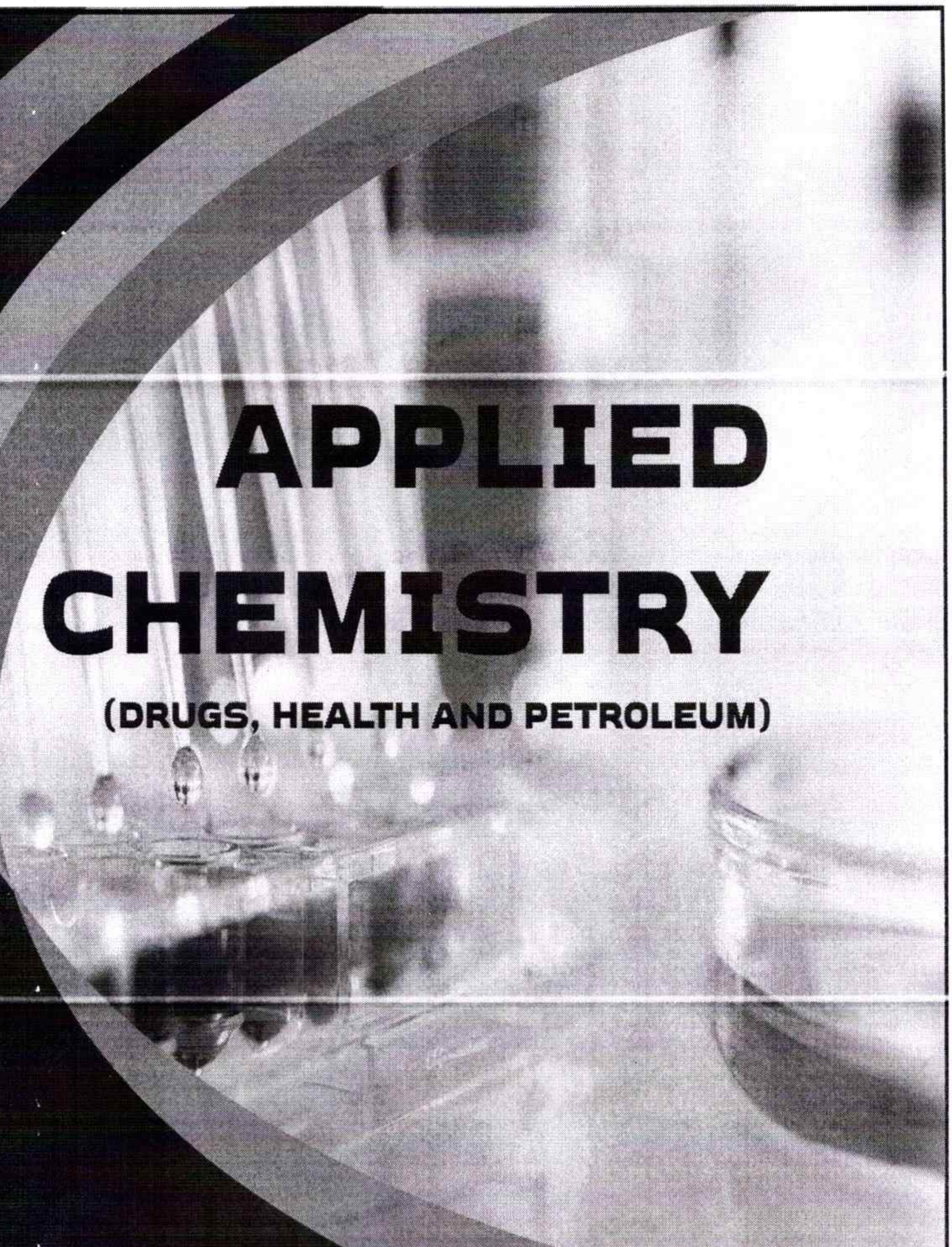


# APPLIED CHEMISTRY

## (DRUGS, HEALTH AND PETROLEUM)


EDITOR

Prof. Dr. techn. Murthy Chavali Yadav
DEAN (Research) | PROFESSOR (Chemistry)
Alliance University, Bangalore.



Kripa Drishti Publications, Pune.

# APPLIED CHEMISTRY

## (DRUGS, HEALTH AND PETROLEUM)


**Editor**

**Prof. Dr. techn. Murthy Chavali Yadav**
DEAN (Research) | PROFESSOR (Chemistry)
Alliance University, Bangalore.



**Kripa-Drishti Publications, Pune.**

Book Title: **Applied Chemistry (Drugs, Health and Petroleum)**

Editor By: **Prof. Dr. techn. Murthy Chavali Yadav**

Authored By: **R. V. V. Ramana Murthy, Hussain Al. Abkari, Murthy Chavali, Jonnala Sandhya, B. V. Subba Reddy, N. Bhasker, Silpi Sarkar, Debasish Debnath, G.D.V. Kusuma, B. Ravi Kumar.**

1st Edition

ISBN: **978-93-94570-63-4**

9 789394 570634

Published: **Sept 2022**

**Publisher:**

KRIPA DRISHTI PUBLICATIONS

**Kripa-Drishti Publications**
A/ 503, Poorva Height, SNO 148/1A/1/1A,
Sus Road, Pashan- 411021, Pune, Maharashtra, India.
Mob: +91-8007068686
Email: editor@kdpublications.in
Web: https://www.kdpublications.in

# PREFACE

This new book, Applied Chemistry (Drugs, Health, Petroleum), examines studies on the petroleum processing sector, possibly useful pharmacological compounds, and medical data. The application of informatics technologies for applied chemistry, specifically towards petroleum research, drug molecule syntheses, and emergency health records management, is presented in this new book together with creative research, new concepts, and fresh advancements. Has several chapters on drugs, petroleum, and health.

Chemical engineers, researchers, graduate students, and those interested in the field of applied chemistry (drugs, health, petroleum), can all benefit from the knowledge provided. The synergistic methods to optimise oil and gas well cementing are discussed in the first chapter. The second chapter talks about the Optimized stimulation techniques in oil and natural gas production. The third and fourth chapters discuss about the Design, Synthesis, Molecular Docking and Biological Evaluation of 1-(Benzo[d]thiazol-2-Ylamino) (Phenyl)methyl) Naphthalen-2-ol Derivatives as antiproliferative agents and novel chalcone derivatives along with their QSAR studies. The fifth chapter explains the present scenario of electronic health records challenges in the Indian healthcare scenario towards data science application. The sixth chapter discusses the progress and challenges of hydraulic fracturing application. This volume will be a valuable resource for faculty and advanced students in petroleum engineering, drug synthesis, and health management as well as other researchers, scientists, and industry professionals in related areas.

# CONTENT

*ISBN: 978-93-94570-63-4*

# 1. Studies on Synergistic Approaches to Optimize Oil and Gas Well Cementing

**R. V. V. Ramana Murthy**

TAQA Well Services Company,
Well Cementing laboratory,
Dammam, Kingdom of Saudi Arabia.

**Hussain Al. Abkari**

TAQA Well Services Company,
Well Cementing laboratory,
Sharnbasva University,
Dammam, Kingdom of Saudi Arabia.

**Murthy Chavali**

Research Division of Chemistry,
Faculty of Science &Technology,
Alliance University, Chandapura-Anekal,
Bengaluru, Karnataka, India.

**Jonnala Sandhya**

Department of Chemistry,
Vaageswari College of Engineering,
Karimnagar, Telangana, India.

