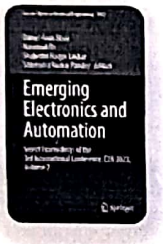
3.4.4 Number of books and chapters in edited volumes / books published per teacher during 2024-25

INDEX

IoT-Based Secure Healthcare Framework Using Blockchain Technology with Nature-Inspired Optimization Algorithms

| Conference paper | First Online: 13 February 2025

pp 269–281 | Cite this conference paper



Emerging Electronics and Automation

(E2A 2023)

Ramamani Tripathy, P. T. Satyanarayana Murty, Balajee Maram, Ankit Garg, T. Daniya & B. Santhosh Kumar

Part of the book series: Lecture Notes in Electrical Engineering ((LNEE,volume 1202))

Included in the following conference series:
International Conference on Emerging Electronics and Automation

Abstract

This study introduces a novel method for resolving security and privacy issues in IoT-based healthcare systems by combining blockchain technology with optimization

59 Intelligent diagnosis of diabetic retinopathy: Leveraging machine and deep learning

Balajee Maram[1,a], *S. Arun Joe Babulo*[2,b], *B. Manivannan*[3,c], *B. Santhosh Kumar*[4,d], *T. Daniya*[5,e], *and Sasibhushana Rao Pappu*[6,f]

[1]Professor, School of Computer Science and Artificial Intelligence, SR University, Warangal, Telangana, India
[2]Assistant Professor, Department of BCA, K.S.R. College of arts and Science for Women, K.S.R. Kalvi Nagar, Tiruchengode, Namakkal, India
[3]Assistant Professor, Department of CSE, Vivekanandha College of Engineering for Women, Tiruchengode, India
[4]Professor and Head of Department, Department of Computer Science and Engineering, Guru Nanak Institute of Technology, Ibrahimpatnam, Ranga Reddy, Telangana, India
[5]Assistant Professor, Department of CSE—AI and ML, GMR Institute of Technology, Rajam
[6]Assistant Professor, Department of Computer Science and Engineering, GITAM School of Technology, Visakhapatnam Campus, GITAM (Deemed to be University), India

Abstract: This abstract presents a succinct summary of the research proposal entitled "Diagnosis of DR utilizing ML and DL Techniques." The proposal aims to tackle the urgent matter of DR, which stands as a prominent contributor to visual impairment in individuals with diabetes. The current diagnostic procedures employed in traditional practices are characterized by a manual approach that is both labor-intensive and time-consuming. Consequently, there is a growing demand for automated diagnostic solutions that can provide accurate results. This study is to create a resilient model utilizing ML and DL methodologies in order to improve the effectiveness and precision of diagnosing DR based on retinal pictures. The study proposal delineates various objectives, including the gathering and preprocessing of datasets, the exploration of machine learning techniques for feature extraction, the building of deep learning architectures, and the full evaluation of the presented methods. This study aims to conduct a comparative analysis between the suggested models and established manual diagnosis techniques, thereby offering significant insights into their respective efficacy. It provides a valuable contribution to the area of medicine by introducing a sophisticated diagnostic tool for DR.

Keywords: DR, machine learning, deep learning, retinal images, diagnosis, automated, accuracy, efficiency, medical imaging

1. Introduction

Diabetic retinopathy (DR) is a significant microvascular problem associated with diabetes mellitus and continues to be a prominent cause of vision impairment and blindness on a global scale. The illness predominantly impacts the retina, a sensory tissue involved for converting light into neural signals, so facilitating the process of vision. The increasing incidence of diabetes, which was expected to be 463 million cases worldwide in 2019, has emphasized the importance of early detection and treatments for DR. in order to reduce its potentially severe impact on visual health. Historically, the diagnosis of DR has been dependent on the manual evaluation conducted by experienced ophthalmologists, who analyze fundus pictures. This process involves

[a]maram.balajee@gmail.com, maram.e15007@cumail.in; [b]arunjoe@ksrwomenarts.edu.in; [c]manicse1981@gmail.com; [d]bsanthosh.csegnit@gniindia.org; [e]daniya.t@gmrit.edu.in; [f]sasipappu510@gmail.com

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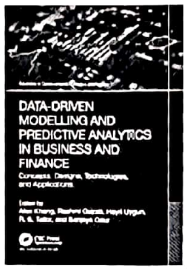
Chapter



Machine Learning-Based Functionalities for Business Intelligence and Data Analytics Tools

By Rajasekar Rangasamy (/search?contributorName=Rajasekar Rangasamy&contributorRole=author&redirectFromPDP=true&context=ubx), E. Gurumoorthi (/search?contributorName=E. Gurumoorthi&contributorRole=author&redirectFromPDP=true&context=ubx), Sonam Mittal (/search?contributorName=Sonam Mittal&contributorRole=author&redirectFromPDP=true&context=ubx), T. Daniya (/search?contributorName=T. Daniya&contributorRole=author&redirectFromPDP=true&context=ubx), M. S. Nidhya (/search?contributorName=M. S. Nidhya&contributorRole=author&redirectFromPDP=true&context=ubx)

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ABSTRACT

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Next Chapter > (chapters/edit/10.1201/9781032618845-8/study-domain-specific-approach-business-using-big-data-analytics-visualization-babasaheb-jadhav-pooja-kulkarni-ashish-kulkarni-sagar-kulkarni?context=ubx)

ABOUT THE AUTHORS

Dr. Krishna Mohan is a Postgraduate in Engineering. He received his Ph. D in Computer Science. His doctoral thesis was entitled "Featuring Clustering Approach for evaluation of descriptive type question answers". He spent 14 years in IT industry across various companies such as Fujitsu, Mastech and cigna etc., He has been at JNTUK for the last 10 years. Presently he is serving as Director of school of management studies, JNTUK. 10+ Years of Teaching experience in a reputed Government University JNTUK AP India Awarded twice as best teacher by outgoing students evaluation for the years 2015 and 2016. Expertise in Data Science , Machine Learning , Big data, Data mining, Hadoop , Statistical Analysis Using R and Python. Hadoop tools like Hive , PIG and HBase. Resource person to train the faculty at various Universities Expertise in the development of software using J2EE technologies- Servlets, JSPs, EJBs, Struts, Spring and web technologies like JavaScript, HTML, XML and XSL. Extensively involved in Designing Object Oriented systems using MVC architecture, Jakarta struts framework, Spring framework, UML and Rational Rose. Have vast experience in full stack development.

