

International Research Journal of Management Science & Technology



**ISSN 2250 – 1959(Online)
2348 – 9367 (Print)**

An Internationally Indexed Peer Reviewed & Refereed Journal

www.IRJ MST.com
www.isarasolutions.com

Published by iSaRa Solutions

Work is financially supported by “Sant Gadge Baba Amravati University, Amravati” under Rajiv Gandhi Science Technology Commission, Govt. of Maharashtra, Mumbai

Complex analysis of essential Soil properties as soil data sets and its relationship identification for designing prediction system about Nutrient holding capacity of soil using PCA

Author Name & Designation:

Dr.Maya V.Mawale,

HOD & Assistant Professor ,Department:Department of Computer Science

University/Organization: Adarsha Science,J.B.Arts & Birla Commerce Mahavidyalaya Dhamangaon
Rly State:Maharashtra

Co- Author names & Designation:

Dr.Deepak S.Mohekar,

Assistant Chief Technical Officer , ICAR-NBSS&LUP, Nagpur

Dr.N.G.Patil,

Director of ICAR-NBSS&LUP, Nagpur

Abstract:

This study was carried out to predict meaningful information from large set of soil micronutrient and macro nutrient values as parameters and represented in graphical manner for clear understanding. This complex analysis helps in determining role of dependent variable and independent variable and their relationships, their dependability for designing any prediction system.

Analysis process is carried out to collect information for assessing soil parameter. Soil parameters analysis is done on 108 soil samples collected from ICAR-NBSS & LUP, Nagpur. The values of EC,CaCo₃,CEC,N,P,K,Cu,Fe,Mg,Zn,Mn,Bulk Density and pH of soil sample collected for the year 2022 and Principle Component Analysis (PCA) is done to predict these soil parameters relationship that have direct/indirect effects on Nutrient Holding Capacity(NHC).

Keywords: complex analysis.soilparameter,Principle Component Analysis,Cu_copper, Fe_iron; ; K_potassium; Mn_manganese; OC_organic content: P_phosphorus; Zn_zinc.

Introduction

To handle real world problem lots of data and information is needed as size and scale are larger and testing is done on such a large scale is quite difficult. Complex analysis is used to predicate meaningful information from large data and representation of that data in graphical manner. Crop Yield is the result of a complex process. There are many biological, chemical and physical factors which are responsible for determining soil quality [1]. Soil texture is different for different area, lots of the variation in soil properties, show vibrant effects, and fluctuating characteristic and hence prediction of such soil properties become complex[2].With the help of complex analysis larger data sets is converted into meaningful and steady information. More number of dependent variables are useful for better accuracy in data analysis as each variable shows its significance individually and relationship between each other having same properties. Complex analysis using Principle Component Analysis (PCA) is data analysis tool used for predicting meaningful information from large data set of soil parameters and representation in graphical manner to make its clear understanding[3]. This analysis help in determining role of dependent variable and independent variable in the system and their relationships, their dependability for designing any prediction system[4].

Zeichen Journal

UGC Care Group II Journal ISSN: 0932-4747

Zeichen Journal

Zeichen journal is the leading open-access journal, providing a platform for publishing innovative and research articles. As an open access journal, articles in Zeichen will always be freely available online and readily accessible. This means that your work will be recognized and can be searched in Google Scholar.

UGC CARE GROUP II JOURNALS LINK:

<https://ugccare.unipune.ac.in/Apps1/User/LR/Login>

User Name: careugcpune2@gmail.com

Password:

SCOPUS ACTIVE JOURNAL LINK –

<https://www.scopus.com/sourceid/21100856788>

Zeichen is an open-access journal publishing full-length research papers and review articles covering subjects that fall under the wide spectrum of science Engineering & technology. The journal is dedicated towards dissemination of knowledge related to the advancement in scientific research. The prestigious interdisciplinary editorial board reflects the diversity of subjects covered in this journal. science Engineering & technology, the coverage includes environmental science, pure and applied mathematics, agricultural research and engineering, biology, biotechnology, bioinformatics, Healthcare sciences (including clinical medicine,

A Survey of Fuzzy Logic Inference System as Prediction System in Agricultural Domain

Work is financially supported by “Sant Gadge Baba Amravati University, Amravati” under Rajiv Gandhi Science Technology Commission, Govt. of Maharashtra, Mumbai

I. Dr. Maya V. Mawale
Department of Computer Science
(HoD & Assistant Professor)
 Adarsha Science, J.B. Arts & Birla
 Commerce Mahavidyalaya
 Dhamangaon Rly, India

Abstract— This paper analyzes the different parameters of soil, which are important for agricultural yield. Expert systems played important role in the farming Sector as Fuzzy logic as one of the methods of expert systems This paper discusses the major problem of soil water holding capacity. Some reviews are given which shows how soil water and soil nutrient holding capacity affecting crop yield and also shows the importance of prediction and its detection analysis for crops. By prediction systems, farmers get the idea of soil texture and soil quality and suggest crop suitability for land. Fuzzy logic versatility is also reviewed here and how it is helpful in different ways in the agricultural field. This paper proposes the use of the fuzzy logic inference system or expert system for precision agriculture by making use of rule-based approach. This will help farmers to get idea about crop suitability and increase chances of crop productivity. This article is hoped to relatively benefit in development of an FIS especially for predicting WHC and NHC of soil in the agriculture domain.

