Bio-Inspired Computing for Information Retrieval Applications

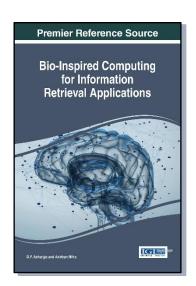
Part of the Advances in Knowledge Acquisition, Transfer, and Management Book Series

D.P. Acharjya (School of Computing Science and Engineering, VIT University, India) and Anirban Mitra (Vignan Institute of Technology and Management, India)

Description:

The growing presence of biologically-inspired processing has caused significant changes in data retrieval. With the ubiquity of these technologies, more effective and streamlined data processing techniques are available.

Bio-Inspired Computing for Information Retrieval Applications is a key resource on the latest advances and research regarding current techniques that have evolved from biologically-inspired processes and its application to a variety of problems. Highlighting multidisciplinary studies on data processing, swarm-based clustering, and evolutionary computation, this publication is an ideal reference source for researchers, academics, professionals, students, and practitioners.



ISBN: 9781522523758 **Release Date:** June, 2017 **Copyright:** 2017 **Pages:** 286

Topics Covered:

- Data Processing
- Evolutionary Computation
- Gene Expression Data
- Rehabilitation Engineering
- Swarm-Based Clustering
- Text Summarization
- Web Crawling

Hardcover: \$205.00

E-Book: \$205.00

Hardcover + E-Book: \$245.00

Order Information

Phone: 717-533-8845 x100 Toll Free: 1-866-342-6657

Fax: 717-533-8661 or 717-533-7115 Online Bookstore: www.igi-global.com



Table of Contents

Foreword

Preface

Acknowledgment

Section 1: Evolutionary Computation in Information Retrieval

Chapter 1

An Innovative Multi-Stage Multi-Dimensional Multiple-Inhomogeneous Melody Search Algorithm: Symphony Orchestra Search Algorithm (SOSA) Mohammad Kiani-Moghaddam and Mojtaba Shivaie

Chapter 2

Performance Analysis of Classifiers on Filter based Feature Selection Approaches on microarray data Arunkumar Chinnaswamy and Ramakrishnan Srinivasan

Chapter 3

Bio-inspired Algorithms for Text Summarization-A Review Rasmita Rautray and Rakesh Chandra Balabantaray

Chapter 4

Issues and Challenges in Web Crawling for Information Extraction Subrata Paul, Anirban Mitra and Swagata Dey

Section 2: Bio and Nature Inspired Computing and Information Retrieval

Chapter 5

Swarm based Clustering for Gene Expression Data P.K. Nizar Banu and S Andrews Samraj

Chapter 6

Significance of Biologically Inspired Optimization Techniques In Real-time Applications Sushruta Mishra, Brojo Kishore Mishra and Hrudaya Kumar Tripathy

Chapter 7

Classification of faults in power transmission systems using modern techniques - An overview

Avagaddi Prasad, J Belwin Edward and K Ravi

Chapter 8

Generating efficient techniques for Information Extraction and Processing using cellular automata

Subrata Paul and Anirban Mitra

Section 3: Human Centric and Behavior Based Computing

Chapter 9

A Novel hybrid Genetic Algorithm for Unconstrained and Constrained function Optimization Rajashree Mishra and Kedar Nath Das

Chapter 10

Gene Expression Programming Baddrud Zaman Laskar and Swanirbhar Majumder

Chapter 11

Bio-inspired Techniques in Rehabilitation Engineering for Control of Assistive Devices

Geethanjali Purushothaman

Chapter 12

Bioinspired algorithms in solving three dimensional protein structure prediction problems Raghunath Satpathy

D. P. Acharjya received his PhD in computer science from Berhampur University, India. He has been awarded with Gold Medal in M. Sc. from NIT, Rourkela. Currently he is working as a Professor in the School of Computing Science and Engineering, VIT University, Vellore, India. He has authored many national and international journal papers, book chapters, and five books to his credit. Additionally he has edited four books to his credit. He is reviewer of many international journals such as Fuzzy Sets and Systems, Knowledge Based Systems, and Applied Soft Computing. He has been awarded with Gold Medal from NIT, Rourkela; Eminent Academician Award from Khallikote Sanskrutika Parisad, Berhampur, Odisha; and Outstanding Educator and Scholar Award from National Foundation for Entrepreneurship Development, Coimbatore. Dr. Acharjya is actively associated with many professional bodies like CSI, ISTE, IMS, AMTI, ISIAM, OITS, IACSIT, CSTA, IEEE and IAENG. He was founder secretary of OITS Rourkela chapter. His current research interests include rough sets, formal concept analysis, knowledge representation, data mining, granular computing, bio-inspired computing, and business intelligence.

Anirban Mitra is presently associated with VITAM, Berhampur as Associate Professor and Head in the Department of Computer Science & Engineering. He has authored around 40 national and international journal/conference papers and few book chapters to his credit. He is in technical review committee of near about 8 reputed conferences and journals. Now, he is handling Industrial projects as a honorary consultant and also associated with a funded research project at I.I.T. Kharagpur. He has 08 years plus of regular experience which also includes teaching- as visiting faculty at Khallikote Govt. (Auto.) College and Berhampur University, academic guide, research and handling administrative responsibilities like as a regular Examiner for UG and PG courses. His present research field are Rough sets, Knowledge Representation, Social Network, Data Mining and Graph Mining.