
Contents

Preface.....	vii
The Editor.....	ix
Contributors.....	xi
Summary of Chapters.....	xiii

Chapter 1	A Comprehensive Analysis of the Effect of Microarray Data Preprocessing Methods on Differentially Expressed Transcript Selection.....	1
	<i>Monika Ray, Johannes Freudenberg, and Weixiong Zhang</i>	

Chapter 2	Differentiation Detection in Microarray Normalization.....	19
	<i>Lei M. Li and Chao Cheng</i>	

Chapter 3	Preprocessing and Normalization for Affymetrix GeneChip Expression Microarrays.....	41
	<i>Ben Bolstad</i>	

Chapter 4	Spatial Detrending and Normalization Methods for Two-Channel DNA and Protein Microarray Data.....	61
	<i>Adi Laurentiu Tarca, Sorin Draghici, Roberto Romero, and Michael Tainsky</i>	

Chapter 5	A Survey of cDNA Microarray Normalization and a Comparison by k -NN Classification.....	81
	<i>Wei Wu and Eric P. Xing</i>	

Chapter 6	Technical Variation in Modeling the Joint Expression of Several Genes.....	121
	<i>Walter Liggett</i>	

Chapter 7	Biological Interpretation for Microarray Normalization Selection.....	151
	<i>Phillip Stafford and Younghee Tak</i>	

Chapter 8	Methodology of Functional Analysis for Omics Data Normalization.....	173
	<i>Ally Perlina, Tatiana Nikolskaya, and Yuri Nikolsky</i>	
Chapter 9	Exon Array Analysis for the Detection of Alternative Splicing	205
	<i>Paul Gardina and Yaron Turpaz</i>	
Chapter 10	Normalization of Array CGH Data.....	233
	<i>Bo Curry, Jayati Ghosh, and Charles Troup</i>	
Chapter 11	SNP Array-Based Analysis for Detection of Chromosomal Aberrations and Copy Number Variations.....	245
	<i>Ben Bolstad, Srinka Ghosh, and Yaron Turpaz</i>	
Index		267