Keywords—WHC-Water Holding Capacity, NHC-Nutrient Holding Capacity, FIS-Fuzzy Inference System, AI-Artificial Intelligence

I. INTRODUCTION

Capabilities of AI represent by Expert systems. Fuzzy logic is the method of the Expert system show reasoning ability like human brain. Fuzzy logic used for prediction analysis in different domains due to its decision-making ability. Agriculture is the most important sector as it fulfilled the basic necessity for humans (food and cloths). But there are some factors like soil water availability that affect crop productivity. Water crises for farm are one of the issues in dry region. Choice of crop as per soil water and nutrient holding capacity status become a important issue for crop production.

Soil water holding capacity is a term that is directly related with crop production. Water holding capacity of the soil to determine water storage capacity of the field and also determine how much extra irrigation should be applied[1]. The main aim of farmers is to maintain the field at or near capacity. When soil shows deficiency in the amount water in the soil, farmers make the soil profile replenished by precipitation or irrigation which increase economical burden. The key issue in front of farmers is to understand the status of soil water holding capacity and how to manage it so that the farmer does not need to special effort about increase it and get clear idea about crop suitability of soil.

Soft computing technologies' approaches in agriculture domain played a vital role like a neural network, machine learning, fuzzy logic etc. Soft Computing concept is applied for crop yield prediction and management, pest control and precision agriculture [2]

Tuijin Jishu, which translates to "Propulsion Technology" in English, is a prestigious and cutting-edge academic journal dedicated to advancing the field of propulsion engineering and technology. Our mission is to serve as a platform for researchers, engineers, and enthusiasts alike to share their knowledge, discoveries, and innovations in the propulsion domain.

At Tuijin Jishu, we believe that propulsion technology is at the forefront of modern scientific and engineering achievements, driving humanity forward in space exploration, aviation, transportation, and beyond. As such, we are committed to promoting the dissemination of high-quality, peer-reviewed research that pushes the boundaries of propulsion systems, fuels, and related technologies.

Tuijin Jishu is a peer-reviewed open-access journal, ensuring that all published articles undergo rigorous scrutiny by expert reviewers in the field. We strive to maintain the highest standards of integrity and scientific accuracy, upholding the trust and credibility of our readers and contributors.

Our journal covers a broad spectrum of propulsion-related topics, including but not limited to:

1. **Rocket Propulsion:** Advancements in chemical propulsion, hybrid systems, electric propulsion, and novel propulsion concepts.
2. **Aerospace Propulsion:** Cutting-edge research on aircraft engines, propulsion systems, and aerothermodynamics.
3. **Space Exploration:** Innovations in space propulsion, interplanetary travel, and propulsion challenges in long-duration missions.
4. **Green Propulsion:** Sustainable and eco-friendly propulsion technologies, biofuels, and reducing environmental impact.
5. **Advanced Materials:** Research on materials for propulsion systems, thermal management, and structural integrity.
6. **Computational Fluid Dynamics (CFD):** Modeling and simulation techniques to optimize propulsion performance.
7. **Propulsion Control Systems:** Developments in autonomous and intelligent control of propulsion systems.

Why Tuijin Jishu?

- **Expertise:** Our editorial board comprises esteemed professionals and researchers from diverse propulsion-related disciplines, ensuring a balanced and multidisciplinary approach to propulsion technology.
- **Global Community:** Tuijin Jishu fosters collaboration among propulsion enthusiasts worldwide, breaking down geographical barriers and promoting international cooperation.
- **Innovation:** We celebrate innovation and originality, encouraging authors to present groundbreaking research that contributes to the advancement of propulsion technology.
- **Open Access:** Tuijin Jishu follows the open-access model, making all published articles freely available to the global scientific community, accelerating the exchange of knowledge.
- **Ethics and Integrity:** We uphold the highest ethical standards in academic publishing, ensuring transparency, fairness, and confidentiality throughout the review process.

Advancement in Polymer Blends and Composites: A Comprehensive Review of Structural, Optical, Thermal and Electrical Attributes for Multifaceted Applications

Ms. Riya R. Tekade¹, Dr. Shilpa G. Vidhale²

¹Ph.D. Research Scholar, Department of Physics, Adarsh Science, J. B. Arts and Birla Commerce College, Dhamangaon Railway, Amravati (M.S.), India.

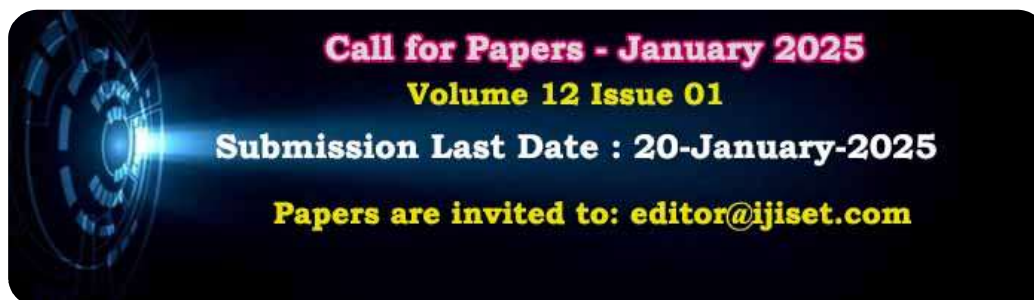
²Assistant Professor, Department of Physics, Adarsh Science, J. B. Arts and Birla Commerce College, Dhamangaon Railway, Amravati (M.S.), India.