Dr. G Stalin Babu was awarded a Doctor of Philosophy in Computer science and Engineering at JNTUK-Kakinada University in the year of 2023. M.Tech at JNTU College of Engineering, Hyderabad in the year of 2010. He is qualified in UGC NET, GATE. Presently working as an Assistant Professor in Computer Science and Engineering at GMR Institute of Technology, Rajam. He has 15 years of teaching experience. He published 25 national and international journals like SCI, Scoups and UGC care. He guided Projects for professional students such as B.Tech, M.Tech. He also got the best NPTEL Motivation award. He attended many National and International Conferences and workshops. He acts as reviewer for IJCDS (Scoups), Springer and various conferences. He is specialization in Machine learning, Deep Learning and image processing.

Ramesh Bandaru is an experienced Assistant Professor in the Department of Computer Science and Engineering at Aditya Institute of Technology and Management, Tekkali, Srikakulam. He graduated in Computer Science and Engineering from JNTU Hyderabad, Andhra Pradesh, India, and later his Master of Technology in Computer Science and Engineering from JNTU Kakinada, Andhra Pradesh, India. With over 15 years of teaching experience, Ramesh has made significant contributions to the academic community, having published a good number of papers in national and international journals, conferences, and symposiums. His areas of expertise include Computer Networks, Machine Learning (ML), Deep Learning (DL), Image Processing, Web Technologies, and Web Mining.

Kalyan Savalapuraju is working as Assistant Professor in the Department of Data Science, Aditya Institute of Technology and Management, Tekkali, Srikakulam, District, Andhra Pradesh, India. He had completed his B.Tech in Computer Science and Engineering from JNTU Kakinada in 2010, M.Tech in Computer Science and Engineering from JNTU Kakinada in 2013. He had more than 8+ years of teaching experience. Currently pursing Ph.D. in CSE at JNTUGV, Vizianagaram. His area of research interest includes Artificial Intelligence, Machine Learning, Python Programming, OOAD, Computer Networks and Operating Systems.

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DATA COMMUNICATION AND COMPUTER NETWORKS

Dr. A. Krishna Mohan | Dr. G. Stalin Babu | Sri Ramesh Bandaru | S. Kalyan

DATA COMMUNICATION AND COMPUTER NETWORKS

Dr. A. Krishna Mohan
Dr. G. Stalin Babu
Sri Ramesh Bandaru
S. Kalyan

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Rajesh Bunga is an Assistant Professor in the Department of Computer Science and Engineering at Aditya Institute of Technology and Management, Tekkali, Srikakulam. He post graduated in computer science and engineering from JNTU, Kakinada, Andhra Pradesh, India. With over 12 years of teaching experience, Rajesh has made significant contributions to the academic community, having published papers in national and international journals. His expertise includes Programming, Computer Networks, DBMS, Web Technologies and Web Mining.

Ramesh Bandaru is a seasoned Assistant Professor in the Department of Computer Science and Engineering at Aditya Institute of Technology and Management, Tekkali, Srikakulam. He graduated with a Bachelor of Technology in Computer Science and Engineering from JNTU, Hyderabad, Andhra Pradesh, India, followed by a Master of Technology in Computer Science and Engineering from JNTU in Kakinada, Andhra Pradesh. Ramesh, who has over 15 years of teaching experience, has contributed significantly to the academic community by publishing more than 20 articles in national and international journals, conferences, and symposiums. His expertise spans Computer Networks, Database Management Systems, Machine Learning (ML), Deep Learning (DL), Image Processing, Web Technologies, Web Mining and Programming.

G. Vijay Kumar is an experienced Assistant Professor in the Department of Computer Science and Engineering at Aditya Institute of Technology and Management, Tekkali, Srikakulam. He graduated in Computer Science and Engineering from JNTU, Hyderabad, Andhra Pradesh, India, and later his Master of Technology in Computer Science and Engineering from JNTU, Kakinada, Andhra Pradesh, India. With over 17 years of teaching experience, he has made significant contributions to the academic community, having published many papers in national and international journals and conferences. His expertise includes Operating Systems, Computer Networks, Network Security, Cloud Computing and Cyber Security.

Dr. G Stalin Babu was awarded a Doctor of Philosophy in Computer science and Engineering at JNTUK-Kakinada University in the year of 2023. M.Tech at JNTU College of Engineering, Hyderabad in the year of 2010. He is qualified in UGE NET, GATE. Presently working as an Assistant Professor in Computer Science and Engineering at GMR Institute of Technology, Rajam. He has 15 years of teaching experience. He published 25 national and International journals like SCI, Scoups and UGC care. He guided Projects for professional students such as B.Tech, M.Tech. He also got the best NPTEL Motivation award. He attended many National and International Conferences and workshops. He acts as reviewer for IJCDS (Scoups), Springer and various conferences. He is specialization in Machine learning, Deep Learning and image processing.

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DATA STRUCTURES USING C

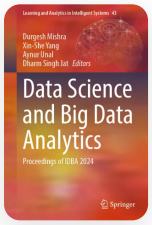
Data Structures using 'C'

Bunga Rajesh
Ramesh Bandaru
Gangu Vijay Kumar
Dr. G. Stalin Babu

Analyzing Efficiency and Accuracy of NLP Tasks by BART Transformer

| Conference paper | First Online: 16 May 2025

| pp 251–263 | Cite this conference paper



Data Science and Big Data Analytics

(IDBA 2024)

Attada Venkataramana, Poonam V. Tijare & Paras Nath Singh

Part of the book series: Learning and Analytics in Intelligent Systems ((LAIS,volume 43))

Included in the following conference series: International Conference on Data Science and Big Data Analysis

Abstract

A novel kind of neural network architecture is called a transformer. The HuggingFace transformer models offer a user-friendly way to deploy few top-performing Natural Language Processing (NLP) models. In a number of NLP applications, including text

