

**Analysis of Microarray Time-Series Based on Binary Correlation  
and a First Order Model of the Involved Cellular Processes**

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This paper considers the problem of extracting binary gene expression levels from cDNA microarray optical intensity measurements. The specific system considered consists of a short time series of cDNA microarray experiments, corresponding to three yeast cell cycles. The data analysis procedures described here exploit the periodic, binary character of the desired end result. In addition, possible extensions to finer resolutions (e.g., ternary gene expression models) and to cluster analysis are also described briefly.