Abstract: -The provided review article presents a comprehensive examination of the changing landscape within polymer blends and composites research. Encompassing a variety of investigations, this survey delves into the structural, optical, thermal, and electrical characteristics of these materials. A range of polymer matrices combined with diverse additives are studied to enhance specific traits for varied applications. Particularly noteworthy is the integration of nanoparticles, rare earth complexes, and other enhancers into polymers such as PMMA, PVC, PS, and PVDF, which significantly impact conductivity, luminescence, mechanical strength, and thermal resilience. Through methods spanning from solution casting to in-situ polymerization, the research highlights how customized doping techniques can introduce improved properties, opening new possibilities in fields like optoelectronics and materials science. Amid the extensive exploration of literature, numerous procedures for thin film sample preparation surface, emphasizing the strategic integration of appropriate materials as a promising approach to influence polymer characteristics. This revitalizes optical, thermal, and electrical attributes, spanning technical and biomedical applications.

Keywords: Polymer thin film, Polymer blend, Doping, PS (Polystyrene), PMMA (Polymethyl methacrylate)

1. Introduction

In the current era, polymers stand out as promising materials due to their affordability, ease of processing, lightweight nature, and feasibility in both thick and thin film sample fabrication. A particularly valuable attribute of polymers has been their ability to impede electrical conduction, serving as insulators. However, in this technologically advanced age, they have garnered significant attention as conductive polymers. The inherent process ability of polymers has positioned them as a focal point of interest. By blending and reinforcing polymers, it becomes possible to engineer materials with desired properties [31]. Polymer-based composites are extensively explored for both fundamental understanding and practical applications. These composites not only combine the beneficial characteristics of dopants and polymers but also introduce novel properties absent in single-phase materials. Introducing an appropriate dopant can substantially enhance the properties of a polymer [39]. A polymer blend refers to a mixture of two or more polymers that are combined to yield a novel material with distinct physical properties. Various types of polymer blends exist, including thermoplastic blends, thermoplastic-rubber blends, thermoplastic-thermosetting blends, and rubber-thermosetting blends, all of which have undergone extensive investigation. The primary objective of polymer blending is to produce economically viable products with unique traits. Polymer blending is a vast and boundless field of study that demands


[Current Issue >>](#)


International Journal of Innovative Science Engineering and Technology (IJSET) is an scholarly, online international journal which aims to Publishes peer reviewed original research result oriented Survey papers in the fields of Engineering , Basic and Applied Sciences and Promote Innovative Technology. This journal intends to be of interest and utility to researchers and practitioners in the academic, industrial and governmental sectors. All original research contributions of significant value in all areas of engineering discipline are welcome.

Submitted papers will be reviewed by Technical Committees of the Journal. All submitted articles should report original, previously unpublished research results, experimental or theoretical, and will be peer-reviewed. Articles submitted to the journal should meet these criteria and must not be under consideration for publication elsewhere. Manuscripts should follow the style of the journal and are subject to both review and editing.

IJSET is steered by a distinguished Board of Directors, Researchers ,Engineers and Academicians and is supported by an international review board consisting of prominent individuals representing many well-known Universities, Colleges, and Corporate World.

Key Features

An ISO 9001:2015 Certified International Journal.

IJSET aims to cover all major domains including general science and engineering.

One of the journals aiming to bring out research in both Science and engineering research with wider scope.

Highlights to bring out research article that seeks to uncover the science underlying technological advances.

Offering rapid review and publication, mostly the submitted papers will be published within two months.

Online availability throughout the year enabling the user to download articles.

Around 7000+ Articles are Published in Our Journal.

Worldwide 700+ University are approved.

More than 8+ Years in Publication.

Frequency of Publication : Monthly

IJSET Highlights

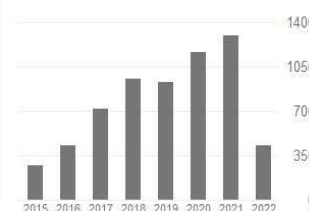


IJSET Citation Report



Cited by

	All	Since 2017
Citations	6356	5516
h-index	30	27
i10-index	139	119



Variable Cosmological Constant with Plane Symmetric Space Time

S.N.Bayaskar ¹, Shoeb A.A.Q. ², U. T. Arbat ³

^{1,2} Department of Mathematics, Adarsha Science, J.B.Arts and Birla Commerce Mahavidyalaya Dhamangaon Rly Dist.Amravati 444709 (India)

E-mail: snbayaskar@rediffmail.com

E-mail: shoebakhtar0796@gmail.com

³ Department of Mathematics, DES's college of Engineering and Technology Dhamangaon Rly Dist.Amravati 444709 (India)

E-mail: umesharbat1201@gmail.com

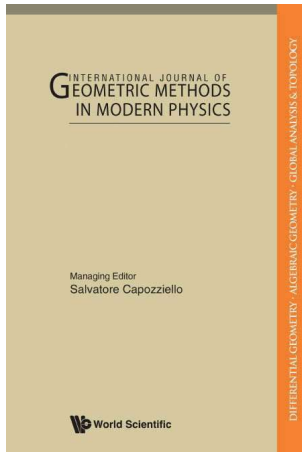
Abstract We consider a self consistent system of plane cosmology perfect fluid model with variable cosmological constant. The perfect fluid is taken to be one obeying the usual equation of state $p = \gamma\rho$ with $\gamma \in [0,1]$. Einstein's field equations are solved by using a law of variation for mean Hubble's parameter, which is related to average scale factor and that yields a constant value of deceleration parameter. The plane symmetric cosmological model is presented, where the cosmological constant remains positive and decreases with the cosmic time. It is found that the solutions are consistent with the recent observations of type Ia supernovae. A detailed study of physical and kinematical properties of the model is carried out.

