# 数学与系统科学研究院

# 计算数学所学术报告

**(定期学术报告)**

**报告人：** 文新博士 (ICMSEC)

**报告题目：**

**Numerical methods to a type of delta function integrals**

**报告时间：** 2007 年 10 月 25 日(周四)

下午 16:00—17:00

**报告地点：** 科技综合楼三层 311

计算数学所报告厅

## Abstract:

**We present second to fourth order numerical methods to a type of delta function integrals in one to three dimensions. These delta function integrals arise from recent efficient level set methods for computing the multivalued solutions of nonlinear PDEs. We show that the natural quadrature approach with usual discrete delta functions and support size formulas to the two dimensional delta function integrals suffer from nonconvergence. We then present high order numerical methods to this type of delta function integrals based on interpolation approach. Numerical examples verify the efficiency and accuracy of these methods.**


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