***Abstract:***

*Nano silica, when combined with cement slurry aids in improving its compressive strength even, reduces the wait-on-cement time for cement plugs. This study focuses on the combined effect of nano silica used in natural oil and gas well cementing. A comparative study is conducted on the performance of cement slurry (conventional 118 pcf (15.8 lbm/gal) with nano silica and cement slurry without nano-silica.*

*The cement slurry combined with nano-silica has shown an early compressive strength development in cement slurry at different concentration of silica fume at 10% and 20% by weight of cement. This study also focuses on other areas for improvement including slurry stability, free fluid reduction, lower fluid loss value, fine rheology, appropriate thickening time and higher ultimate compressive strength development. The cement slurry with nano-silica has shown improvement in the compressive strength due to the increased rate of hydration, thus thickening time was within 5hrs.*

***Keywords:*** *Nano silica, Low density slurries, viscosity, cement thickening time, cement-compressive strength, formation permeability.*

# Dual-Facet Loaded Dual-Polarized Quad-band Dielectric Resonator-Rectenna for RF Energy Harvesting in Smart City Applications

Daasari Surender
*Department of ECE*
*Vaageswari College of Engineering*
*Karimnagar, Telangana,*
*India-505527*
surender.daasari@gmail.com

Venkata Reddy Adama
*Department of ECE*
*Vaageswari College of Engineering*
*Karimnagar, Telangana,*
*India-505527*
venkat7641@gmail.com

Taimoor Khan
*Department of ECE*
*National Institute of Technology*
*Silchar*
*Assam, India, 788010*
ktaimoor@ieee.org

Fazal A. Talukdar
*Department of ECE*
*National Institute of Technology*
*Silchar*
*Assam, India, 788010*
fatalukdar@gmail.com

D. Rama Krishna
*Department of ECE*
*University College of Engineering (A),*
*Osmania University, Hyderabad,*
*Telangana, India-501301*
dasariramakrishna@osmania.ac.in

G. Amarnath
*Department of ECE*
*Marri Laxman Reddy Institute of*
*Technology & Mgmt,*
*Hyderabad, Telangana, India-500043*
amarnath@mlritm.ac.in

2023 IEEE Wireless Antenna and Microwave Symposium (WAMS) | 979-8-3503-1243-0/23/$31.00 ©2023 IEEE | DOI: 10.1109/WAMS57261.2023.10242897

***Abstract*— The most widely used approach for replacing traditional batteries and extending battery life is radio frequency energy harvesting (RFEH). However, the power density in the immediate environment is low thus the antenna with multiband features is essential to gather a huge amount of RF power from the low-density atmosphere. This paper presented a multiband dual-polarized dielectric resonator antenna for smart city applications using RFEH technology. The proposed DR antenna covers the frequency bands of WLAN 5.2 GHz, Wi-Fi 5.8 GHz, and future 6 GHz Wi-Fi bands of 6.2 GHz and 6.6 GHz. A rectangular dielectric resonator (DR) is fabricated using a K10 material and it is designed on a low-cost epoxy FR4 substrate (having $\varepsilon_r$=4.4). A coaxial probe feeding approach is used for excitation purposes. The substrate and DR material dimensions are 66 mm×68.2 mm×1.6 mm and 13.6 mm×11.4 mm×6.35 mm respectively. A spiral metallic coil is stuck on two faces (front and bottom) of a DR material to operate the antenna in the desired band of frequencies. The proposed technique is used to bring down the axial ratio (AR) value below 3dB level in two resonant bands. The maximum gain of 6.72 dB is observed experimentally at 5.2 GHz frequency.**

***Keywords*— *Radio frequency energy harvesting (RFEH), single-band antenna, circular polarization (CP), spiral facet, smart city***

## I. Introduction

A smart city brightens the city's efficiency and sustainability structurally and functionally, which assures the quality of citizens' health and life. To establish a smart city, widespread deployment of wireless networks that are integrated with sensing elements is essential to monitor our breathing surroundings, e.g., smart lighting system, health condition of the structural buildings, or the condition of weather report [1-5]. Besides, closely associated sensor nodes in the wireless sensor networks (WSNs) also helped in monitoring the sound, temperature, localization, and so on [6]. The most important task of the sensor nodes is monitoring the information from the ambient environments and sharing that information with an associated network [7]. These sensor nodes are depending on conventional batteries for powering themselves. The energy consumption increases with increasing sensing nodes connected in the WSN to perform various functions of the smart city. The lifetime of the conventional batteries is limited, and thus these batteries are to be replaced periodically. However, frequent replacement of batteries may not practicable all the time. To afford sustainable monitoring by maintaining an adequate energy supply for these sensing elements of a WSN in the smart city is an important issue [8]. To release this problem of driving the sensors in the WSNs of a smart city, green technology or energy harvesting techniques have been employed.

In energy harvesting (EH) technology, energy is collected from various ambient energy sources such as sun, wind, acoustic, motion, and electromagnetic (EM) energies, etc., and this collected energy is converted into a suitable form of electrical energy for energizing small electronic devices [9-10]. Among various EH approaches, RF energy harvesting approach has gained more popularity due to the creation of more radiating renewable resources [11]. Rectenna, also known as rectifying antenna, are specialized types of equipment used in the RFEH technique to gather electromagnetic (EM) energy from environmental sources and transform it into a form that can be used to power electronic devices. The antenna and a rectifiers are the main elements of the rectenna system. Electromagnetic energy from the environment is collected using an antenna or aerial, and alternating energy is converted to direct current (DC) using a rectifier circuit. The rectenna's aerial gathering capability largely determines how well it performs.

The dielectric resonator antennas (DRAs) exhibit a wide bandwidth, flexibility in shapes and feeding techniques, and also exhibits a large radiation efficiency over microstrip patch antennas. A multilayer configuration of DRA's has been investigated for RFEH applications in [12-13]. Here this, the designed antenna operates at a single band of frequencies. A single band antenna can only receive a finite amount of ambient power, and because of its particular operating frequency, its biggest drawback is interoperability with all geographical regions. Thus, designing a multiband antenna with an enhanced harvesting ability is an important issue for energy harvesting applications. Agrawal et al. [14] have proposed a slot-loaded DRA with dual-band characteristics. The designed antenna suffers from a large antenna dimension, and it is a LP antenna. The polarization diversity approaches are more demanded over single polarized antenna

# An Efficient Dielectric Resonator Antenna for Dual-Band Dual-Polarized RFEH Applications in Smart City Environment

Daasari Surender
*Department of ECE*
*Vaageswari College of Engineering, Telangana, India*
surender.daasari@gmail.com

Md. Ahsan Halimi
*Department of ECE*
*National Institute of Technology Silchar, Assam, India.*
ahsanhalimi@gmail.com

Taimoor Khan
*Department of ECE*
*National Institute of Technology Silchar, Assam, India.*
ktaimoor@ieee.org

Fazal A. Talukdar
*Department of ECE*
*National Institute of Technology Silchar, Assam, India.*
fatalukdar@gmail.com

2022 IEEE Silchar Subsection Conference (SILCON) | 978-1-6654-7100-8/22/$31.00 ©2022 IEEE | DOI: 10.1109/SILCON55242.2022.10028861

*Abstract*— **This work presents a dual-polarized dielectric resonator antenna (DRA) operating over two frequency bands that cover LTE1800 and LTE2500 bands for radio frequency energy harvesting (RFEH) applications. An Eccostock HIK K10 material with a dielectric constant of 10 is used to create a DRA. The dimension of DRA is 9×16.1×5.5 mm$^3$ placed over the 1.6 mm thick FR4 substrate ($\varepsilon_r$=4.4). The area of the substrate material is optimized as 60×50 mm$^2$. A Bow-tie-shaped slot is created into the ground plane to help bring down the resonant frequency to 1.95 GHz and also helps in increasing the reflection coefficient performance. One more resonance is observed by placing a reflecting plane having an equal dimension to the antenna substrate at a gap of 20 mm from the antenna ground plane. In addition to this, an improvement in the antenna gain is also observed with a reflecting surface. The reflecting plane helps to increase the gain value. The maximum possible gain value is 8.36 dB at 2.6 GHz frequency. The proposed antenna exhibits omnidirectional radiation properties, thus it is suitable to harvest ambient EM energies available at LTE bands.**

***Keywords***— ***radio frequency energy harvesting (RFEH), dielectric resonator antenna (DRA), reflecting plane, Bow-tie shape of a slot***

## I. INTRODUCTION

The concept of smart cities is now becoming a reality: cities are increasingly associated and bright with smart cities, with fast advancements in distinct fields including sensing, municipal services, transportation, etc. These can allow facilities to be carried more reliably and efficiently, inspiring visitors' and dwellers' experiences, and the data created can be exploited for pioneering applications. While several sensing elements allow these applications can be grid-powered, there is an enhancing demand for independent sensing devices [1], [2]. Whereas these systems are usually driven by conventional batteries. But, conventional batteries suffer from a limited lifetime, hence the frequent replacement of batteries is needed which increases the system cost and complexity. An energy harvesting (EH) approach is found to be a good solution for energizing low-power devices [3], [4].