Keyword plane symmetric model, Cosmology, Cosmological constant, Deceleration Parameter.

1 Introduction

The plane symmetric cosmological model plays an important role in the presence of linearly coupled massless scalar field and source of free electromagnetic field and perfect fluid. In modern cosmological theories, a dynamic cosmological term Λ remains a focal point of interest as it solves the cosmological constant problem in a natural way. There are significant observational evidence for the detection of Einstein's cosmological constant component of material content of the universe that varies slowly with time and space to act like Λ . There are many open questions in theoretical and experimental cosmologies, which are still under the consideration of cosmologists and need to be answered. One of the fundamental and challenging problems in cosmology is the cosmological constant Λ problem. Einstein considered the introduction of Λ -term into the field equations as a blunder of his life. But later on, researchers found that the Λ -term is very useful for describing many cosmological observations. The discussion of pawar, Bayaskar, Patil [2] and Bayaskar [3] on the plane symmetric model in presence of thick domain walls in Brans-Dicke theory of gravitation and most of the astrophysical work continues to operate on the assumption $\Lambda = \text{const}$. For example, gravitational lens statistics [4], CMB anisotropies [5], cluster abundance [6], etc. At the same time the studies of Barr [7], and many others have shown to give rise an effective cosmological term that decays with time. The discussions of Ratra and Peebles [12], on the cosmological constant problem and on cosmology with a time-varying cosmological constant reveal that in the absence of any interaction with matter or radiation, a solution of Einstein's equations and the assumed equation of covariant conservation of stress-energy with a time-varying Λ can be found. For these solutions the conservation of energy requires decrease in the energy density of matter or radiation.

Supernovae Cosmological Project (Garnavich et al. [13;14]) and High-z Supernovae Team recently observed and strongly favour a significant and positive Λ with magnitude $\Lambda \left(\frac{Gh}{c^3} \right) \approx$

[< back](#)

International Journal of Geometric Methods in Modern Physics

ISSN (print): 0219-8878 | ISSN (online): 1793-6977

Supports Open Access

[Tools](#) [Share](#) [Recommend](#)

[Submit an article](#)
[Subscribe](#)
[Journal](#)
[About the Journal](#)

The journal has seen over 10 times increase in downloads this year. Its papers have been downloaded **272,732 times already!**

Publish with us today!

IJGMMP - Top Articles of 2023

Do you have a special issue proposal?
Send us your ideas!

Editor's Pick for IJGMMP (Monthly Highlights)

Topological defects in Λ CDM $f(Q)$ gravity model with Hubble's parametrization

S. H. Shekh ^{*,¶}, A. Dixit ^{†,||}, S. N. Bayaskar ^{‡,**} and S. C. Darunde ^{§,††}

^{*}*Department of Mathematics*

*S. P. M. Science and Gilani Arts Commerce College
Ghatanji, Yavatmal, Maharashtra 445301, India*

[†]*Department of Mathematics, GLA University
Mathura 281406, Uttar Pradesh, India*

[‡]*Department of Mathematics
Adarsha Science Jairamdas Bhagchand Arts
and Birla Commerce Mahavidyalaya
Dhamangaon Rly., Maharashtra 444709, India*

[§]*Department of Mathematics, Jagadamba Mahavidyalaya
Achalpur 444806, Maharashtra, India*

[¶]*da_salim@rediff.com*

^{||}*archana.dixit@gla.ac.in*

^{**}*bayaskaramv@gmail.com*

^{††}*siddhantd888@gmail.com*

Received 12 April 2024

Accepted 23 July 2024

Published 31 August 2024

The modified theories of gravity, especially the $f(Q)$ theory, have attracted much attention in recent years. This study delves into non-static plane-symmetric solutions within the framework of this theory, employing a metric approach. The field equations are addressed with the incorporation of the Hubble parametrization $H = \frac{H_0}{\sqrt{2}}[1 + (1+z)^{2(1+\beta)}]^{1/2}$. The determination of optimal values for free parameters is achieved through the analysis of 57 data points of the Hubble parameter $H(z)$. Additionally, the study explores the behavior of various cosmological parameters, including the deceleration parameter (q), energy density (ρ), pressure (p), and equation of state (EoS) parameter (ω), comparing them with observational findings. To validate the results, energy conditions and state finder analysis are undertaken. Ultimately, it is established that our model exhibits behavior akin to the Λ CDM model. Finally, we found that our model behaves similar to the Λ CDM model.

Keywords: FLRW space-time; $f(Q)$ gravity; cosmology.

PACS Nos.: 95.36.+x, 04.50.kd, 98.80.Jk

Heterocyclic Letters

An International Quarterly Journal of Heterocycles

Editor-in-Chief

Dr. Vandana Gupta

E-mail: dr_vandana27@yahoo.co.in

Editorial office

A-13, Jai Jawan Colony, Tonk Road,
Jaipur-302018, India

<http://heteroletters.org>



SYNTHESIS, SPECTRAL CHARACTERIZATION AND ANTIBACTERIAL STUDIES OF SCHIFF BASES DERIVED FROM SULPHA DRUGS

V. A. Sadafale^{a*}, P. R. Mandlik^b

^{a*} Department of Chemistry, Adarsha Science, J. B. Arts & Birla Commerce Mahavidyalaya, Dhamangaon Rly, Amravati, India

^b Department of Chemistry, Shri Shivaji Science College, Amravati, India

*Email: vasadafale1980@gmail.com

ABSTRACT:

Schiff base ligands synthesized by the condensation of dapsone with salicylaldehyde, o-vanillin, 2,4-dihydroxyacetophenone and 2,4-dihydroxybenzophenone were characterized and investigated by physical and spectral techniques, namely, elemental analysis, melting point, ¹H NMR, IR, UV-Vis spectra, and mass spectrometry measurements. The Schiff bases were screened for antibacterial activity in vitro against Gram positive and Gram negative bacteria viz. *Escherichia coli*, *Staphylococcus aureus*, *Pseudomonas aeruginosa* and *Klebsiella pneumoniae* using standard agar cup plate or well diffusion method. The ligand L¹H and L²H were found to be highly active against all bacterial strains whereas the ligand L³H₂ and L⁴H₂ were highly active against *Escherichia coli*, *Staphylococcus aureus* and *Klebsiella pneumoniae* and moderately active against *Pseudomonas aeruginosa*.

KEYWORDS: Sulpha drug, Dapsone, Antibacterial activity, Salicylaldehyde, o-vanillin

INTRODUCTION:

In the 1930s, Sulpha drugs were developed as the first medicines effective against bacterial diseases. They appeared as the first "sensation medications" at a time when death from bacterial infections such as pneumonia and blood poisoning were commonⁱ. A group of synthetic organic compounds called sulfonamides are capable of constraining bacterial growth and activityⁱⁱ. Sulfonamides are compounds that contain sulfur in a -SO₂NH₂ moiety directly attached to a benzene ringⁱⁱⁱ. Schiff base compounds which contain the azomethine (imine) group (-RC=N-) are usually prepared by the condensation of a primary amine with an active carbonyl compound^{iv}. The sulfonamide derivatives have been widely used in clinical medicine as pharmacological agents with a wide variety of biological actions, Schiff bases are also known to be anticancer and antiviral agents^v. Sulfonamides are well renowned for their antibacterial^{vi-viii}, antitumor^{ix}, diuretic^x, and antithyroid^{xi} activities.

The presence of azomethine and sulfonamide functional group is responsible for antimicrobial activity, which can be transformed depending upon the type of substituent present on the aromatic rings. The condensation of sulfa drugs with aldehydes or ketones gives biologically



SYNTHESIS, SPECTRAL CHARACTERIZATION AND ANTIBACTERIAL STUDIES OF SCHIFF BASES DERIVED FROM SULPHA DRUGS

V. A. Sadafale^{a*}, P. R. Mandlik^b

^{a*}Department of Chemistry, Adarsha Science, J. B. Arts & Birla Commerce Mahavidyalaya, Dhamangaon Rly, Amravati, India

^bDepartment of Chemistry, Shri Shivaji Science College, Amravati, India

*Email: vasadafale1980@gmail.com

ABSTRACT:

Schiff base ligands synthesized by the condensation of dapsone with salicylaldehyde, o-vanillin, 2,4-dihydroxyacetophenone and 2,4-dihydroxybenzophenone were characterized and investigated by physical and spectral techniques, namely, elemental analysis, melting point, ¹H NMR, IR, UV-Vis spectra, and mass spectrometry measurements. The Schiff bases were screened for antibacterial activity in vitro against Gram positive and Gram negative bacteria viz. *Escherichia coli*, *Staphylococcus aureus*, *Pseudomonas aeruginosa* and *Klebsiella pneumoniae* using standard agar cup plate or well diffusion method. The ligand L¹H and L²H were found to be highly active against all bacterial strains whereas the ligand L³H₂ and L⁴H₂ were highly active against *Escherichia coli*, *Staphylococcus aureus* and *Klebsiella pneumoniae* and moderately active against *Pseudomonas aeruginosa*.

KEYWORDS: Sulpha drug, Dapsone, Antibacterial activity, Salicylaldehyde, o-vanillin

INTRODUCTION:

In the 1930s, Sulpha drugs were developed as the first medicines effective against bacterial diseases. They appeared as the first “sensation medications” at a time when death from bacterial infections such as pneumonia and blood poisoning were commonⁱ. A group of synthetic organic compounds called sulfonamides are capable of constraining bacterial growth and activityⁱⁱ. Sulfonamides are compounds that contain sulfur in a -SO₂NH₂ moiety directly attached to a benzene ringⁱⁱⁱ. Schiff base compounds which contain the azomethine (imine) group (-RC=N-) are usually prepared by the condensation of a primary amine with an active carbonyl compound^{iv}. The sulfonamide derivatives have been widely used in clinical medicine as pharmacological agents with a wide variety of biological actions, Schiff bases are also known to be anticancer and antiviral agents^v. Sulfonamides are well renowned for their antibacterial^{vi-viii}, antitumor^{ix}, diuretic^x, and antithyroid^{xi} activities.

The presence of azomethine and sulfonamide functional group is responsible for antimicrobial activity, which can be transformed depending upon the type of substituent present on the aromatic rings. The condensation of sulfa drugs with aldehydes or ketones gives biologically

UGC CARE LISTED
ISSN No.2394-5990

संशोधक

• वर्ष : ९२ • मार्च २०२४ • पुरवणी विशेषांक २४



प्रकाशक : इतिहासाचार्य वि.का.राजवाडे संशोधन मंडळ, धुळे

स्थापना : ९ जानेवारी १९२७



The Shade of Traumatic Lives of Pakistani Women in Bapsi Sidhwa's "The Pakistani Bride"

Dr. Furquan Ahemad Khan Chandkhan Pathan

Assistant Professor in English

Adarsha Science, J. B. Arts and Birla Commerce Mahavidyalaya,

Dhamangaon Rly, Dist Amravati, M.S. India.