Chapter 13
Study on Environmental and Social Impacts Through Electric Vehicles

T. Surulivel Rajan
https://orcid.org/0000-0003-0977-2763
Department of Mechanical Engineering, Prince Shri Venkateshwara Padmavathy Engineering College, Chennai, India

C. R. Edwin Selva Rex
https://orcid.org/0000-0003-1090-1841
Department of Electrical and Electronics Engineering, Vignana Bharathi Institute of Technology, India

Dhiresh Someshrao Shastri
https://orcid.org/0009-0000-6302-2002
Department of Mechanical Engineering, Dr. Vishwanath Karad MIT World Peace University, Pune, India

GBSR Naidu
Department of Electronics and Communication Engineering, GMR Institute of Technology, Vizianagaram, India

C. Senthil Kumar
https://orcid.org/0000-0001-6137-1858
School of Computer Science Engineering and Information Systems, Vellore Institute of Technology, Vellore, India

S. Boopathi
Department of Mechanical Engineering, Muthayammal Engineering College, Rasipuram, India

ABSTRACT

Transitioning to electric vehicles (EVs) can significantly reduce environmental and social impacts, improve air quality, and enhance social equity, with higher energy efficiency when integrated with renewable sources. Electric vehicles significantly

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Introduction to data-driven intelligent systems

G. Vimala Kumari, Babji Prasad Chapa, N. Krishna Chaitanya, Rupesh G. Mahajan, and Minal Shahakar

1.1 INTRODUCTION

In an era defined by technological innovation and unprecedented data availability, the landscape of intelligent systems has undergone a profound transformation. The convergence of advanced computing power, vast datasets, and sophisticated algorithms has ushered in an era where machines can learn, adapt, and make informed decisions autonomously. This chapter serves as a gateway to the realm of data-driven intelligent systems, offering readers a comprehensive introduction to the fundamental concepts, methodologies, and applications that underpin this dynamic and rapidly evolving field. The basic block diagram of a data-driven system is shown in Figure 1.1.

The block diagram shows the steps involved in understanding data-driven intelligence. The process starts with data acquisition, which involves the collection of data from a variety of sources. The collected data is then cleaned and preprocessed to prepare it for analysis. Features are then engineered from the data to create variables that are informative and relevant to the problem that is being solved. The next step is to train a machine learning model. The model learns the relationships between the features and the target variable. The model is then evaluated to see how well it performs on a held-out set of data. If the model performs well, it can be deployed to production. This means that the model is used to make predictions on new data. The predictions can then be used to make decisions.

1.1.1 Evolution of intelligent systems

The roots of intelligent systems [1] can be traced back to early rule-based systems that followed predetermined instructions to perform specific tasks. However, the limitations of such systems became increasingly evident as they struggled to handle complex, uncertain, and ambiguous real-world scenarios. The breakthrough came with the advent of data-driven approaches, which harnessed the power of data to enable systems to learn and improve from experience. This chapter explores the historical journey that has culminated in the data-driven intelligent systems we encounter today.

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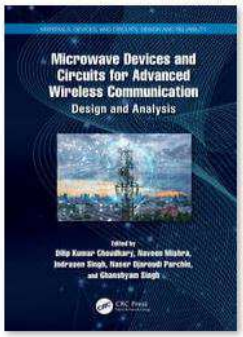

Chapter

Design of a mmWave Reconfigurable Intelligent Surface for Futuristic Wireless Communications

By B Anil Babu, BTP Madhav, P Ravi Kumar, T Anil Kumar

Book Microwave Devices and Circuits for Advanced Wireless Communication

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Chapter 17
Automatic White Blood Cells Counting Using OPENCV

Prabhakar Telagarapu
https://orcid.org/0000-0003-3287-6325
GMR Institute of Technology, India

Babji Prasad Chapa
GMR Institute of Technology, India

Sahithi Reddy Pullanagari
University of Sydney, Australia

ABSTRACT

Counting the number of white blood cells (WBCs) is a crucial procedure in medical laboratories for diagnosing various diseases. However, manual counting can be time-consuming and susceptible to errors. To overcome this, a research study has proposed an automated approach for WBC counting in sampled images using OpenCV, an open-source computer vision library. The authors developed an algorithm that segments the WBCs from the background by utilizing preprocessing techniques, followed by edge detection (canny edge detection) to identify the cells' boundaries. The number of cells is counted by implementing a simple circular Hough transform method. For this, the authors approached and collected datasets from ALL-IDB team for sampled images to test the proposed method. The proposed method has achieved high accuracy rates and outperformed manual counting in terms of speed and efficiency. The developed approach has the potential to be integrated into existing medical laboratory workflows, automating the WBC counting process and improving the diagnosis and treatment of various diseases.

1. INTRODUCTION

Reddy, V. H. (2014) proposed blood plays a major role in the human body. Noor, A. M., et.al (2020) developed blood is a complex fluid that contains various types of cells. Poomcokrak, J., & Neatpisarnvanit, C. (2008) presented and Hiremath, P. S., et.al., (2010) described white blood cells are comprised of monocytes, lymphocytes, neutrophils, eosinophils, basophils, and macrophages, each with different properties and functions. Anisha, P. R., Reddy, et.al (2022) performed comparison to white blood cells.

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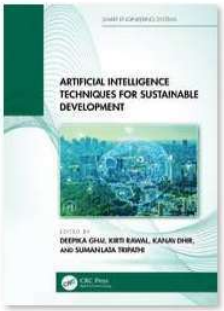

Chapter

Key Concepts in AI Models for Remote Sensing Applications

By Jami Venkata Suman, Mamidipaka Hema, Babji Prasad Chapa, Jhansi Bharathi Madavarapu

Book Artificial Intelligence Techniques for Sustainable Development

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ABSTRACT

About the Authors

Dr.Mamidipaka Hema working as an Assistant Professor in the Department of Electronics and Communication Engineering at JNTU-GV College of Engineering, Vizianagaram. She completed AMIE in Electronics and Communication Engineering and completed Masters in Engineering in Digital Systems and Computer Electronics at JNTUA, Ananthapur, Andhra Pradesh, India. She received PhD in Department of ECE at JNTUK, Kakinada, Andhra Pradesh, India. She is in the field of Teaching at JNTU-GV, Vizianagaram, Andhra Pradesh, India. She is in teaching profession for more than 15 years. She has presented 30 number of papers in National and International Journals, Conference and Symposiums. She has 3 patents published and 3 patents grant, has 3 books published. Her main area of interest includes Embedded systems, Biometrics, Gait analysis, Signal, Image & Video processing. She is a Senior Member of the IEEE, life member of IEI and member of IET.