Energy Harvesting (EH) is a technique in which ambient energy emanated from various sources such as solar, acoustic, thermal, wind, mechanical, and radio frequency (RF), etc. is harvested using a receiving element, and it is converted into the electrical form of energy as suitable to run low power devices. Based on the type of source used, they are classified as solar EH, acoustic EH, thermal EH, wind EH, mechanical EH, and RFEH. Each EH technique has some merits and demerits. However, the RFEH approach has more advantages over all other EH approaches due to its continuous accessibility and increasing availability due to the establishment of multiple RF transmitters, and especially the RFEH is suitable for operation in the indoor atmosphere also [5], [6].

The RFEH is the process of utilizing RF energy to enable low-power devices using rectenna. The rectenna avoids frequent replacement of the battery by extending the device lifetime, so maintenance cost reduces. In the RFEH, the rectenna (or antenna and the rectifier combinedly) is the basic and essential component. The overall performance is relying primarily on the antenna [7] and rectifying circuit [8]. The antenna captures the RF energy from the surrounding. Thus, the overall rectenna performance is determined by the power captured by the antenna. Usually, the power received by the antenna increases using a high-gain antenna. However, a high gain antenna is possible with a large antenna dimension [9], [10]. This increases the overall rectenna dimension too, which limits the applications of rectenna.

Alternatively, a multi-band configuration is suitable to increase the antenna received power. Many dual-band antennas have been reported for RFEH applications. A multilayer structure with a reflecting plane [11], an elliptically shaped slot-loaded circular microstrip patch antenna in [12], a multi-port dual-band differentially driven microstrip patch antenna in [13], and a quasi-yagi antenna with a split-ring resonator in [14] were designed for dual-band operation. The reported designs in [11-14] suffer from various limitations such as large antenna dimensions, complexity, and low gain. Besides this, However, losses associated with microstrip patch radiators are more due to the conductive portion involved. Thus, dielectric resonator antennas (DRA's) have attained more popularity. A pentagonal-shaped DRA has been proposed in [15]. A notch including a rectangular slot helps to achieve desired performance. However, the implemented antenna suffers from a large antenna dimension. In addition to the aforementioned specifications, the antenna having dual-polarized characteristics is an added advantage of receiving any polarized wave from the surrounding air. A dual-polarized dual-band DRA is reported in [16]. Crossed slots are etched in the ground plane below the dielectric resonator to help in achieving dual-polarized characteristics. However,

978-1-6654-7100-8/22/$31.00 ©2022 IEEE

# OPERATING SYSTEMS

# TITLE OF THE BOOK: OPERATING SYSTEMS

**Edition: First – 2022**



**DISCLAIMER**

The authors are solely responsible for the contents published in this text book. The publishers or editors do not take any responsibility for the same in any manner. Errors, if any, are purely unintentional and readers are requested to communicate such errors to the editors or publishers to avoid discrepancies in future.



**ISBN: 978-93-92992-82-7**

**MRP: Rs. 600/-**

**PUBLISHER & PRINTER: Scientific International Publishing House**

**Contact: +917019991025**

**Website: www.sipinternationalpublishers.com**

# AUTHORS PROFILE

Dr.N.Chandra Mouli Working as an Asst.Prof. in the Department of CSE. At Vaageswari College Of Engineering-Karimnagar. He secured Master of Technology in CSE at Jawaharlal Nehru Technological University Hyderabad, India. He secured Ph.D. in the field of Cloud Computing at Sri Satya Sai University of Technology & Medical Sciences, Bhopal, India. He is in teaching profession for more than 12 years. He has presented number of papers in National and International Journals, Conference and Symposiums. His main area of interest includes Cloud Computing and Cyber security.

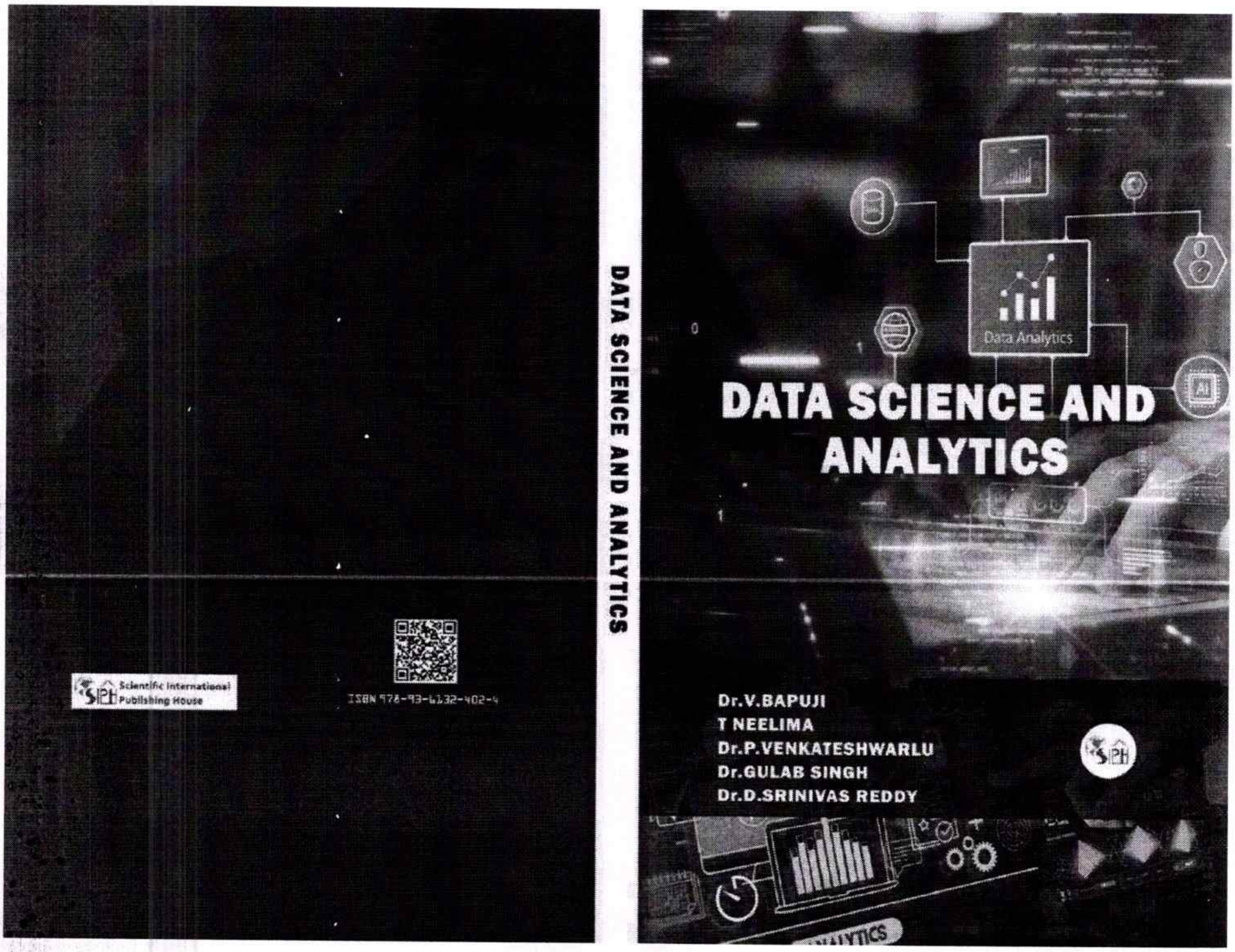
Dr. Manjula Shanbhog is an Associate Professor and Head of the Computer Science and Engineering Department at Lloyd Institute of Engineering and Technology. She has done Ph D in Computer Science in the field of Cloud Computing. She has over 15 years of teaching and research experience in the area of Cloud Computing, Data Science, Machine Learning, Deep Learning, and Image Processing. She has published books, book chapters and research papers in reputed national and international journals and also patented her research work. During her teaching tenure she has guided many post graduate and graduate students in their project/research work. She has also attended and conducted various National & International conferences/ seminars, presented research papers and chaired the conferences.