Email : pathanfurquan@gmail.com; Contact No. - 07875383639

Abstract :

Bapsi Sidhwa is not only one of the shimmering stars but also occupies a prominent place in the galaxy of English Literature. She, was born in 1938 in Karachi, Pakistan, to a Parsi family and grew up in Lahore, is an author of five novels: *Cracking India*, *The Pakistani Bride*, *The Crow Eaters*, *An American Brat*, and *Water* which have been translated and published in number of languages. Her novels reflect her personal experience about the Partition of India, exploitation of women and displacement in the Patriarchal Pakistani Society; in order to bring women's issues of the Indian subcontinent into open discussion as well her novels are feministic study of the gendered subsistence of Pakistan women portraying her concern for female sexuality and resistance along with all female characters are women of strong feminist convictions but they are the victims of the oppressor men. It can be observed clearly in her novel "The Pakistani Bride" (1983). "The Pakistani Bride" (1983) is a story based on real incident. Bapsi Sidhwa came to know this real story when she was invited to a remote army camp in the Karakoram Mountains along with her husband Noshir.

"there she heard the story of a fine young Punjabi girl who had away from her tribal husband, who could not bear the incident of losing his wife, which in the value system of his community was equal to losing his honour, after leaving her husband, the girl survived for almost two weeks in the lofty mountains till she was found by her husband, who killed her on the spot"¹

"The Pakistani Bride" is a breathtaking story of Munni, a young Pakistani girl, a main character of the novel. Munni's life is full of uncertain calamities

since from her childhood. She loses her family at the age of four or five years. Her family tries to escape the aggression of the 1947 Partition of Indian and Pakistan and unfortunately her family is killed by the Sikhs when they are on the train in order to flee from the violence of the 1947.

"In the wake of Partition violence ... a train to Pakistan. Of thousands of people sitting on the roof of the train, there are Sikandar, his wife Zohra with a baby on her lap and their little daughter, Munni. The train is ambushed near the border. Zohra and Sikandar are killed among others."²

Aftermath she is adopted by Qasim, a man from the mountainous region of Kohistan, tribal region at Pakistan-Afghanistan border and he renames her Zaitoon after his own dead daughter. He says, "Munni, you are like the smooth, dark olive, the Zaitoon, Christ College of Arts and Science, Kilacher that grows near our hills.... The name suits you... I shall call you Zaitoon" (TPB-30). Qasim brought up Zaitoon as his own daughter and they settle in the bustling city of Lahore. Qasim, the central character, is married to a girl five years older to him. His wife is raped before the consummation of their marriage, and he kills the rapist. After few years, his whole family is consumed by small pox, except him. Then he goes down to the Punjab plains in search of work where he comes across orphaned Munni and he adopts her; in this way the family is reconstituted which gives unlikely amalgamation of two cultures, the Punjabi and the Kohistani, the urban and the tribal along with the brown and the fair. This is the happiest period for Zaitoon who enjoys her life without any tension but this brief period comes to end when Qasim fixes her marriage at the age of sixteen with Sakhi, the

UGC CARE LISTED
ISSN No.2394-5990

संशोधक

• वर्ष : ९२ • मार्च २०२४ • पुरवणी विशेषांक ०७



प्रकाशक : इतिहासाचार्य वि.का.राजवाडे संशोधन मंडळ, धुळे



Sustainable Supply Chain Management Practices and Its Impact on International Business: A Literature Review

i) Dr. Shailesh O. Kediya

Asso. Professor, Symbiosis Skills
& Professional University, Pune.
shailesh.kediya@sspu.ac.in

ii) Umesh Wagh

Assit Professor,
DAMS, GSCC, Wardha
umeshwagh39@gmail.com

iii) Dr. Rupesh R. Dahake

Assit. Professor, Adarsha Sci. J.B Arts
& Birla Commerce College, Dhamangaon Rly
rupeshdahake@rediff.com

Abstract:

The increasing concerns regarding environmental degradation, social injustice, and resource depletion have propelled businesses to adopt sustainable practices across their operations, including their supply chains. This paper explores the impact of Sustainable Supply Chain Management (SSCM) practices on international business, drawing upon academic literature published between 2015 and 2023. The introductory section highlights the growing pressure on businesses to operate sustainably and the potential benefits of SSCM for international competitiveness. Subsequently, the paper outlines the research objectives and problem statements. The core section presents a comprehensive literature review, analyzing 15 research papers to examine the diverse SSCM practices, their environmental and social implications, and their influence on economic performance in international contexts. The discussion elaborates on key findings related to cost reduction, resource efficiency, brand reputation, market access, and risk mitigation. Furthermore, the major findings emphasize the positive impact of SSCM on various dimensions of international business performance. The conclusion reinforces the critical role of SSCM in enhancing

sustainability and competitiveness in the global marketplace. Finally, the paper identifies potential avenues for further research, encouraging continued exploration of SSCM's evolving landscape and its multifaceted impacts.

Keywords: Sustainable Supply Chain Management (SSCM), International Business, Environmental Impact, Social Impact, Economic Performance

1. Introduction

The globalization of business has intensified scrutiny on the environmental and social impacts of production and trade. Consumers are increasingly demanding transparency and ethical practices from companies, while regulatory bodies are tightening environmental and labor standards. Consequently, businesses face growing pressure to integrate sustainability into their core operations, encompassing their entire supply chains, which stretch across diverse geographical and cultural contexts.