Dr.Jami Venkata Suman working as an Assistant Professor in the Electronics and Communication Engineering Department at GMR Institute of Technology, Rajam. He graduated in Electronics and Communication Engineering at Visvesvaraya Technological University, Karnataka, India. He secured Master of Technology in VLSI System Design at JNTUH, Andhra Pradesh, India. He secured Ph.D in Electronics and Communication Engineering at GITAM (Deemed to be University), Visakhapatnam, Andhra Pradesh, India. He is in teaching profession for more than 16 years. He has published more than 60 papers in National and International Journals, Conferences and Symposiums. He has 12 patents published, 15 patents granted and 8 books published. His main area of interest includes Low Power VLSI Design, FPGA Implementation, VLSI Signal Processing, Digital IC Design and Semiconductor Device Modeling.

Dr.Madhavi Mallam working as a Professor and Head in the Department of Electronics and Communication Engineering at PES Institute of Technology and Management, Shivamogga, Karnataka. She graduated in Electronics and Communication Engineering at Jawaharlal Nehru Technological University, Hyderabad, Andhra Pradesh, India. She secured Master of Technology in DECS at JNTUH, Andhra Pradesh, India. She secured PhD in Electronics and Communication Engineering at JNTUK, Kakinada, Andhra Pradesh, India. She is in teaching profession for more than 16 years. She has published more than 30 papers in National and International Journals, Conferences and Symposiums. She has 3 patents published, 3 patents granted and also 4 books published. She has obtained funding projects grants worth Rs. 50,00,000 from different funding agencies DST, VTU, and VGST. Her main area of interest includes Signal Processing, Communications, Digital IC Design and Semiconductor Device Modeling.

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Dr. Madhavi Mallam

MICROPROCESSORS & INTERFACING

Authors

Dr. Mamidipaka Hema
Assistant Professor
Department of Electronics and Communication Engineering
UCEV-JNTUK, Vizianagaram

Dr. Jami Venkata Suman
Assistant Professor
Department of Electronics and Communication Engineering
GMR Institute of Technology, Rajam

Dr. Madhavi Mallam
Professor and Head
Department of Electronics and Communication Engineering
PES Institute of Technology and Management, Shivamogga, Karnataka.

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About the Authors

Dr.Nagandla Prasad completed his Ph.D from Koneru Lakshmaiah Education Foundation (KL university), in 2023. He completed his M.Tech from JIET in 2014 and completed B.Tech from BIET in 2012. He has published 15 articles, 2-patents on various research domains. Mainly, his research areas include antennas, meta surfaces, Terahertz domain, liquid crystals, etc. Presently, he is working as a senior assistant professor in ECE department, GMRIT, RAJAM-532127, Andhra Pradesh, India.

Dr.Pokkunuri Pardhasaradhi was born in Andhra Pradesh, India. He received Ph.D degree in 2012 from Acharya Nagarjuna University (ANU), Guntur, India. He is currently working as a professor with the Department of Electronics and Communication Engineering, and working as Associate dean (R&D, Publications) Koneru Lakshmaiah Education Foundation (Deemed to be University) Guntur, India. He has authored over 124 international research publications and published 4 patents. Under his guidelines, 8 students awarded their Ph.D degrees and currently 2 students are pursuing their Ph.D degrees. Mainly his research areas include antennas, meta surfaces, Terahertz domain, liquid crystals, etc.

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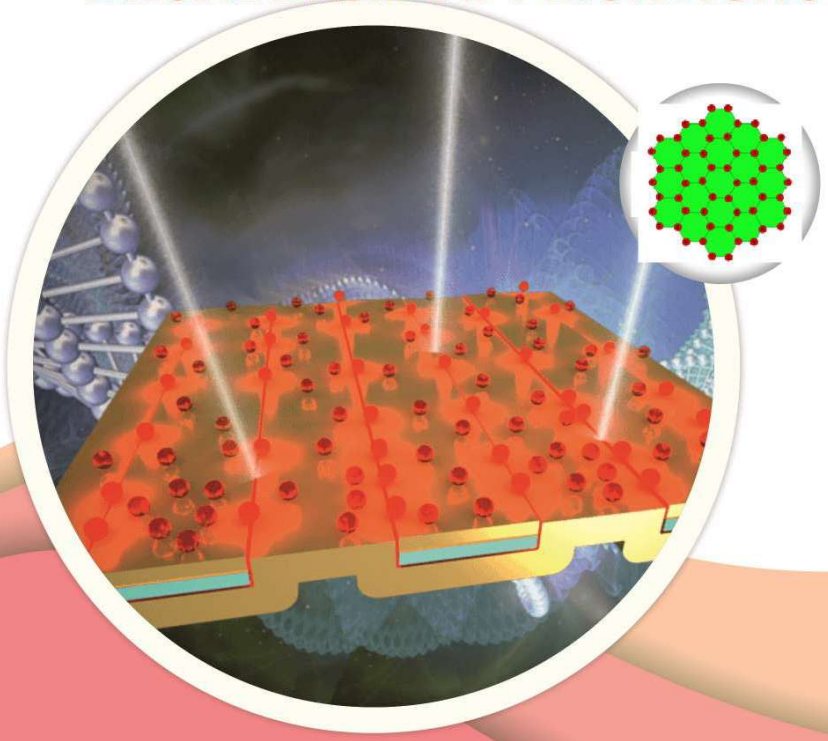
DESIGN AND ANALYSIS OF GRAPHENE METASURFACES FOR BROADBAND APPLICATIONS

Dr. Nagandla Prasad
Dr P. Pardhasaradhi

DESIGN AND ANALYSIS OF GRAPHENE METASURFACES FOR BROADBAND APPLICATIONS



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About the Authors

Dr.K.Babulu working as a Professor in the Electronics and Communication Engineering Department at JNTU-GV College of Engineering Vizianagaram (A). He graduated in Electronics and Communication Engineering at Andhra University, Visakhapatnam. He secured Master of Technology from REC, Warangal. He obtained Ph.D in the area of VLSI & Embedded System Design from JNTUA, Anantapur Andhra Pradesh, India. He is in teaching profession for more than 25 years. He has published more than 100 papers in National and International Journals, Conferences and Symposiums. He is senior member of IEEE and life member of IEI and IET. His main area of interest includes VLSI & Low Power VLSI Design, VLSI Signal Processing, FPGA implementation and Embeded systems.

