

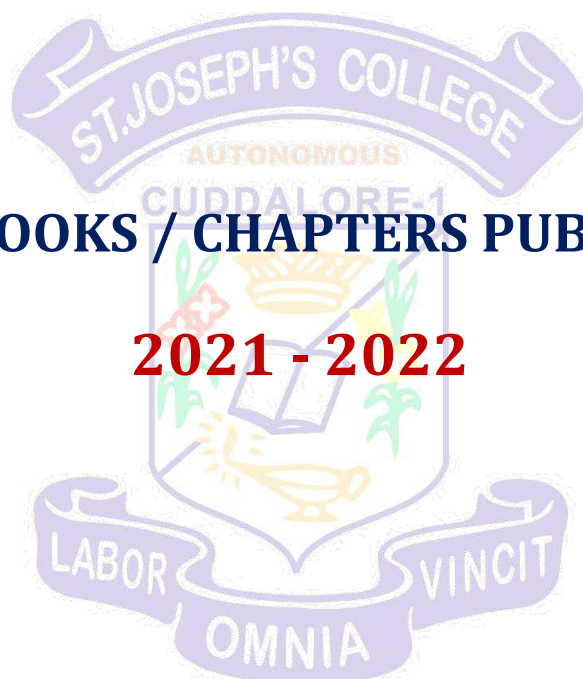


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3.4.4 BOOKS / CHAPTERS PUBLISHED

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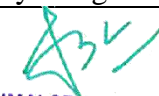


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Sl. No.	Name of the teacher	Title of the Book/Chapter published	ISBN Number	Name of the Publisher
1	Dr. P. Marie Arockianathan	Chitin-based Nanomaterials	978-0-12-824364-0	Elsevier
2	Dr. T. Miranda Lakshmi	A Study on Tools and Techniques of Big Data Analytics for Text Summarization from Multi-Documents	9781799872313	IGI Global Publisher
3	Dr. T. Miranda Lakshmi	Mobile Computing in the Developing World: A Case Study of the Fisherwoman App in Tamil Nadu, India	9781799877127	IGI Global Publisher
4	Mrs. R. Roseline	A multidisciplinary approach/Artificial Intelligence And Machine Learning Applications In Smart Production: Progress, Trends, And Directions	978-81-950236-3-9	Association of Global Academicians and Researchers – AGAR
5	Dr. P. Marie Arockianathan	Impact of Sequencing and Bioinformatics Tools in Food Microbiology	978-0-367-35118-2	CRC Press, Taylor & Francis Group
6	Dr. P. Marie Arockianathan	Application of Next-Generation Sequencing Techniques in Food-Related Microbiome Studies	978-0-367-35118-2	CRC Press, Taylor & Francis Group
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9	Dr. F. Christy Belina	Devadhai Nee	978-9356-208391	Tamil Aiyya Veliyeettagam


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BIOPOLYMERIC NANOMATERIALS

Fundamentals and Applications

Edited by
Shamsher S. Kanwar
Ashok Kumar
Tuan Anh Nguyen
Swati Sharma
Yassine Slimani



Micro & Nano Technologies Series

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Chitin-based nanomaterials

Marie Arockianathan P

PG & RESEARCH DEPARTMENT OF BIOCHEMISTRY, ST. JOSEPH'S COLLEGE OF ARTS & SCIENCE (AUTONOMOUS), CUDDALORE, TAMIL NADU, INDIA

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4.1 Introduction

Currently researchers are in search of novel materials that promote sustainability and are eco-friendly. This has created renewed interest in bio-based polymers and its composites. Due to this, new and new products are developed by scientists with enhanced properties for various biological applications in different fields. Many biological wastes from forests to marine organisms create various environmental and health issues. The disposals of these wastes are also of great concern. But these wastes provide a great source for the production of biopolymers, which is beneficial not only to the environment but also economically.