Sustainable Supply Chain Management (SSCM) encompasses strategies, policies, and practices that aim to minimize the negative environmental and social impacts of a company's supply chain while simultaneously maximizing economic benefits. It involves integrating

International Journal of Cultural Studies and Social Sciences
**CULTIVATING CALM: A COMPREHENSIVE STUDY OF STRESS MANAGEMENT
STRATEGIES AMONG WOMEN EMPLOYEES IN AMRAVATI'S PRIVATE SECTOR
INDUSTRY**

Prof. Pratiksha Ashokrao Kalmegh Research Scholar Assistant Professor
Department of Management Studies, PRMIT & R, Badenra pakalmegh@mitra.ac.in 8788889296
Dr. A. G. Naranje Research Supervisor Professor & Head Department of Commerce, Adarsha
Science Jairamdas Bhagchand Art & Birla Commerce Mahavidyalaya Dhamangaon (Rly),

Abstract:

This comprehensive study delves into the stress management strategies employed by women employees within Amravati's private sector industry. With a focus on cultivating calm amidst professional challenges, the research explores various stressors encountered by women in the workplace and examines the effectiveness of different coping mechanisms. Through surveys, interviews, and data analysis, the study sheds light on the prevalence of stress among women employees and identifies key factors contributing to their stress levels. Additionally, it investigates the utilization and perceived efficacy of stress management techniques such as relaxation techniques, time management strategies, and social support networks. The findings of this study aim to inform organizations and policymakers about the unique stressors faced by women in the private sector industry and provide insights into developing tailored interventions to promote employee well-being and productivity.

Keywords: stress management, women employees, private sector industry, Amravati, coping strategies, workplace stressors, relaxation techniques, time management, social support, employee well-being.

Introduction:

1.1 Stress

Stress is a complex and multifaceted phenomenon that involves a wide range of physiological, psychological, and behavioral responses to perceived threats or demands. It can be triggered by various factors, including external stressors such as work pressure, relationship issues, financial difficulties, or major life events, as well as internal stressors such as negative thoughts, worries, or self-imposed expectations. Physiologically, stress activates the body's natural "fight-or-flight" response, which is orchestrated by the autonomic nervous system and the release of stress hormones such as cortisol and adrenaline. This response prepares the body to deal with the perceived threat by increasing heart rate, blood pressure, and respiration rate, while redirecting energy to vital organs and muscles. While this response can be adaptive in short-term situations, chronic activation of the stress response can lead to negative health outcomes, including cardiovascular disease, weakened immune function, digestive disorders, and mental health issues such as anxiety and depression. Psychologically, stress can manifest as feelings of tension, irritability, anxiety, or overwhelm, as well as cognitive difficulties such as impaired concentration, memory problems, and negative thinking patterns. Chronic stress can also affect mood regulation, leading to mood swings, emotional instability, and a decreased sense of well-being. Additionally, stress can impact behavior, leading to changes in eating habits, sleep patterns, social withdrawal, substance abuse, or risk-taking behaviors. The experience of stress is highly subjective, with individual differences in perception, coping mechanisms, and resilience levels playing a significant role in how individuals respond to and manage stress. Factors such as personality traits, social support networks, coping skills, and past experiences can influence one's ability to effectively cope with stress and adapt to challenging circumstances. Given the pervasive nature of stress and its impact on physical and mental health, it is essential to develop effective strategies for stress management and prevention. These may include lifestyle interventions such as regular exercise, healthy eating, adequate sleep, relaxation techniques (e.g., mindfulness, deep breathing, meditation), social support, time management, setting boundaries, problem-solving skills, and seeking professional help when needed (e.g., therapy, counseling,

About the Journal



International Journal of Scientific Research in Computer Science, Engineering and Information Technology (IJSRCSEIT) is peer-reviewed, online international journal published Bimonthly by [Technoscience Academy](https://technoscienceacademy.com). IJSRCSEIT is a highly-selective journal, covering topics that appeal to a broad readership of various branches of Computer Science, Engineering, Information Technology and related fields. The Journal has many benefits all geared toward strengthening research skills and advancing academic careers. Journal publications are a vital part of academic career advancement. To maintain a high-quality journal, manuscripts that appear in the IJSRCSEIT Articles section have been subjected to a rigorous review process.

[Submit Paper Now!](#)

Email addresses for [submitting articles](#) are ijsrcseit@gmail.com, editor@ijsrcseit.com

JOURNAL INFORMATION

Title : International Journal of Scientific Research in Computer Science, Engineering and Information Technology

Frequency : Bimonthly

E-ISSN : 2456-3307

Publisher : [Technoscience Academy](https://technoscienceacademy.com) [<https://technoscienceacademy.com>]

Refereed : Peer Review

Copyright : Technoscience Academy, India

Starting Year : 2016

Subject : Computer Science, Engineering and Information Technology

Language : English

Distribution : Open Access

Publication Format : PDF & HTML -> Online

Document Identifier Type : DOI (<https://doi.org/10.32628/IJSRCSEIT>)

Artificial Intelligence using Neural Network D.S.S. For Iris Detection

R.D. Chaudhari¹, Y. B. Gandole²

¹Assist. Professor, Shri R.L.T. College of Science, Akola, Commerce

²Principal, Adarsha Science, J.B.Arts and Birla, Mahavidyalaya, Dhamangaon Rly-444709

ABSTRACT

Our main aim is to develop a secure biometric recognition system to identify individual person both Irises other than physical or behavioural characteristics. One such method is iris recognition which is one of the most secure and unique features of any person. God has created every individual with an exclusive iris pattern on this earth. The iris recognition technique consists of iris localization, normalization, feature extraction and matching. Their unique feature was extracted and given to the neural network using MATLAB Simulation for detecting the Iris. The match results shows that the individual is identified accurately both the iris of a same Person.