Dr.Ravva Gurunadha working as an Associate Professor in the Department of Electronics and Communication Engineering at JNTU-GV College of Engineering, Vizianagaram (A). He completed B.E in Electronics and Communication Engineering from Andhra University College of Engineering (AUCE), Visakhapatnam and completed M.Tech in Instrumentation and Control Systems from JNTU Kakinada, Andhra Pradesh, India. He received PhD in Department of ECE at JNTUGV, Vizianagaram, India. He is in the field of Teaching at JNTU-GV College of Engineering (A), Vizianagaram, and Andhra Pradesh, India. He is in teaching profession for more than 20 years. He has presented 30 number of papers in National and International Journals, Conference and Symposiums. His main area of interest includes Embedded systems, Biometrics, Signal, Image & Video processing. He is a Member of the IEEE, life member of IEI and member of IET.

Dr.M.Hema working as an Assistant Professor in the Department of Electronics and Communication Engineering at JNTU-GV College of Engineering Vizianagaram (A). She completed AMIE in Electronics and Communication Engineering and completed Masters in Engineering in Digital Systems and Computer Electronics at JNTUA, Ananthapur, Andhra Pradesh, India. She received PhD in Department of ECE at JNTUK, Kakinada, Andhra Pradesh, India. She is in the field of Teaching at JNTU-GV, Vizianagaram, Andhra Pradesh, India. She is in teaching profession for more than 15 years. She has presented 30 number of papers in National and International Journals, Conference and Symposiums. Her main area of interest includes Analog & Digital Electonics, Microprocessors, Embedded systems, Biometrics, Gait analysis, Signal, Image & Video processing. She is a Senior Member of the IEEE, life member of IEI and member of IET.

Dr.Jami Venkata Suman working as an Associate Professor in the Electronics and Communication Engineering Department at GMR Institute of Technology, Rajam. He graduated in Electronics and Communication Engineering at Visvesvaraya Technological University, Karnataka, India. He secured Master of Technology in VLSI System Design at JNTUH, Andhra Pradesh, India. He secured Ph.D in Electronics and Communication Engineering at GITAM (Deemed to be University), Visakhapatnam, Andhra Pradesh, India. He is in teaching profession for more than 19 years. He has published more than 100 papers in National and International Journals, Conferences and Symposiums. He has 12 patents published and 25 patents granted, has 10 books published. He is life member of ISTE, senior member of IEEE. His main area of interest includes Low Power VLSI Design, Signal Processing, Digital IC Design, FPGA Implementation and Semiconductor Device Modeling.

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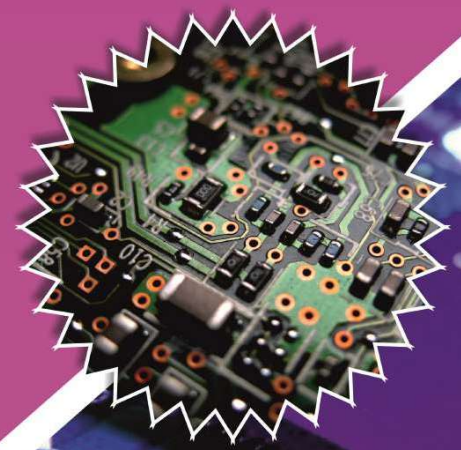
DIGITAL ELECTRONICS: PRINCIPLES AND APPLICATIONS

Dr. K. Babulu | Dr. Ravva Gurunadha
Dr. M. Hema | Dr. Jami Venkata Suman

DIGITAL ELECTRONICS:

Principles and Applications



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DIGITAL ELECTRONICS: PRINCIPLES AND APPLICATIONS

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Electric Vehicle Technology

Dr. Mohd. Asif Gandhi is working as Associate Professor in Department of Mechanical Engineering at Anjuman-I-Islam's Kalsekar Technical Campus, Panvel, India; with additional charge as Controller of CIRDPI Cell (Centre of IPR; R&D Projects; Publications and Internal Revenue Generation) for the entire campus. He was formerly the HoD of Mechanical Engineering Department. He is a B.E. (Production Engineering) from M.H. Saboo Siddik College of Engineering; a M.E. (Production Engineering)(Specialization in Manufacturing Engineering) from Fr. Conceicao Rodrigues College of Engineering both affiliated to University of Mumbai; and a Ph.D. in Industrial Engineering from NITIE (now called IIM Mumbai), Mumbai, India. He has worked 10 years in the industry and 17 years in academia. He has got many publications to his credit in highly ranked journals. He holds 10 patents and 4 copyrights. He has authored 8 books and has 50 certifications to his credit.

Dr. J.S.V.Siva Kumar, currently working as Associate Professor, Department of Electrical and Electronics Engineering, GMR Institute of Technology, Rajam, Andhra Pradesh – 532127. He graduated with a Ph.D in Electrical Engineering from Andhra University, Visakhapatnam, M.Tech in Power Electronics from Vellore Institute of Technology, Vellore and B.ech in Electrical and Electronics Engineering from GMR Institute of Technology, Rajam. Along with he has over thirty papers published in national and international journals. He has more than 18 years of teaching and research experience. He is a member of ISTE and organized conference, workshops and seminars.