Mr. Mithun B Patil Working as an Assistant Professor in the Department of Computer Science and Engineering at N K Orchid College Of Engineering Solapur Maharashtra. He graduated in Computer Science & Engineering at Dayanada Sagar College of Engineering Bangalore, Karnataka India. He secured Master of Technology in Computer Science & Engineering, from VTU Belgavi, Karnataka India. He is Pursuing Ph.D. in the field of Wireless Networks at Computer Science & Engineering, VTU Belgavi, and Karnataka India. He is in teaching profession for more than 11 years. He has presented 13 papers in National and International Journals, Conference and Symposiums and filed 07 National and International Patents. His main area of interest includes Wireless sensor Networks, Operating System, Distributed system and Computer graphics.

Mr. Dillip Narayan Sahu Working as Lecturer in the Department of MCA, School of Computer Science at Gangadhar Meher University (GMU). He graduated in Physics Honours at Sambalpur University, Sambalpur, India. He secured Master of Computer Application and Master of Technology in Computer Science at Sambalpur University, Sambalpur, India. He secured M.Phil. Degree in Computer Science at MATS University, Chattisgarh, India. He is Pursuing Ph.D. in the field of Machine Learning. He is in teaching profession for more than 10 years. He has presented and published number of papers in National and International Journals, Conferences and Symposiums. His main area of interest includes Artificial Intelligence, Machine Learning, Analysis and Design of Algorithms, Data Science and Internet of Things.

(Scientific International Publishing House)

ISBN : 978-93-92992-82-7 www.sipinternationalpublishers.com




Principal
Vaageswari College of Engineering
KARIMNAGAR-505 ...

# DATA SCIENCE AND ANALYTICS

**FIRST EDITION**

**Authors**

**Dr.V.BAPUJI**

*Professor*
*Vaageswari College of Engineering*
*Karimnagar, Telangana*

**T Neelima**

*Assistant Professor*
*Brilliant Grammar School Educational Society's*
*Group of Institutions*
*Hyderabad, Telangana – 501 505*

**Dr.P.VENKATESHWARLU**

*Professor*
*Vaageswari College of Engineering*
*Karimnagar, Telangana*

**Dr.GULAB SINGH**

*Professor*
*Vaageswari College of Engineering*
*Karimnagar, Telangana*

**Dr.D.SRINIVAS REDDY**

*Professor*
*Vaageswari College of Engineering*
*Karimnagar, Telangana*

SIPH

**Title of the Book: DATA SCIENCE AND ANALYTICS**

**Edition: First – 2022**



**ISBN: 978-93-6132-402-4**

**MRP: 600/-**

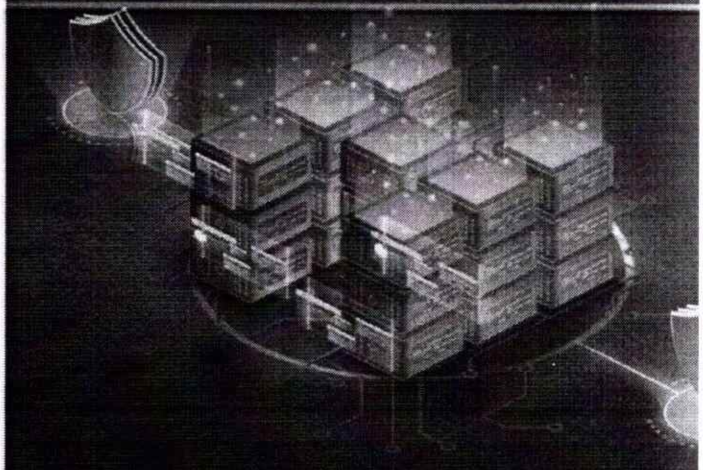
**PUBLISHER & PRINTER:** Scientific International Publishing House,
32B, Mazhuppan Street, Mannargudi,
Tamilnadu, India.
www.sipinternationalpublishers.com
editor@sipinternationalpublishers.com

DATAMINING AND DATAWAREHOUSING

Scientific International Publishing House

ISBN 978-93-6132-950-0

# DATAMINING AND DATAWAREHOUSING



Dr. D PAVAN KUMAR
Dr.GULAB SINGH
Dr.D.SRINIVAS REDDY
Dr.V.BAPUJI
Dr.N.CHANDRAMOULI

SIPH

# DATAMINING AND DATAWAREHOUSING

**FIRST EDITION**

**<u>Authors</u>**


**Dr. D Pavan Kumar**

*Professor*
*Brilliant Grammar School Educational Society's*
*Group of Institutions*
*Hyderabad, Telangana – 501 505*

