

ON THE INFERENCE OF REGULATORY ELEMENTS, CIRCUITS AND MODULES

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Advances in genomics have led to the production of various functional genomic data as well as genomic sequence data. This is particularly true in yeasts. Such data have proved to be highly useful for inferring regulatory elements and modules. I shall present studies that I have done with my colleagues and collaborators on the following topics. (1) Detection of transcription factors (including their interactions) involved in a specific function such as the cell cycle, (2) inference of the cis elements (binding sites and sequences) of a transcription factor, (3) reconstruction of the regulatory circuits of genes, and (4) inference of regulatory modules. In all these topics, we have developed methods and have applied them to analyze data from yeasts.