THE UNIVERSITY OF CHICAGO

Department of Statistics
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ZHENGRONG XING

Department of Statistics
The University of Chicago

A Multiscale Alternative to Wavelets in De-noising Poisson-distributed Data

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110 Eckhart Hall, 5734 S. University Avenue

ABSTRACT

Wavelet analysis has become part of the standard toolkit for researchers in many areas. It has widespread usage in image processing and signal recovery, and even in areas such as partial differential equations. As such, wavelets are the natural choice for de-noising Poisson counts. This talk will give an overview of some of the current methods that deal with Poisson data, as well as introduce a novel methodology. This new approach is much better suited to dealing with high-throughput sequencing data in genetics, and simulation results will demonstrate that this approach slightly outperforms other methods in terms of performance.

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