Dr. Ashes Maji is an Assistant Professor in the Department of Mechanical Engineering, AEC, Asansol. He completed his PhD in Refined Nonlinear Theory of Laminated Composite Plates Based on Shear Deformation Theories from ME Department in IIT(ISM) Dhanbad. He has 16 years of teaching and 04 years of industry experience and published a total of 20 technical papers in reputed international and national journals and conference proceedings. Dr. A. Maji has also been involved in various consultancy works in collaboration with nearby industries. His research areas include nonlinear behaviour of composite materials, active vibration control and delamination of composite materials.

Dr. S. Sakthivel Padaiyatchi received the Degree in Electrical and Electronics Engineering and Master Degree in Power Systems Engineering in 1999 and 2002 respectively. He obtained the Ph.D. Degree in Electrical Engineering faculty from Anna University, Chennai, Tamil Nadu, India in 2014. Currently, He is a Professor of Electrical and Electronics Engineering at Nehru Institute of Engineering and Technology, Coimbatore, Tamil Nadu, India. He has 23 years of experience in teaching electrical engineering courses. His research areas of interest are power system control, optimization techniques, power system deregulation, FACTS and voltage stability improvement.

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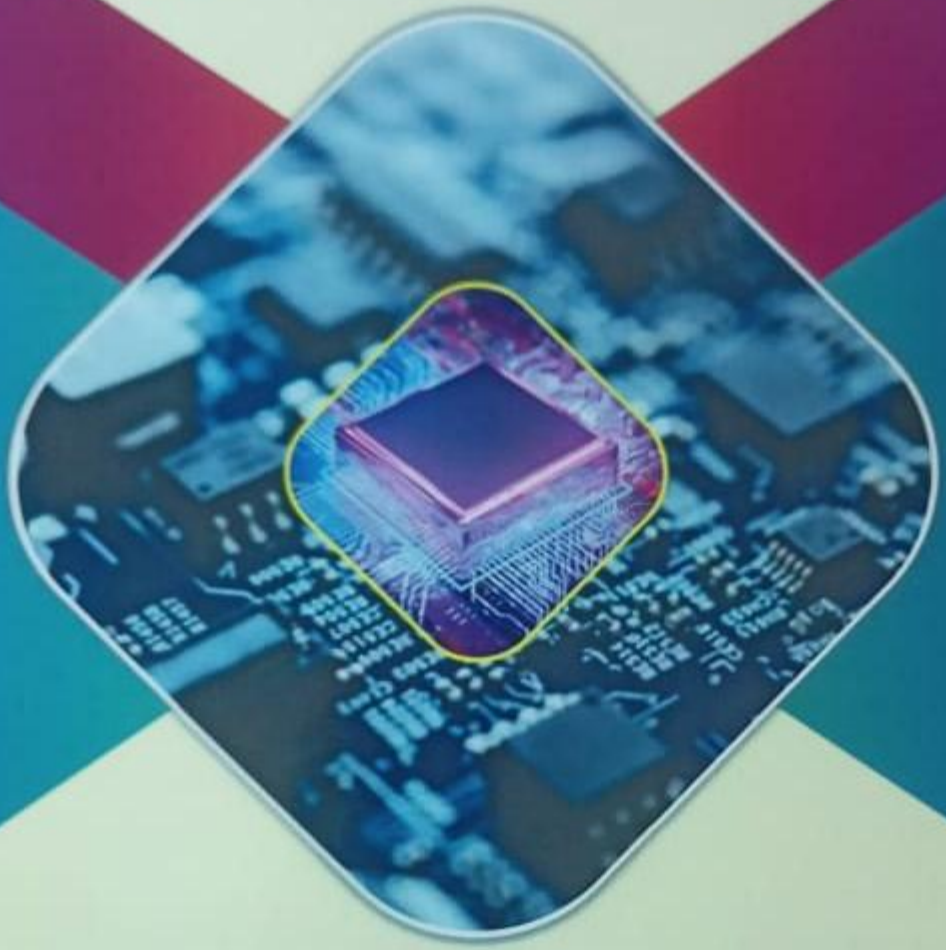
Power Electronics



Putchakayala Yanna Reddy | Dr. K. Radha Lakshmi
Dr G Chandra Sekhar | Dr. M. Vijayalakshmi

About the Authors

Putchakayala Yanna Reddy Working as Assistant Professor in the Department of Electrical and Electronics Engineering in Bharat Institute of Engineering and Technology at Mangalpally, Ibrahimpatnam, Hyderabad, Ranga Reddy District - 501 510. He received the Bachelor's Degree (B.Tech) in Electrical and Electronics Engineering (EEE) in the year 2009 from Jawaharlal Nehru Technological University (JNTU) Hyderabad, India. He received the Master's Degree (M.Tech) in Electrical and Electronics Engineering with Specialization in Power Electronics (PE) in the year 2013 from Jawaharlal Nehru Technological University (JNTU) Hyderabad, India. He is Pursuing Ph.D., in Electrical Engineering Department at National Institute of Technology (NIT), Silchar, Cachar, Assam-788010, India. He is in the field of Research in "Hybrid AC/DC Microgrid Control with Soft Computing Techniques" since 2021 at National Institute of technology (NIT), Silchar, Cachar, Assam-788010, India. He has more than 14 years teaching Experience. He has Authored 03 Textbooks and Published 06 Book Chapters and filed 04 Patents and he has Presented more than 10 Research Papers in International Journals and International Conferences. His main area of Research interest includes Micro grid Operation and Control Techniques, Renewable Energy Systems Integration, Electric grid and Electric Vehicle Integration and Soft Computing Techniques. He is a Life member of Prestigious Associations like Indian Society for Technical Education (ISTE), International Association of Engineers (IAENG), Asian Society of Reseachers (ASR), Institute of Research Engineers & Doctors (IRED), International Computer Science and Engineering Society (ICSES), Teaching and Education Research Association (TERA) and All India Council for Technical Skill Development (AICTSD).