**Dr.GULAB SINGH**

*Professor*
*Vaageswari College of Engineering*
*Karimnagar, Telangana*

**Dr.D.SRINIVAS REDDY**

*Professor*
*Vaageswari College of Engineering*
*Karimnagar, Telangana*

**Dr.V.BAPUJI**

*Professor*
*Vaageswari College of Engineering*
*Karimnagar, Telangana*

**Dr.N.CHANDRAMOULI**

*Professor*
*Vaageswari College of Engineering*
*Karimnagar, Telangana*

**Title of the Book: DATAMINING AND DATAWAREHOUSING**

**Edition: First – 2022**



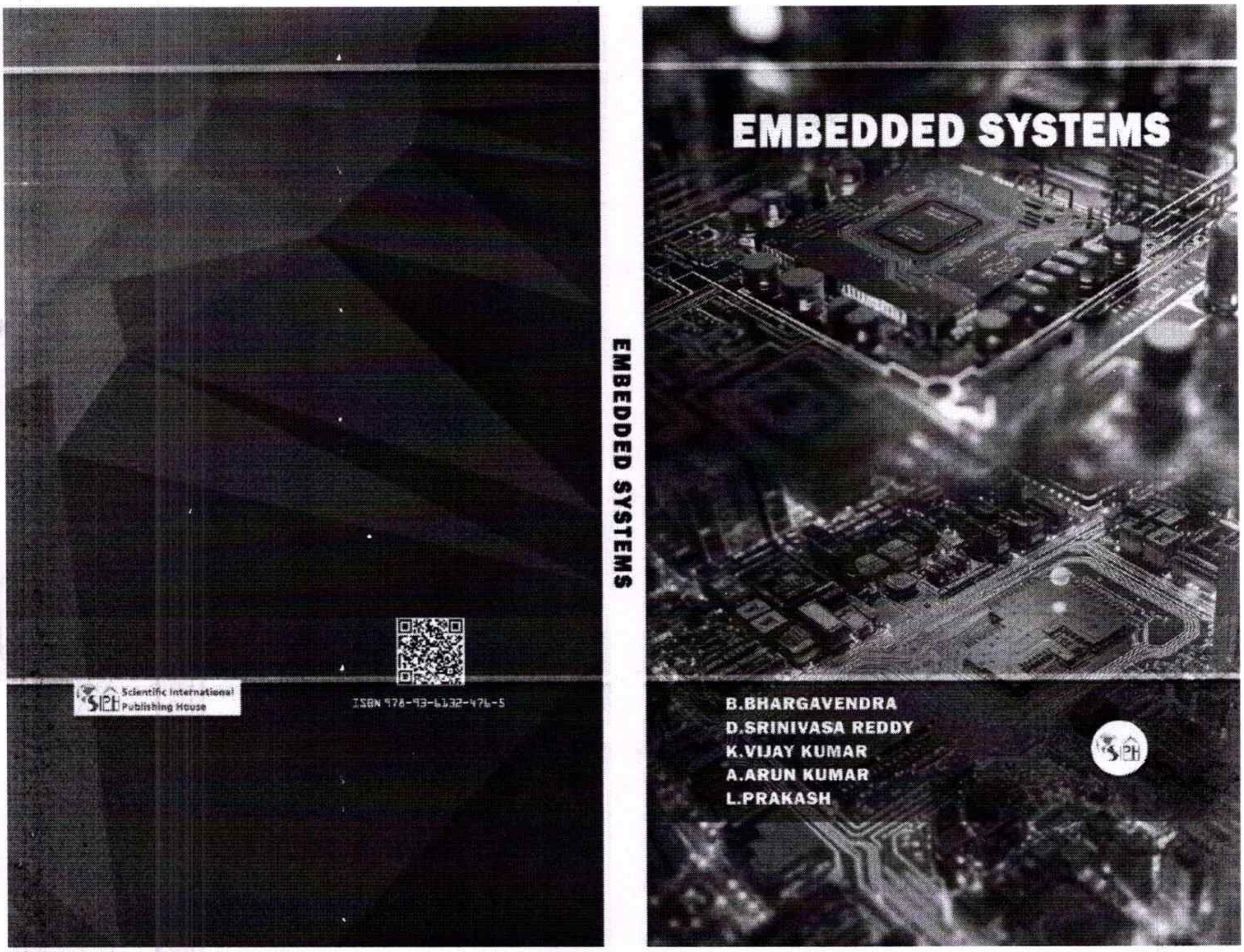
**Disclaimer**

The Authors/Editors are solely responsible for the contents published in this text book. The publishers or editors do not take any responsibility for the same in any manner. Errors, if any, are purely unintentional and readers are requested to communicate such errors to the editors or publishers to avoid discrepancies in future.

**ISBN: 978-93-6132-950-0**

**MRP: 600/-**

**PUBLISHER & PRINTER:** Scientific International Publishing House,
32B, Mazhuppan Street, Mannargudi,
Tamilnadu, India.
www.sipinternationalpublishers.com
editor@sipinternationalpublishers.com




Principal
Vaageswari College of Engineering
KARIMNAGAR

# EMBEDDED SYSTEMS

**FIRST EDITION**

**Authors**


**B. BHARGAVENDRA**

*Assistant Professor*
*Vaageswari College of Engineering*
*Karimnagar, Telangana*

***D SRINIVASA REDDY***

*Assistant Professor*
*Brilliant Grammar School Educational Society's*
*Group of Institutions*
*Hyderabad, Telangana – 501 505*

**K. VIJAY KUMAR**

*Assistant Professor*
*Vaageswari College of Engineering*
*Karimnagar, Telangana*

**A. ARUN KUMAR**

*Assistant Professor*
*Vaageswari College of Engineering*
*Karimnagar, Telangana*

**L. PRAKASH**

*Assistant Professor*
*Vaageswari College of Engineering*
*Karimnagar, Telangana*

**Title of the Book: EMBEDDED SYSTEMS**

**Edition: First – 2022**



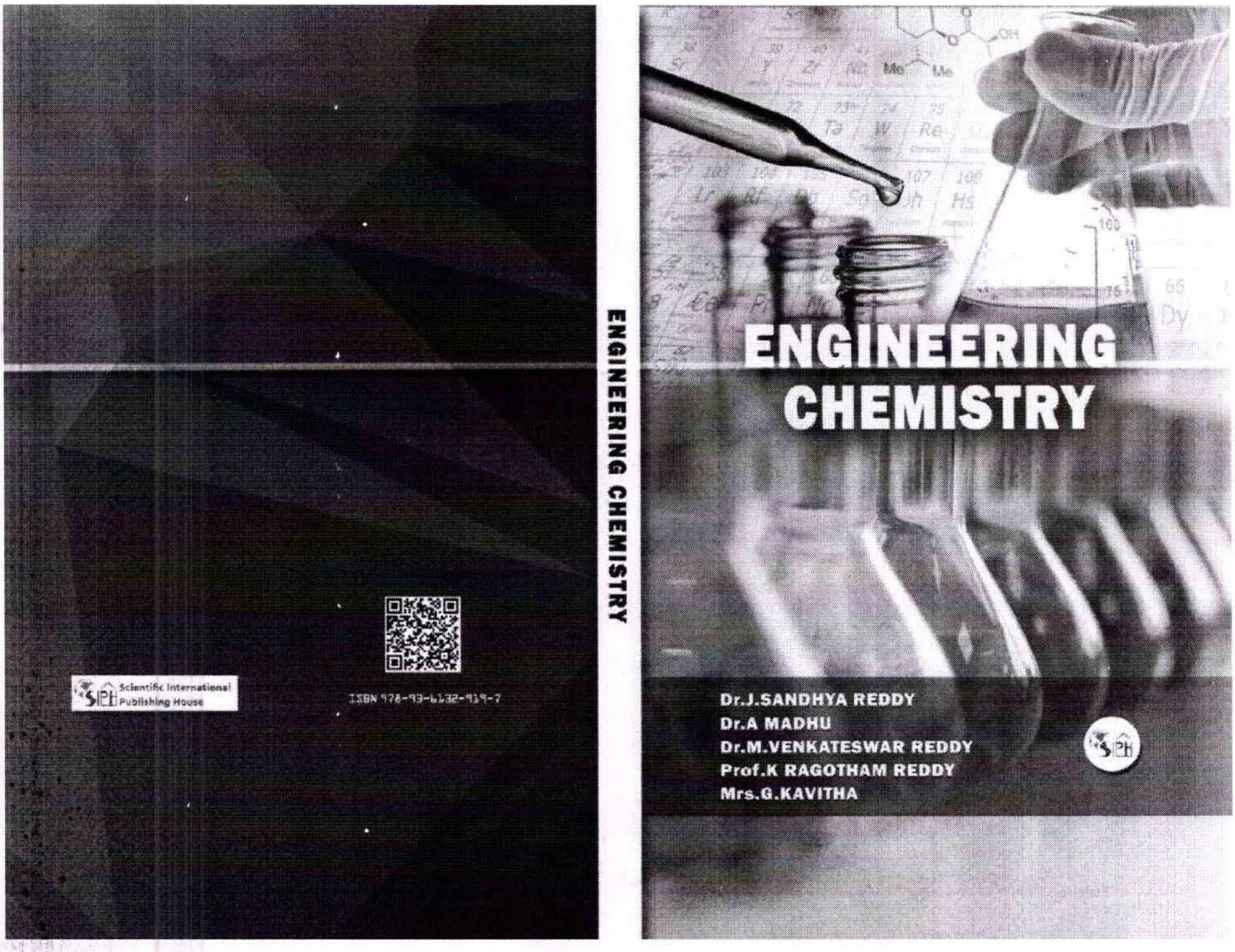
**Disclaimer**

The Authors/Editors are solely responsible for the contents published in this text book. The publishers or editors do not take any responsibility for the same in any manner. Errors, if any, are purely unintentional and readers are requested to communicate such errors to the editors or publishers to avoid discrepancies in future.

