数学与系统科学研究院

计算数学所学术报告

报告人：　Prof. Bob Eisenberg

（ *Rush University and Illinois Institute of Technology, Chicago IL* ）

报告题目：

Electricity is Different: it is universal

邀请人：　卢本卓 研究员

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上午 10:40-11:40

报告地点：　数学院南楼九层

902 教室

Abstract:

Mathematicians and physicists usually work with approximate laws. Scientists have developed exquisite skills to use their approximate knowledge to precise effect. But the crucial technology of our time depends on just one technology, the technology of electricity called electronics, in one dimensional branched systems. I argue that our electronic technology is so powerful because it is simple and precise over an enormous range, from microvolts to megavolts, from picoamps to thousands of amps, from tenths of an ohm to (nearly) gigohms. One of the laws of electrodynamics---conservation of current---is universal and exact, no matter what the material context, even though material properties are not exact or universal. I argue that our successful electronic technology is implemented in branched one dimensional circuits because they implement a universal law, exact from the smallest device in a computer chip to the largest devices of power technology, from protons to stars.

欢迎大家参加！