Biopolymers such as starch, cellulose, chitin, etc. are naturally occurring polymers obtained from various natural sources that are available in plenty. These polymers are alternative to

BIOPOLYMERIC NANOMATERIALS

Fundamentals and Applications

Edited by Shamsheer S. Kanwar, Ashok Kumar, Tuan Anh Nguyen, Swati Sharma and Yassine Slimani

Biopolymeric Nanomaterials refers to biocompatible nanomaterials, consisting of biopolymers, such as protein (silk, collagen, gelatin, β -casein, zein, and albumin), protein-mimicked polypeptides, and polysaccharides (chitosan, alginate, pullulan, starch, and heparin). Biopolymeric nanomaterials may be used as (1) delivery systems for bioactive compounds in food application, (2) delivery of therapeutic molecules (drugs and genes), and (3) tissue engineering.

This book outlines the fundamental design concepts and emerging applications of biopolymeric nanomaterials. It also provides information on emerging applications of biopolymeric nanomaterials, including in biomedicine, manufacturing, and water purification, as well as assessing their physical, chemical, and biological properties.

This is an important reference source for materials scientists, engineers, and biomedical scientists who are seeking to increase their understanding of how polymeric nanomaterials for being used for a range of biomedical and industrial applications.

Key Features

- Provides information on the design concepts and synthesis of biopolymeric nanomaterials biomedical and industrial application.
- Highlights the major properties and processing methods for biopolymeric nanomaterials.
- Assesses the major challenges of producing biopolymeric nanomaterials at an industrial scale.



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Chapter 2

A Study on Tools and Techniques of Big Data Analytics for Text Summarization From Multi-Documents

Martin Aruldoss
Central University of Tamil Nadu, India

Miranda Lakshmi Travis
St. Joseph's College of Arts and Science (Autonomous), India

ABSTRACT


Multi-document summarization extracts and summarizes the information without affecting its original context from the different sources of documents. It has been carried out using extractive text summarization and abstractive text summarization. Extractive summarization extracts summaries from verbatim lines, and abstractive summarization extracts new lines of summary from the source documents. Abstractive summarization is an advanced technology compared to extractive summarization. This research studies extractive summarization of multi documents from internet resources using word frequency counting and with maximum coverage using K-means clustering. In an internet search, the search algorithm shows the results from different websites using crawling and indexing. However, the search and text summary take place from hundreds, thousands, maybe millions of documents. To handle and manipulate these huge amounts of information, big data and its techniques are applied widely. This research also addresses big data techniques and tools that are available for multi-document summarization.

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Chapter 5

Mobile Computing in the Developing World: A Case Study of the Fisherwoman App in Tamil Nadu, India

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ABSTRACT

Nagapattinam is one of the main places for the catching and export of fish in Tamil Nadu State, in the south of India. In the local markets, fisherwomen buy fish, which are then sold in the streets as well as door-to-door. These “street selling fisherwomen” face various difficulties, including means of transport, carrying heavy fish baskets, and challenges in fish selling during sickness. To overcome these problems, a project was set up with support from the Tamil Nadu State Council for Science and Technology to develop a mobile app with native (Tamil) language to simplify the different processes involved in fish selling. Special features, like adding fish detail using images, voice-based searches on market conditions, and location tracking for the delivery of fish, are helping the fisherwomen to reduce the complexity of the selling process. This chapter provides detail on this project, examines the benefits, and discusses the difficulties encountered in the adoption of the mobile app, which is enabling fisherwomen to boost their revenues and improve their quality of life.

INTRODUCTION

Tamil Nadu has a coastal length of 1076 km stretching along the Bay of Bengal, the Indian Ocean, and

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the Arabian Sea (Ramesh et al., 2008). Marine fish production is more than 500,000 tons and contributes to the livelihood of a million marine fisherfolk. More than 34% of adult women are involved in marine fish production (Department of Fisheries, 2020). The coastal length of Nagapattinam district is 187 km, which is one of the longest coastal districts of Tamil Nadu. In this district, more than 53 villages are involved in marine fishing and contain many worship places belonging to different faiths. Vailankanni, which is very near to Nagapattinam, is one of the popular shrines of mother Mary and is also known as the “Lourdes of the East”, attracting thousands of pilgrims every day (Nagapattinam, 2021). The majority of women are involved in fish auctioning and selling in the Nagapattinam district in some way. A certain number of fisherwomen sell fish in the markets and others are street sellers, selling door-to-door. Different age groups are involved, but most of the fisherwomen are aged between 20 and 60. Each of these women sell a minimum of 5 -12 kgs of fish, depending on their physique and general health (Figure 1). In the Nagapattinam district, some fisherwomen are over 60 years old, selling 7 - 9 kg of fish per day (Karthikesan et al., 2019). The overall aim of the project discussed in this chapter was to understand the difficulties of fisherwomen in the selling of fish, and to provide a technical solution to simplify the process.

