数学与系统科学研究院

计算数学所学术报告

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报告题目：

Mean Value Theorems in Higher Dimensions and Their Applications

邀请人： 林群 院士

报告时间：**2013** 年 **5** 月 **10** 日（周五）

下午 **16:00-17:00**

报告地点： 科技综合楼三层 **301**

计算数学所小报告厅

Abstract:

In this paper, we describe the Mean Value Theorem (MVT) and Cauchy Mean Value Theorem (CMVT) when considering an R^{n-1} dimensional hyperplane intersects an R^{n-1} dimensional smooth surface in R^n. We demonstrate how we derive the the proofs of MVT and CMVT by applying techniques described in [Yang]. We further discuss how the theorems can be extended by replacing the hyperplane with another smooth surface. Next, we link MVT to problems of finding the extreme values for a smooth function subject to several constraints. We use technological tools to show how we can obtain the solutions that are guaranteed by our theories. Complete paper can be found at https://php.radford.edu/~ejmt/deliveryBoy.php?paper=eJMT_v6n1p1.

Reference.

[Yang] W.-C. Yang, .Revisit Mean Value, Cauchy Mean Value and Lagrange Remainder Theorems, Electronic Journal of Mathematics and Technology (eJMT), ISSN 1933-2823, Issue 2, Vol.1, June, 2007.

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