**ISBN: 978-93-6132-476-5**

**MRP: 600/-**

**PUBLISHER & PRINTER:** Scientific International Publishing House,
32B, Mazhuppan Street, Mannargudi,
Tamilnadu, India.
www.sipinternationalpublishers.com
editor@sipinternationalpublishers.com




Principal
Vaageswari College of Engineering
KARIMNAGAR

# Engineering Chemistry

**FIRST EDITION**

**Authors**


**Dr. J. Sandhya Reddy**

*Professor*
*Vaageswari College of Engineering*
*Karimnagar, Telangana*

**Dr. A Madhu**

*Professor*
*Brilliant Grammar School Educational Society's*
*Group of Institutions*
*Hyderabad, Telangana – 501 505*

**Dr. M. Venkateswar Reddy**

*Professor*
*Vaageswari College of Engineering*
*Karimnagar, Telangana*

**Prof. K Ragotham Reddy**

*Assistant Professor*
*Brilliant Institute of Engineering & Technology*
*Hyderabad, Telangana-501 505*

**Mrs. G. Kavitha**

*Assistant Professor*
*Vaageswari College of Engineering*
*Karimnagar, Telangana*

**Title of the Book: Engineering Chemistry**

**Edition: First – 2022**



**Disclaimer**

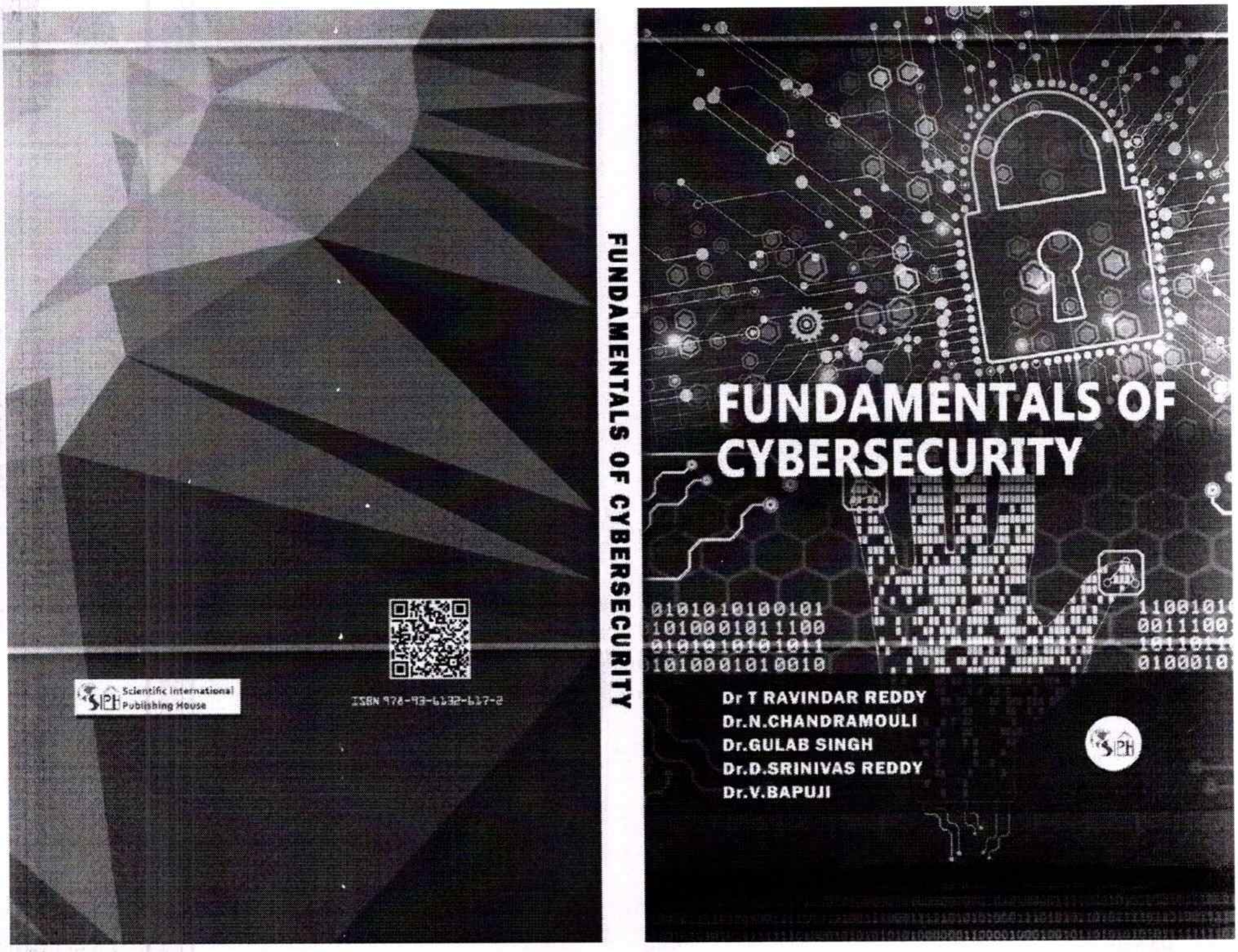
The Authors/Editors are solely responsible for the contents published in this text book. The publishers or editors do not take any responsibility for the samein any manner. Errors, if any, are purely unintentional and readers are requested to communicate such errors to the editors or publishers to avoid discrepancies in future.

**ISBN: 978-93-6132-919-7**

**MRP: 600/-**

**PUBLISHER & PRINTER:** Scientific International Publishing House,
32B, Mazhuppan Street, Mannargudi,
Tamilnadu, India.
www.sipinternationalpublishers.com
editor@sipinternationalpublishers.com

Principal
Jaageswari College of Engineering
KARIMNAGAR-505 527.




Principal
Vaageswari College of Engineering
KARIMNAGAR

# FUNDAMENTALS OF CYBERSECURITY

**FIRST EDITION**

**Authors**

**Dr T Ravindar Reddy**

*Professor*
*Brilliant Grammar School Educational Society's*
*Group of Institutions*
*Hyderabad, Telangana – 501 505*