Figure 1. Fishing harbour at Karikal: the loaded fish baskets of fisherwomen



In recent years, mobile applications have been developed for a range of different business domains. The number of mobile phone users in developing countries like India has grown rapidly. Staesser (2018) reported that in the previous decade, the number of mobile phone users worldwide had grown to four billion, with 37 percent of that growth occurring in developing economies. This includes accessing social media applications, agriculture management, train ticket booking, liquefied petroleum gas (LPG) refill cylinder booking for household purposes, different kinds of travel booking, banking services, and insurance payments. As Yanes (2020) notes, “in poorer regions, mobile technologies have become an opportunity to boost economic, health, educational and technological development” (para. 2). Mobile

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Chapter - LVX

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ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING APPLICATIONS IN SMART PRODUCTION: PROGRESS, TRENDS, AND DIRECTIONS

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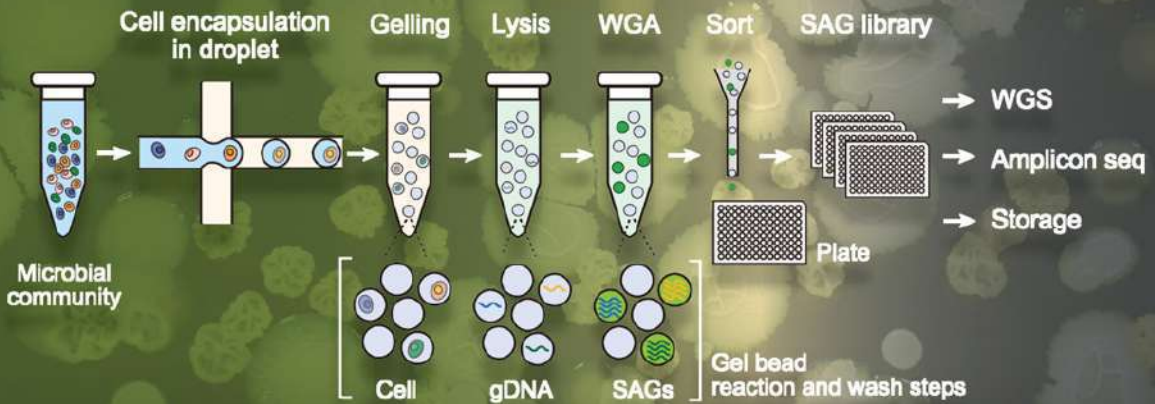
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Food Analysis & Properties Series

SEQUENCING TECHNOLOGIES IN MICROBIAL FOOD SAFETY AND QUALITY



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CHAPTER 7

Impact of Sequencing and Bioinformatics Tools in Food Microbiology

Ramachandran Chelliah, Eric Banan-Mwine Daliri, Fazle Elahi, Imran Khan, Shuai Wei, Su-Jung Yeon, Kandasamy Saravanakumar, Inamul Hasan Madar, Sumaira Miskeen, Ghazala Sultan, Marie Arockianathan, Shanmugarathinam Alagarsamy, Thirumalai Vasam, Myeong-Hyeon Wang, Usha Antony, Devarajan Thangadurai, and Deog Hwan Oh

