

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**

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报告题目:

Life is Different: it is Inherited

邀请人: 卢本卓 研究员

报告时间: 2018 年 6 月 20 日 (周三)

上午 9:30-10:30

报告地点: 数学院南楼九层

902 教室

Abstract:

What is different about life? Why do life sciences require different science and mathematics? I address these issues starting from the obvious: all of life is inherited from genes. Twenty thousand genes of say 30 atoms each control an animal of $\sim 10^{25}$ atoms. How is that possible? Answer: the structures of life form a hierarchy of devices that allow handfuls of atoms to control everything. A nerve signal involves meters of nerve but is controlled by a few atoms. Indeed, potassium and sodium differ only in the diameter of the atoms. Life depends on this difference in diameter. Sodium and potassium are otherwise identical. The task of the biological scientist is first to identify the hierarchy of devices and what they do. Then we want to know how the devices work. We want to understand life well enough to improve its devices, in disease and technology.

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