**Dr.N.CHANDRAMOULI**

*Professor*
*Vaageswari College of Engineering*
*Karimnagar,Telangana*

**Dr.GULAB SINGH**

*Professor*
*Vaageswari College of Engineering*
*Karimnagar,Telangana*

**Dr.D.SRINIVAS REDDY**

*Professor*
*Vaageswari College of Engineering*
*Karimnagar,Telangana*

**Dr.V.BAPUJI**

*Professor*
*Vaageswari College of Engineering*
*Karimnagar,Telangana*

**Title of the Book: FUNDAMENTALS OF CYBERSECURITY**

**Edition: First – 2022**



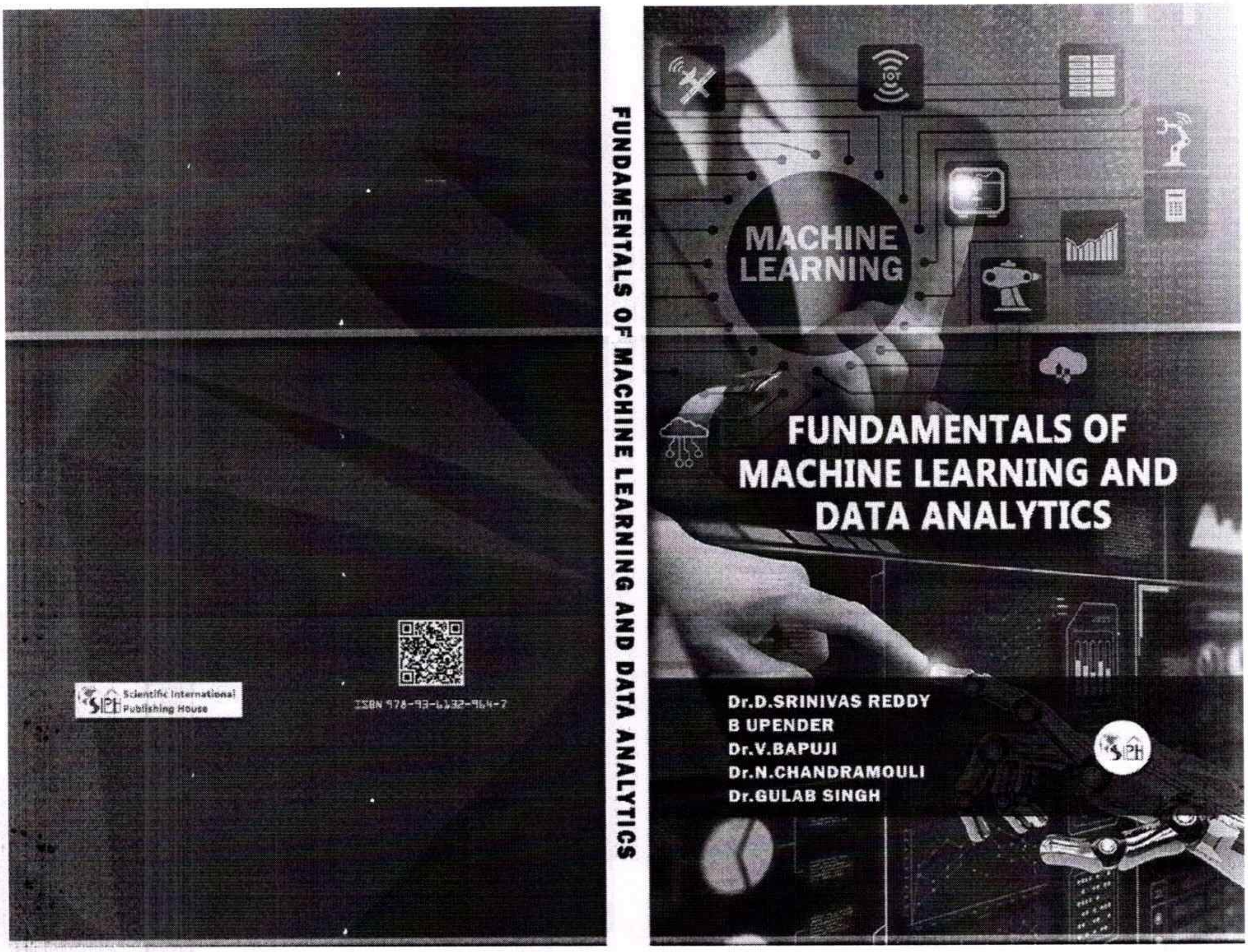
**Disclaimer**

The Authors/Editors are solely responsible for the contents published in this text book. The publishers or editors do not take any responsibility for the same in any manner. Errors, if any, are purely unintentional and readers are requested to communicate such errors to the editors or publishers to avoid discrepancies in future.

**ISBN: 978-93-6132-617-2**

**MRP: 600/-**

**PUBLISHER & PRINTER:** Scientific International Publishing House,
32B, Mazhuppan Street, Mannargudi,
Tamilnadu, India.
www.sipinternationalpublishers.com
editor@sipinternationalpublishers.com




Principal
Vaageswari College of Engineering
KARIMNAGAR-505 527

# FUNDAMENTALS OF MACHINE LEARNING AND DATA ANALYTICS

**FIRST EDITION**

**Authors**

**Dr. D. SRINIVAS REDDY**

*Professor*
*Vaageswari College of Engineering*
*Karimnagar, Telangana*

**B. Upender**

*Assistant Professor*
*Brilliant Grammar School Educational Society's*
*Group of Institutions*
*Hyderabad, Telangana – 501 505*

**Dr.V.BAPUJI**

*Professor*
*Vaageswari College of Engineering*
*Karimnagar, Telangana*

**Dr.N.CHANDRAMOULI**

*Professor*
*Vaageswari College of Engineering*
*Karimnagar, Telangana*

**Dr.GULAB SINGH**

*Professor*
*Vaageswari College of Engineering*
*Karimnagar, Telangana*

**Title of the Book: FUNDAMENTALS OF MACHINE LEARNING AND DATA ANALYTICS**

**Edition: First – 2022**



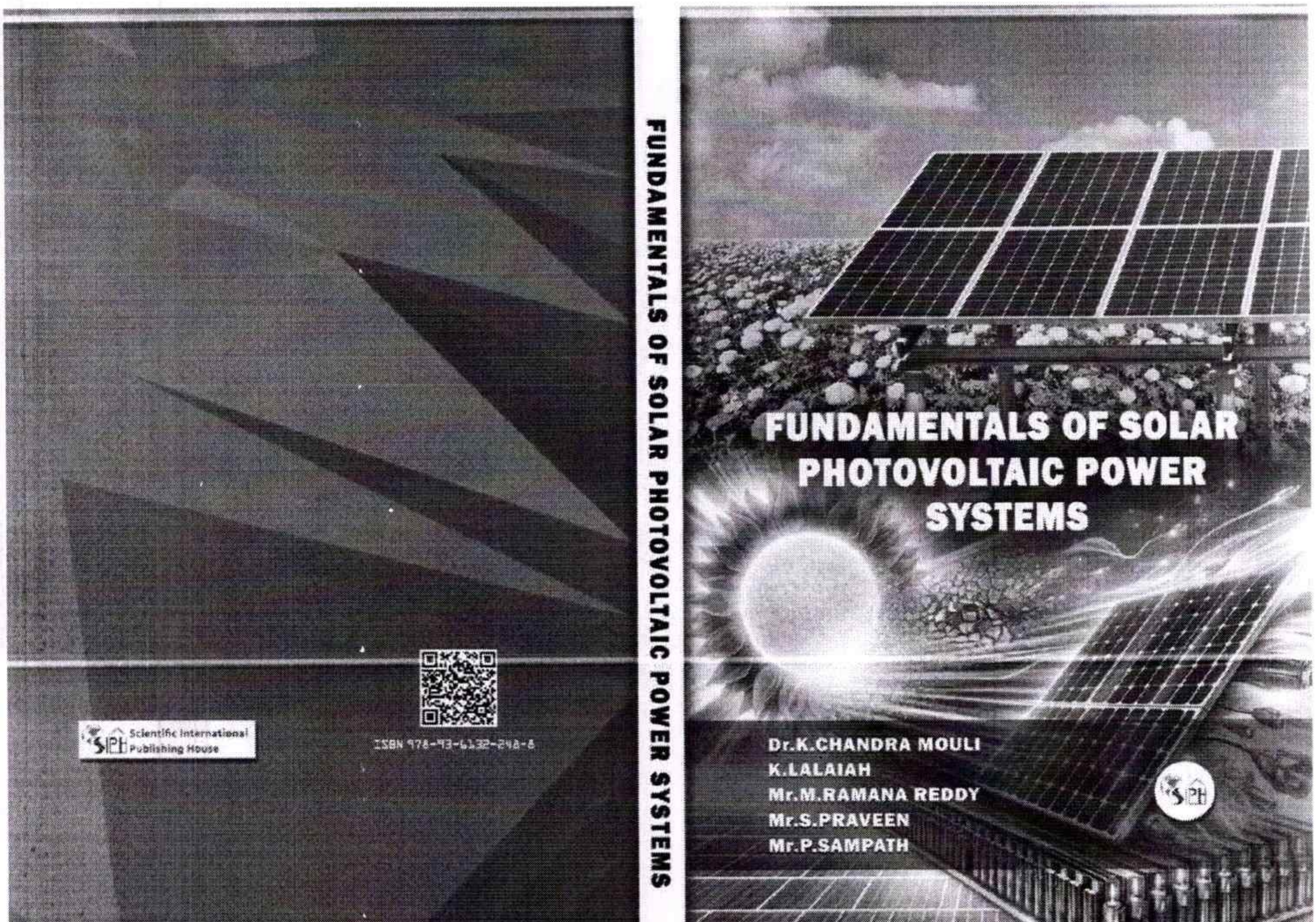
**Disclaimer**

The Authors/Editors are solely responsible for the contents published in this text book. The publishers or editors do not take any responsibility for the samein any manner. Errors, if any, are purely unintentional and readers are requested to communicate such errors to the editors or publishers to avoid discrepancies in future.

**ISBN: 978-93-6132-964-7**

**MRP: 600/-**

**PUBLISHER & PRINTER:** Scientific International Publishing House,
32B, Mazhuppan Street, Mannargudi,
Tamilnadu, India.
www.sipinternationalpublishers.com
editor@sipinternationalpublishers.com




Principal
Vaageswari College of Engineering
KARIMNAGAR-505 527.