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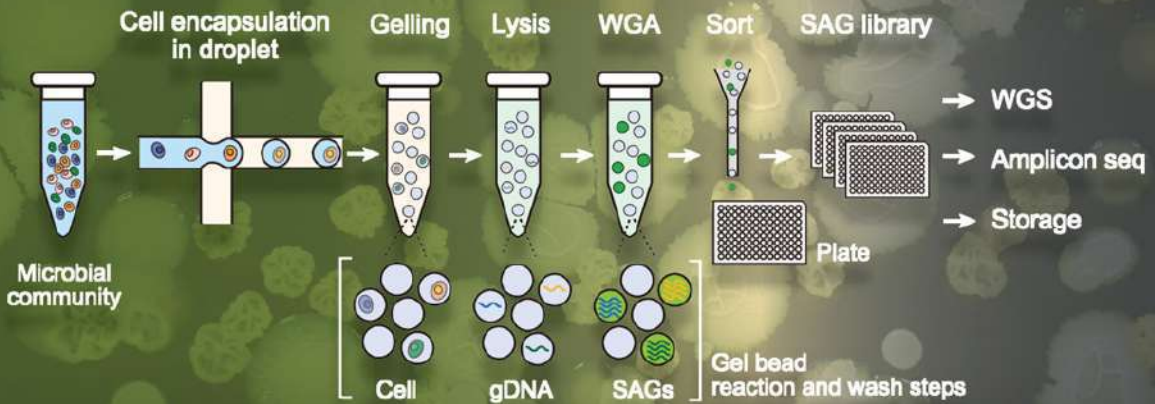
7.1 INTRODUCTION—ROLE OF BIOINFORMATICS IN FOOD SCIENCE

In today's world, market demands for healthy, safe, and nutritional food products with minimal synthetic preservatives are rising regularly. World Health Organization (2019) reports that about 600 million people worldwide suffer from diarrheal diseases, associated with 420,000 deaths worldwide (Hoffmann et al. 2017). Therefore, maintaining food safety and quality is an evolving challenge for food scientists, regulators, and the food industry globally. Nevertheless, before reaching the consumer's plate, food commodities must pass through various stages such as harvesting, transportation, storage, refining, and dissemination through which they are vulnerable to attack by a variety of pests, microbes, and oxidative degradation that significantly deteriorate product quality and also have a negative impact on consumer health (Holton et al. 2017). The numerous endogenous factors (bioactive compounds, nutrients, pH, water interaction) and external factors (gas composition, temperature, and microorganisms) of food ecosystems impact on pathogenic microbe development (Holton et al. 2017).

Present methods of protection, detection of biological pollutants, and their related threats are inadequate, expensive, and have their own limitations. In this sense, recent developments in omics sciences (genomics, transcriptomics, proteomics, and metabolomics) may be used to identify, avoid, and regulate foodborne microbes and pathogens and recognize the mode of action of phytochemicals at the cellular level. Thus, in recent years, “foodomics” (an integration of various omics technologies), the omics definition in food science, has been given substantial attention by industry and law enforcement

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Application of Next-Generation Sequencing Techniques in Food-Related Microbiome Studies

Ramachandran Chelliah, Eric Banan-Mwine Daliri, Fazle Elahi, Imran Khan, Shuai Wei, Su-Jung Yeon, Kandasamy Saravanakumar, Inamul Hasan Madar, Sumaira Miskeen, Ghazala Sultan, Marie Arockianathan, Shanmugarathinam Alagarsamy, Thirumalai Vasan, Myeong-Hyeon Wang, Usha Antony, Devarajan Thangadurai, and Deog Hwan Oh

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18.1 INTRODUCTION

It is widely known that foodborne diseases cause considerable morbidity and mortality in humans, particularly in immunosuppressed individuals and in young children (Stark et al. 2009). Many foodborne diseases are caused by bacteria, viruses, and parasites (Newell et al. 2010). Consequently, sporadic infections or outbreaks are reported regularly in many countries. In addition to these, increased globalization has resulted in the transmission of foodborne pathogens across international borders, severely impacting trade and food security (Jennings et al. 2016; King et al. 2017). This has led several

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Gender Discrimination in Neela Paadmanabhan's *Generations*

A. Lenin

Assistant Professor of English
St. Joseph's College Arts and Science
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Neela Paadmanabhan (1938) is a renowned writer from South India who writes both in Tamil and Malayalam. His novels project the work classing people and the sufferings of the poor is deeply rooted in his works. He has written 20 novels, 10 short Story collections, 4 volumes of poetry and about 7 essay collection in Tamil language. For the novel *Illai Uthir Kaalam*, he was awarded the Sahitya Akademi Award for Tamil. With a racy styles and true-to-life language in his fictions, he has touched and established a bench mark in the field of literature. His first novel is *Thalaimuraigal* which has been translated into English as *Generations* by a famous Tamil writer and critic Ka.Naa. Subramanian. The artistic intuition and inspiration is very well brought out through his novels. The skillful narrative structure and realistic portrayal of characters made the novel all the whole interesting.