Dr.K.Radha Lakshmi working as a Assistant Professor(SG) in the Electrical and Electronics Engineering Department at Solamalai College of Engineering, Madurai. She graduated in Engineering at Syed Ammal Engineering College, Ramanathapuram, Tamilnadu, India. She secured Master of Engineering in Power Electronics and Drives at Alagappa Chettiyar College of Engineering and Technology, Karaikudi, Tamilnadu, India. She secured Ph.D., in Electrical Engineering Department at Anna University, Chennai, Tamilnadu, India. She is in the field of Electrical and Electronics Engineering at Solamalai College of Engineering, Madurai, Tamilnadu, India. She is in teaching profession for more than 12 years. She has presented 13 papers in National and International Journals, Conference and Symposiums. His main area of interest includes Power Electronic and Drives.

Dr.G.Chandra Sekhar working as Professor in the Department of Electrical and Electronics Engineering at GMR Institute of Technology, Rajam, Andhra Pradesh. He graduated in Electrical and Electronics Engineering at SRKR. Engg. Colleg, Bhimavaram, Andhra Pradesh, India. He secured Master of Technology in EEE Department at JNTU, Kakinada, Andhra Pradesh, India. He secured Ph.D., in Faculty of Electrical Engineering at JNTU, Hyderabad, Andhra Pradesh, India. He is in the field of Power system protection, Renewable energy, at GMR Institute of Technology, Rajam, Andhra Pradesh, India. He is in teaching profession for more than 22 years. He has presented 40 papers in National and International Journals, Conference and Symposiums. His main area of interest includes Power system protection and Electrical vehicle technology.

Dr.M.Vijayalakshmi working as an Associate Professor in the ECE Department at G.Narayanamma Institute of Technology and Science, Hyderabad. She graduated in Bachelor of Engineering in ECE at Chaitanya Bharathi Institute of Technology, Hyderabad, Telangana, India. She secured Master of Engineering in ECE Department at Osmania University, Hyderabad, Telangana India. She Completed her Ph.D., in ECE Department at JNTHH, Hyderabad, Telangana, India. Her area of research in Wireless Networks. She taught various B.Tech and M.tech subjects in the area of Electronics, Digital, Communications & wireless Networks .She is in teaching profession for more than 24 years. She has presented 30 papers in National and International Journals, Conference and Symposiums. His main area of interest includes Wireless communications and networks and Optical Communications.

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Authors

Putchakayala Yanna Reddy
Assistant Professor
Department of Electrical and Electronics Engineering
Bharat Institute of Engineering and Technology
Mangalpally, Ibrahimpatnam, Hyderabad, Ranga Reddy District - 501 510.

Dr.K.Radha Lakshmi
Assistant Professor(SG)
Department of Electrical and Electronics Engineering
Solamalai College of Engineering, Madurai

Dr G Chandra Sekhar
Professor
Department of Electrical and Electronics Engineering
GMR Institute of Technology, Rajam, Andhra Pradesh.

Dr.M.Vijayalakshmi
Associate Professor
Department of Electrical and Electronics Engineering
G.Narayanamma Institute of Technology and Science, Hyderabad.

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Distance Measurement Using Ultrasonic Sensor

Rajesh Babu Damala, Rajesh Kumar Patnaik, Praveen Korla

Book Editor(s):O.V. Gnana Swathika, K. Karthikeyan, Sanjeevikumar Padmanaban

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Summary

This chapter describes an ultrasonic sensor that can gauge how far certain motor vehicle points are from the ground. The sensor works by tracking how long an ultrasonic pulse takes to travel after being reflected by the ground. A threshold comparator can quickly identify reflected pulses that are generated using a limited optimization method. A sub-wavelength detection may be made using a method like this that takes response of frequency into consideration. At rest or at moderate speeds, experimental testing at a frequency of 40 kHz. The sensor is nevertheless functional at speeds of maximum 30 m/s with error of 1 mm. The sensor can self-adapt to diverse conditions to provide optimum results and is made up of inexpensive components, making it appropriate for first-car equipment in many situations.

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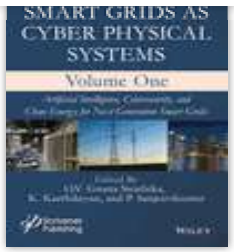

Physical Systems: Smart Grids Paving the Way to Smart Cities

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Electronics and Communications in Japan

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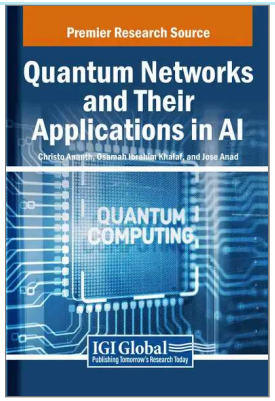
Jaspinder Kaur, Rohit Anand, Nidhi Sindhwani, Ajay Kumar Sharma, Vishal Jain



Quantum Algorithms for Network Analysis in Pathobiology With Quantum Network Medicine

M. Rambabu (GMR Institute of Technology, India), S. Kavitha (Excel Engineering College, India), C. Suganthi (Excel Engineering College, India), S. B. G. Tilak Babu (Aditya Engineering College, India), Manoj Sakharam Ishi (R.C. Patel Institute of Technology, India), and Mrunalini Harish Kulkarni (Independent Researcher, India)

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could possibly be used to solve important problems in network research, like finding larity, and graph isomorphism. When it comes to network analysis, optimization problems can :h quantum algorithms like Grover's search algorithm or quantum-inspired techniques like the algorithm. This list has methods for lowering noise in quantum systems, the creation of quantum ical models for understanding how quantum-enhanced discoveries affect living things. Finally, ods are being created all the time in the dynamic field of quantum network medicine. These elp us learn more about pathobiological networks. It is possible to improve healthcare outcomes complex biological processes in new ways.

