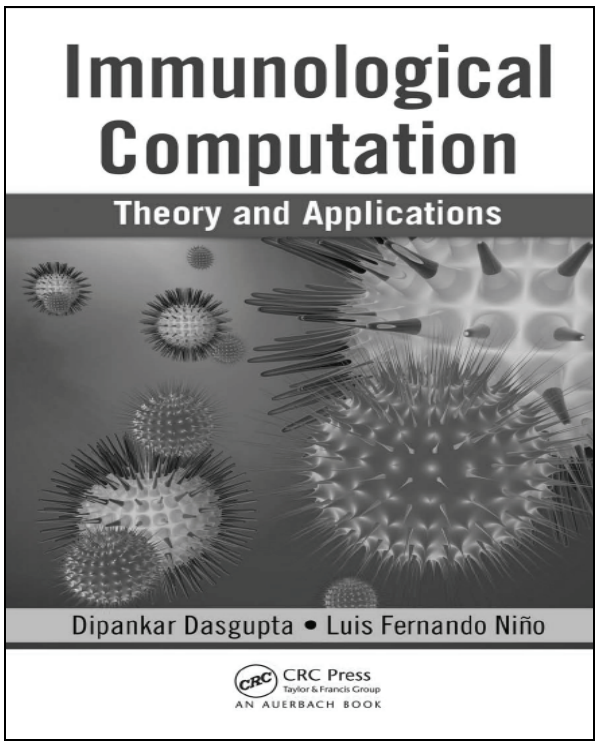
Reseñas Bibliográficas



Título del libro: IMMUNOLOGICAL COMPUTATION: THEORY AND APPLICATIONS
Nombre de los autores: DIPANKAR DASGUPTA Y LUIS FERNANDO NIÑO
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Clearly, nature has been very effective in creating organisms that are capable of protecting themselves against a wide variety of pathogens such as bacteria, fungi and parasites. The powerful information-processing capabilities of the immune system, such as feature extraction, pattern recognition, learning, memory and its distributive nature provide rich metaphors that researchers are finding very useful for the development of computational models. While some of these models are designed to give us a better understanding of the immune systems, other models are being developed to solve complex real-world problems such as anomaly detection, pattern recognition, data analysis (clustering), function optimization and computer security.

Immunological Computation: Theory and Applications is devoted to discussing differrent immunological mechanism and their relation to information processing and problem solving. This unique volume presents a compendium of up-to-date work related to immunity-based techniques. After presenting the general abstractions of immune elements and processes used in computational models, it then.

-Reviews standard procedures, representations, and matching rules that are used in all immunological computation models.

-Covers the details of one of the earliest and most well-known immune algorithms based on the negative selection (NS) process that occurs in the thymus

-Examines promising immune models, including those based on danger theory, cytokine models and MHC based models

The text goes further to describe a wide variety of applications, which include computer security, the detection and analysis of anomalies and faults, robotics, and data mining among others. To enhance understanding of this emerging field of study, each chapter includes a summary, review questions, and exercises for readers to practice; as well as issues that will require future research.