Indian society has practiced an extreme form of patriarchy since ancient times. It depends on the masculinity and subjection

எங்கும்

வெண்மை

எதிலும் முதன்மை



கண்ணகி கலைவேந்தன்

எங்கும் பெண்மை எதிலும் முதன்மை

கண்ணகி கலைவேந்தன்
திருவையாறு

தமிழ் ஜயா வெளியீட்டகம்



பதிப்பாசிரியர்: கண்ணகி கலைவேந்தன்,
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சென்னை எத்திராஜ் மகளிர் கல்லூரித் தமிழ்த்துறை
(தன் நிதிப்பிரிவு) கனடா தமிழ் மகளிர் மாமன்றம்
திருவையாறு, தமிழ் ஐயா கல்விக்கழகம், ஒளவை அறக்கட்டளை
இணைந்து இணைய வழியில் 08-03-2022 அன்று நடத்திய
உலக மகளிர் நாள் விழாவில் பங்கேற்ற கவிஞர்களின்
கவிதைத் தொகுப்பு.

உரை மகளிர் நாள் கிழா கவியரங்கில் பங்கேற்றவர்கள்

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24. தேவதை நீ!

சீறகுகள் முளைத்த அழகிய தேவதை நீ!
உறவுகள் இணைந்தே வாழும் உயிரே நீ!

தன்னுயிர் தந்து இன்னுயிரைப் பிறப்பிக்கும் அற்புதம் நீ!
அறிவும் அழகும் ஒன்றாய் அமைந்த அதிசயம் நீ!

சீட்டுப் போல பறந்து செல்ல குருவியல்ல நீ!
மேகம் மேலே பறந்து செல்லும் பருந்துக் கூட்டம் நீ!

சோறு தண்ணி சமைத்து வைக்க நேர்ந்து விட்ட பாத்திரமா?
சட்டி பானை கழுவுவது உனக்கு கொடுக்கும் சாத்திரமா?

ஜாதியில்லை பேதமில்லை ஏட்டிலே தான் இருக்குது!
பெஞ்சாதி மட்டும் மட்டமென்று வீட்டுக்குள்ளே நடக்குது!

குரும்பத்தையே வழிநடத்தும் குத்துவிளக்கல்ல நீ!
உலகிற்கே வழிகாட்டும் கூகுள் வரைபடம் நீ!

காதல் என்ற பேச்சுப்பேச கயவர் கூட்டம் காத்திருக்கு!
கவனமாக இருந்துவிட்டால் வாழ்வில் மகிழ்ச்சி பூத்திருக்கு!

வீறு கொண்டு எழுந்து உந்தன் பேரு சொல்ல வாழ்ந்துவீடு!
அனைவரும் சமமென்று அனைத்தையும் மாற்றிவீடு!

வேந்தர்சூட ஆட்சி செய்ய மாதர் ஓட்டு தேவைங்க!
தேவர்சூட நடுநடுங்க ஆட்சி செய்வோம் வாருங்க!

எட்டுவச்சு நடந்திங்கன்னா எட்டிப் பிடிக்கும் தூரங்க!
வெற்றிபெற்ற சின்பு தானே உவரு சனமும் பேசுங்க!

சீறகுகள் முளைத்த அழகிய தேவதை நீ!
அறிவும் அழகும் ஒன்றாய் அமைந்த அதிசயம் நீ!!

முனைவர் பி.கிறிஸ்டி பெலினா
உதவிப் பேராசிரியர், தமிழ்த்துறை
தூயவளனார் கலை மற்றும் அறிவியல் கல்லூரி,
கடலூர்.

எவரும் என்னை எதிலும் முதல்கலை!