Chapter Preview

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Chapter 4
Renewable Energy Sources for a Sustainable Worldwide Prospective:
Forecasting Future Multi-Sector Sustainable Regulations

Shweta Katre
Bhilai Institute of Technology, India

Jayasri Kotti
https://orcid.org/0000-0001-6501-1948
GMR Institute of Technology, India

Namra Joshi
https://orcid.org/0000-0003-0515-3156
SVKM'S Institute of Technology, India

Nagorao Pawar
MGM's College of Engineering and Technology, India

Sabyasachi Pramanik
https://orcid.org/0000-0002-9431-8751
Haldia Institute of Technology, India

Ankur Gupta
https://orcid.org/0000-0002-4651-5830
Vaish College of Engineering, Rohtak, India

ABSTRACT

First of all, concerns about climate change and environmental damage, coupled with the depletion of fossil fuels, are driving global shifts towards renewable energy sources. Two especially notable and widely adopted alternatives that have the potential to change our energy landscape and mitigate the effects of global warming are wind and solar energy. As a sustainable resource, wind energy has evolved from simple windmills to intricate, high-tech wind turbines. It includes wind farms that are both onshore and offshore and is characterized by scalability, versatility, and capacity

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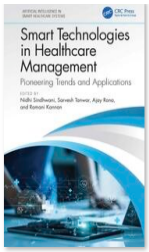

Chapter

Machine Learning-Based Inconsistency Detection in Medical Data

By Janjhyam Venkata Naga Ramesh, Jayasri Kotti, Priyanka Chandani, Rupal Gupta, Ahateshaam Ansari, T.R. Mahesh, Dharmesh Dhabliya

Book Smart Technologies in Healthcare Management

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ABSTRACT

The application of unsupervised anomaly detection algorithms on medical claims data to uncover probable fraud or anomalies in the claims is investigated in this research. The dataset used in the study is the Medicare Claims Synthetic Public Use Files (SynPUFs), which contains information on beneficiaries, their medical problems, and the claims filed for healthcare services. The paper examines and evaluates the efficacy of three unsupervised anomaly detection methods in detecting anomalies in data. The study's findings show that unsupervised anomaly detection has the potential to be used as a tool for detecting suspicious activity in medical claims data, which can ultimately assist enhance the efficiency and accuracy of healthcare systems.

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6 Constraints and impediments to the conduct of extracurricular activities in engineering education during the pandemic – an industrial engineering insight

G.V.S.S. Sharma, M. Srinivasa Rao, V. Rambabu, G. Sasikumar, Sujana Chamarty, and C.L.V.R.S.V. Prasad

Introduction

In the global pandemic clutches, imparting education is a real big challenge (Kumar and Malhotra, 2021). In such a situation, the online medium of instruction emerged as the preferred mode of pedagogy (Grodotzki et al., 2021; Ahmed and Opoku, 2022). Engineering learning requires understanding of the practical experimentation aspect of the subject (Kumar and Sharma, 2017). In such a scenario, the digital twin concept (Rassudov and Korunets, 2020) plays an important role, wherein a balance is struck between online delivery and performing experiments through virtual simulators. Virtual laboratory (Kapilan et al., 2021) emerged as the saviour for imparting practical knowledge to students during Covid-19 pandemic. On the other hand, a research carried out in the University of Sharjah (Mushtaha et al., 2022) revealed that students preferred a blended mode of learning rather than solely depending on either virtual or face-to-face mode of learning. In a developing nation like India, the Covid-19 pandemic acted as an accelerator for implementing many new useful schemes and policies by Government of India promoting open and distant learning (ODL) (Singh and Kumar, 2022).

The prime aspect of engineering education during pandemic is to be humane (Nebrida and Bangud, 2022). Students are in extreme stress both physically and mentally due to continuous exposure to online learning gadgets like smartphones and laptops (Kovid and Kumar, 2022). Faculty must be patient with their students and help them in the mastery of their subjects (Sharaievska et al., 2022). Apart from learning the core engineering subject, the positive coping and emotional well-being of the students through strength-based parenting plays a vital role (Allen et al., 2022). Overcoming the psychological stress is very important to overcome the unusual behaviour, lack of confidence, and improper sleeping patterns during the pandemic

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Influence of Stability Improvement Methods Over the Thermal Conductivity of Al_2O_3-DI Nanofluids

Ravi Kiran Mudidana, Vijay Miditana, and V. Rambabu

Abstract Stability has a dominant role over preserving the thermophysical properties of nanofluids for longer durations from their development. Rapid decrement in the balance between repulsive and attractive forces of nanoparticles can promote the agglomeration in the suspension and deteriorate the thermal performance with the drastic loss of colloidal characteristics. Various techniques such as magnetic stirring, ultrasonication, surfactants, and pH modifiers are applied to improve the chemical stability of nanofluids. But the stability improvement techniques can have significant influence over the thermal conductivity of nanofluids with the effect of intermolecular reactions. The study is aimed to investigate the influence of stability enhancement techniques over the thermophysical properties such as thermal conductivity, viscosity, and density. The nanofluid at different volume fractions such as 0.03, 0.06, 0.09, and 0.12% are developed by dispersing 35 nm sized Al_2O_3 nanoparticles into deionized (DI) water, and stability improvement techniques are applied. The observations made from the performed experimentation are discussed with suitable illustrations.

Keywords Nanofluids · Magnetic stirring · Ultrasonication · Thermophysical properties

R. K. Mudidana (✉) · V. Miditana
Centurion University of Technology and Management, Paralakhemundi, Odisha, India
e-mail: ravikiranmudidana335@gmail.com

V. Rambabu
GMR Institute of Technology, Rajam, Andhra Pradesh, India

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Chapter 12
Analysis on Implantable IoT Sensors

C. H. Gangadhar
Prasad V. Potluri Siddhartha Institute of Technology, India

Ramakrishna Kolikipogu
https://orcid.org/0000-0002-3253-8476
Chaitanya Bharathi Institute of Technology, India

K. Santarao
GMR Institute of Technology, India

Benita Christopher
Westford University, UAE

Nidhya M. S.
https://orcid.org/0000-0002-1290-4520
Dayananda Sagar University, India

ABSTRACT

Miniaturization has allowed for greater efficiency and increased power in implantable electronic devices. Glucose levels, blood pressure, and cerebral activity are just few of the many physiological characteristics that may be tracked with the use of biomedical sensors. A body area network, also known as a wireless sensor network, is primarily comprised of a set of sensors operating in tandem inside a human body. The present status of the workmanship in remote biomedical sensor correspondence and controlling frameworks are talked about in this chapter, alongside their expected applications. Additionally, up-to-date integration techniques are outlined for making the sensors smaller and well suited for implantation. For a collection of sensors to function as a BAN, they must first join forces to establish a network. At long last,

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