



## 复旦大学数学科学学院 数学综合报告会

报告题目: **Neuromorphic Image Analysis and Pattern Recognition for Scientific Applications**

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摘要: Convolutional Neural Networks (CNNs) have become important tools for performing many machine learning tasks including image analysis and pattern recognition. Although most of the existing CNNs are currently constructed, trained and deployed on traditional computing platforms (multicore CPUs and GPUs), it is possible to lower the precision of the CNN parameters and input data without significantly sacrificing the success rate of CNN predictions. As a result, fewer bits can be used to encode CNN parameters and the input data. Such a reduction in the bit precision and representation of the data and network can potentially simplify the design of energy efficient processors suitable for deep learning.

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