simultaneously, computational complexity results were developed for discrete and for convex problems, the Linear Programming problem was shown to be polynomial by Khachiyan, and finally Karmarkar developed his interior point algorithm for LP in 1984. From this point on, the three tools mentioned above were melted with complexity results to generate a revolution in Mathematical Programming. Central points and the central path became the main mathematical construction, and their primal–dual characterizations led to efficient algorithms for linear and convex quadratic problems as well as for linear complementarity problems and semi–definite programming.**

**In this talk we present a mostly geometrical description of the basics of these techniques, stressing the properties of the central paths and the methods for following them.**

**欢迎大家参加！**