Reliable Lab Solutions

ESSENTIAL NUMERICAL COMPUTER METHODS

Edited by

Michael Johnson

The use of computers and computational methods has become ubiquitous in biological and biomedical research. During the last 2 decades most basic algorithms have not changed, but what has is the huge increase in computer speed and ease of use, along with the corresponding orders of magnitude decrease in cost.

A general perception exists that the only applications of computers and computer methods in biological and biomedical research are either basic statistical analysis or the searching of DNA sequence data bases. While these are important applications they only scratch the surface of the current and potential applications of computers and computer methods in biomedical research. The various chapters within this volume include a wide variety of applications that extend far beyond this limited perception. As part of the Reliable Lab Solutions series, Essential Numerical Computer Methods brings together chapters from volumes 210, 240, 321, 383, 384, 454, and 467 of Methods in Enzymology. These chapters provide a general progression from basic numerical methods to more specific biochemical and biomedical applications.

Cover Photo: The *lac* operon. The Regions coding for Proteins are shown in blue, regulatory regions (green) and diffusible regulatory proteins are shown in red color.

Photo Credit: Reinhard Laubenbacher and Abdul Salam Jarrah, Virginia Bioinformatics Institute at Virginia Tech, Blacksburg, Virginia, USA

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