Keywords - Iris recognition, localization, normalization, neural network, person identification, MATLAB.

Introduction –

Identity verification and identification is becoming increasingly popular. Biometric measures [1] such as recognizing one's fingerprints, face, iris and voice greatly help in person identification authentication, and authorization. Pair of iris recognition has the high potential and non-invasive personal verification. Advances in the field have expanded the options to include biometrics such as iris and retina. Among the large set of options, it has been shown that the iris is the most accurate biometric. The iris is the elastic, pigmented, connective tissue that controls the pupil. Dougman [2] proposed an iris recognition system representing an iris as a mathematical function. Mayank Vatsa proposed a support-vector-machine-based learning algorithm selects locally enhanced regions from each globally enhanced image and combines these good-quality regions to create a single high-quality iris image [3] proposes algorithms for iris segmentation, quality enhancement, match score fusion, and indexing to improve both the accuracy and the speed of iris recognition. Further, Tests on another set of 801 images resulted in false accept and false reject rates of 0.0005% and 0.187% respectively, providing the reliability and accuracy of the biometric technology [5]. Leila Fallah Araghi used Iris Recognition based on covariance of discrete wavelet using Competitive Neural Network (LVQ). A set of Edge of Iris profiles are used to build a covariance matrix by discrete wavelet transform using Neural Network [4]. Today with the development of Artificial Intelligence algorithm, Iris recognition system may gain speed, hardware simplicity, accuracy and learning ability. The experimental results have shown the effectiveness of the proposed system in comparison with other previous Iris recognition system.



IJRASET

International Journal For Research in
Applied Science and Engineering Technology



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 11 **Issue:** XII **Month of publication:** December 2023

DOI: <https://doi.org/10.22214/ijraset.2023.57566>

www.ijraset.com

Call: ☎ 08813907089

E-mail ID: ijraset@gmail.com

Comprehensive Analysis of Road Surface Irregularities: Cause, Effect and Mitigation Strategies

D. R. Solanke¹, Y. B. Gandole²

¹Department of Applied Electronics SGB Amravati University, Amravati (MH)

²Department of Electronics Adarsha Science J B Arts & Birla Commerce College, Dhamangaon Rly (MH)

Abstract: *The quality of road facilities is a critical measure of a nation's economic development and overall quality of life. In India, where road transportation is the strength of connectivity, the prevalence of road surface irregularities has emerged as a significant challenge. The present paper aims to systematically examine the multifaceted aspects of road surface irregularities in India. The study begins by providing an overview of the importance of road infrastructure in the Indian context and its insinuations for economic growth and societal well-being. It then delves into the various factors contributing to road surface irregularities, including construction materials, climatic conditions, and traffic volume and maintenance practices. Furthermore, the literature highlights the hostile heightened transportation costs. Finally, this paper concludes with insights into the future prospects and challenges in managing effects of road surface irregularities on road users, such as increased accidents, vehicle tear and wear, and road surface irregularities in the Indian context, emphasizing the need for holistic approaches that integrate technological advancements, policy reforms, and sustainable practices to ensure safe and efficient road transportation. This paper serves as a comprehensive examination of the complexities surrounding road surface quality in India and provides valuable insights for policymakers, researchers, and practitioners working towards improving the nation's road infrastructure.*

Keywords: *Asphalt, Damage, Irregularities, Pavement, Pothole, Road fatalities.*

I. INTRODUCTION

Road accidents have been the leading cause of deaths worldwide with the last three decades seeing a substantial increase in this regard. Road surface irregularities play a crucial role in road safety. Authors are motivated while evaluating the survey regarding road surface irregularities, encounter the statistic of fatalities happening during the active transport due to detreated road [23]. This review aims to delve into the various aspects of road surface irregularities, their impact on vehicles and drivers, and the measures taken to mitigate their effects. The examination covers a wide range of factors, from the types of irregularities to their causes and potential solutions. The review begins by categorizing road surface irregularities into distinct types, including potholes, cracks, bumps, and undulations. Each type is discussed in detail, shedding light on their formation processes and how they manifest. The causes behind these irregularities are explored, ranging from weather conditions and heavy traffic to inadequate road maintenance and construction materials. As per data available in [24], there were 4, 03,100 unfortunate incidences of road accidents during 2021 which claimed 1, 55,622 lives and caused injuries to 3, 71,900 persons. The number of road accidents and fatalities has dropped by 26% and 25% respectively during March-April, 2020 compared to 2019 (Table.1) due to the Movement Control Order (MCO) imposed during the COVID-19 pandemic which resulted in lesser traffic [8]. Again the road fatalities are exponentially rises due to gradual unlocking and phasing out of the containment measures.

	Year	Road Accidents	No. of Injuries	No. of Deaths	No. of Vehicles
0	1995	214.4	266.5	68351	30295
1	2000	308.3	340.2	80118	48857
2	2005	390.4	447.9	98254	66289
3	2010	430.6	470.6	133938	114953
4	2015	464.7	482.4	148707	210023
5	2020	354.8	335.0	133201	295772
6	2021	403.1	371.9	155622	295772

Table 1. Road fatalities according to Report (NCRB-2021) [24]