Abdelmalek Essaadi University
Faculty of Sciences and Techniques
Tangier

المؤتمر الدولي السادس لفيزياء تفاعل الإشعاع والمادة

' العلم من أجل تنمية مستدامة'

6th International Congress on Physics of Radiation-Matter Interactions

"*Science for Sustainable Development*"

PIRM VI - 2018
Physique des Interactions Rayonnement Matière
TANGER

6ème Congrès International de la Physique des Interactions Rayonnement-Matière

"*La science pour un développement durable*"

Tangier, MOROCCO| 7-9 May, 2018

Kenzi Solarus Hotel

Book of Abstracts

Editors : Pr. Said RACHAFI & Pr. Hamid NEBDI

P028

APPLICATIONS OF SOFT COMPUTING BY ARTIFICIAL NEURAL NETWORKING (ANNs) MODEL IN DAIRY SCIENCE AND TECHNOLOGY

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The artificial neural networking (ANNs) is a system based on the function of biological neural networks. Although, at present computing is quite advanced, but there are certain tasks that a program made for a common microprocessor is unable to perform; even so a software implementation of a neural network can be made with their advantages and disadvantages. Another aspect of the ANNs is that there are different architectures, which consequently require different types of algorithms, but despite to be an apparently complex system, a neural network is relatively simple. The ANNs simulations were developed with a systematic step-by-step procedure which optimizes a criterion commonly known as the learning rule. The input/output training data is fundamental for these networks as it conveys the information which is necessary to discover the optimal operating point. Due to recent advancement in dairy science and technology, various mathematical predictions and/or models have been used to reduce the laboratory / industry costs and accelerate high quality of the dairy products. By using predictive models, determining the quality of milk will be possible faster and more accurate based on somatic cell count in short period of time after receiving raw milk. The artificial neural networks (ANNs) are computer software or hardware models inspired by the structure and behavior of neurons in the dynamics of fat content. As a powerful learning tool, increasingly neural networks have been adopted by many large-scale information processing applications. We have experimentally collected some samples from the dairy farm in Bitola, R. Macedonia and later on setup a computer programming by neural networking (N-N) model and also with ANNs model and unearth some valuable results from present study.

Key words: Artificial neural networking (ANN) model, storage period, dynamics of fat content, dairy science.