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	Autore	Zhang Gexiang
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	Sommario/riassunto	This book thoroughly investigates the underlying theoretical basis of membrane computing models, and reveals their latest applications. In addition, to date there have been no illustrative case studies or complex real-life applications that capitalize on the full potential of the sophisticated membrane systems computational apparatus; gaps that this book remedies. By studying various complex applications – including engineering optimization, power systems fault diagnosis, mobile robot controller design, and complex biological systems involving data modeling and process interactions – the book also extends the capabilities of membrane systems models with features such as formal verication techniques, evolutionary approaches, and

fuzzy reasoning methods. As such, the book offers a comprehensive and up-to-date guide for all researchers, PhDs and undergraduate students in the fields of computer science, engineering and the bio-sciences who are interested in the applications of natural computing models.