# Fundamentals of Solar Photovoltaic Power Systems

**FIRST EDITION**


**Authors**

**Dr. K. Chandra Mouli**

*Professor*
*Vaageswari College of Engineering*
*Karimnagar, Telangana*

**K Lalaiah**

*Assistant Professor*
*Brilliant Grammar School Educational Society's*
*Group of Institutions*
*Hyderabad, Telangana – 501 505*

**Mr. M. Ramana Reddy**

*Assistant Professor*
*Vaageswari College of Engineering*
*Karimnagar, Telangana*

**Mr. S. Praveen**

*Assistant Professor*
*Vaageswari College of Engineering*
*Karimnagar, Telangana*

**Mr. P. Sampath**

*Assistant Professor*
*Vaageswari College of Engineering*
*Karimnagar, Telangana*

**Title of the Book: Fundamentals of Solar Photovoltaic Power Systems**

**Edition: First – 2022**



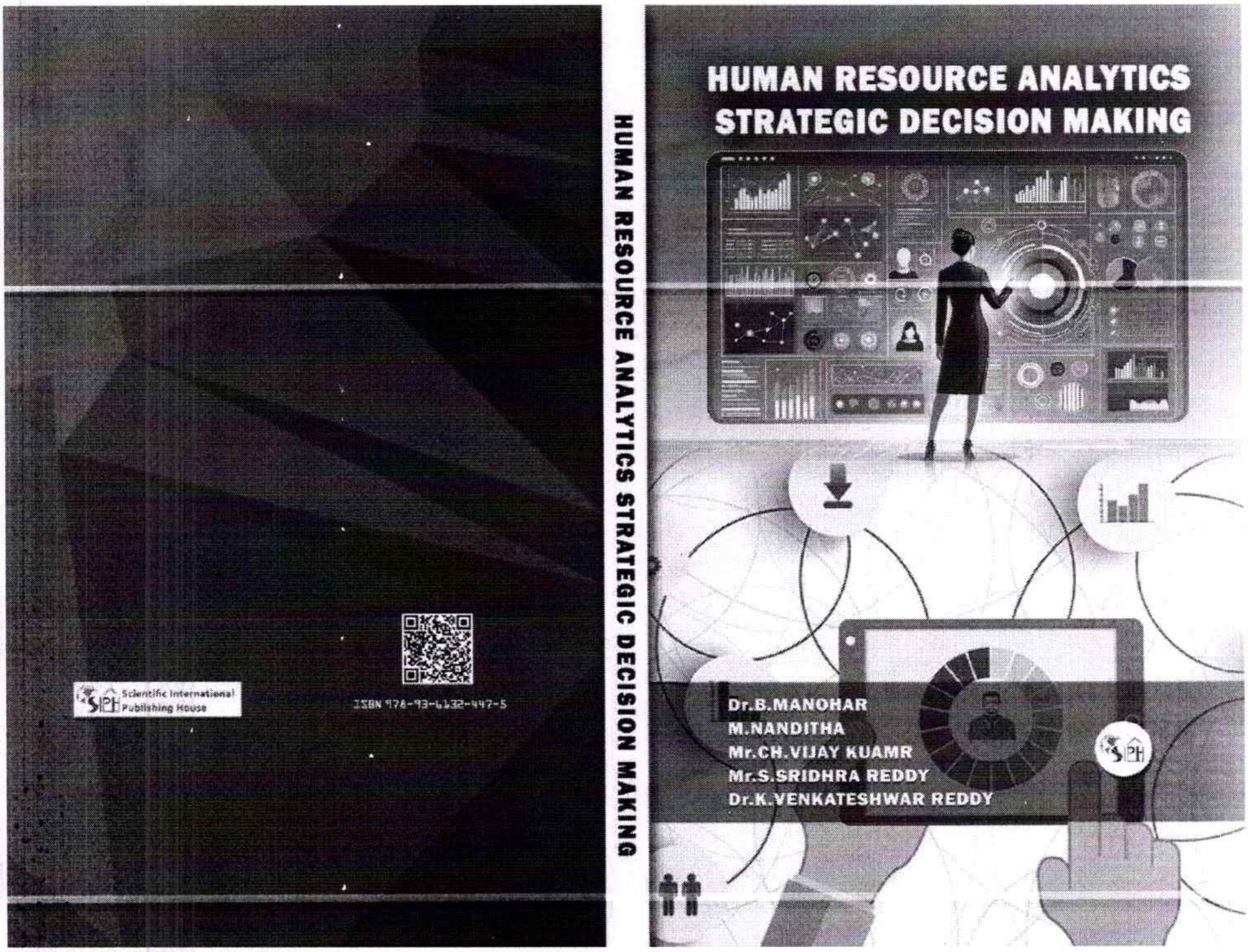
**Disclaimer**

The Authors/Editors are solely responsible for the contents published in this text book. The publishers or editors do not take any responsibility for the same in any manner. Errors, if any, are purely unintentional and readers are requested to communicate such errors to the editors or publishers to avoid discrepancies in future.

**ISBN: 978-93-6132-248-8**

**MRP: 600/-**

**PUBLISHER & PRINTER:** Scientific International Publishing House,
32B, Mazhuppan Street, Mannargudi,
Tamilnadu, India.
www.sipinternationalpublishers.com
editor@sipinternationalpublishers.com


HUMAN RESOURCE ANALYTICS STRATEGIC DECISION MAKING
Scientific International Publishing House
ISBN 978-93-6132-447-5
HUMAN RESOURCE ANALYTICS
STRATEGIC DECISION MAKING
Dr.B.MANOHAR
M.NANDITHA
Mr.CH.VIJAY KUAMR
Mr.S.SRIDHRA REDDY
Dr.K.VENKATESHWAR REDDY

# HUMAN RESOURSE ANALYTICS: STRATEGIC DECISION MAKING

**FIRST EDITION**

**Authors**


**Dr. B. Manohar**

*Professor*
*Vaageswari College of Engineering*
*Karimnagar,Telangana*

**M Nanditha**

*Assistant Professor*
*Brilliant Grammar School Educational Society's*
*Group of Institutions*
*Hyderabad, Telangana – 501 505*

**Mr. Ch. Vijay Kumar**

*Assistant Professor*
*Vaageswari College of Engineering*
*Karimnagar,Telangana*

**Mr. S. Sridhra Reddy**

*Assistant Professor*
*Vaageswari College of Engineering*
*Karimnagar,Telangana*

**Dr K Venkateshwar Reddy**

*Professor*
*Brilliant Institute of Engineering & Technology*
*Hyderabad, Telangana-501 505*

**Title of the Book: Human resource Analytics: strategic decision making**

**Edition: First – 2022**



**Disclaimer**

The Authors/Editors are solely responsible for the contents published in this text book. The publishers or editors do not take any responsibility for the same in any manner. Errors, if any, are purely unintentional and readers are requested to communicate such errors to the editors or publishers to avoid discrepancies in future.

**ISBN: 978-93-6132-447-5**

**MRP: 600/-**

**PUBLISHER & PRINTER:** Scientific International Publishing House,
32B, Mazhuppan Street, Mannargudi,
Tamilnadu, India.
www.sipinternationalpublishers.com
editor@sipinternationalpublishers.com


Principal
Vaageswari College of Engineering
KARIMNAGAR-505 527.

# TURBO MACHINES

**FIRST EDITION**

**Authors**

**Mr. R. Sainath**

*Assistant Professor*
*Vaageswari College of Engineering*
*Karimnagar, Telangana*

**Dr. Peniel Pauldoss**

*Professor*
*Brilliant Grammar School Educational Society's*
*Group of Institutions*
*Hyderabad, Telangana – 501 505*

**Mr. N. Rajkumar**

*Assistant Professor*
*Vaageswari College of Engineering*
*Karimnagar, Telangana*

**Mr. K. Sudarshan**

*Assistant Professor*
*Vaageswari College of Engineering*
*Karimnagar, Telangana*

**Mr. Md. Yaqubali**

*Assistant Professor*
*Vaageswari College of Engineering*
*Karimnagar, Telangana*

**Title of the Book: Turbo Machines**

**Edition: First – 2022**



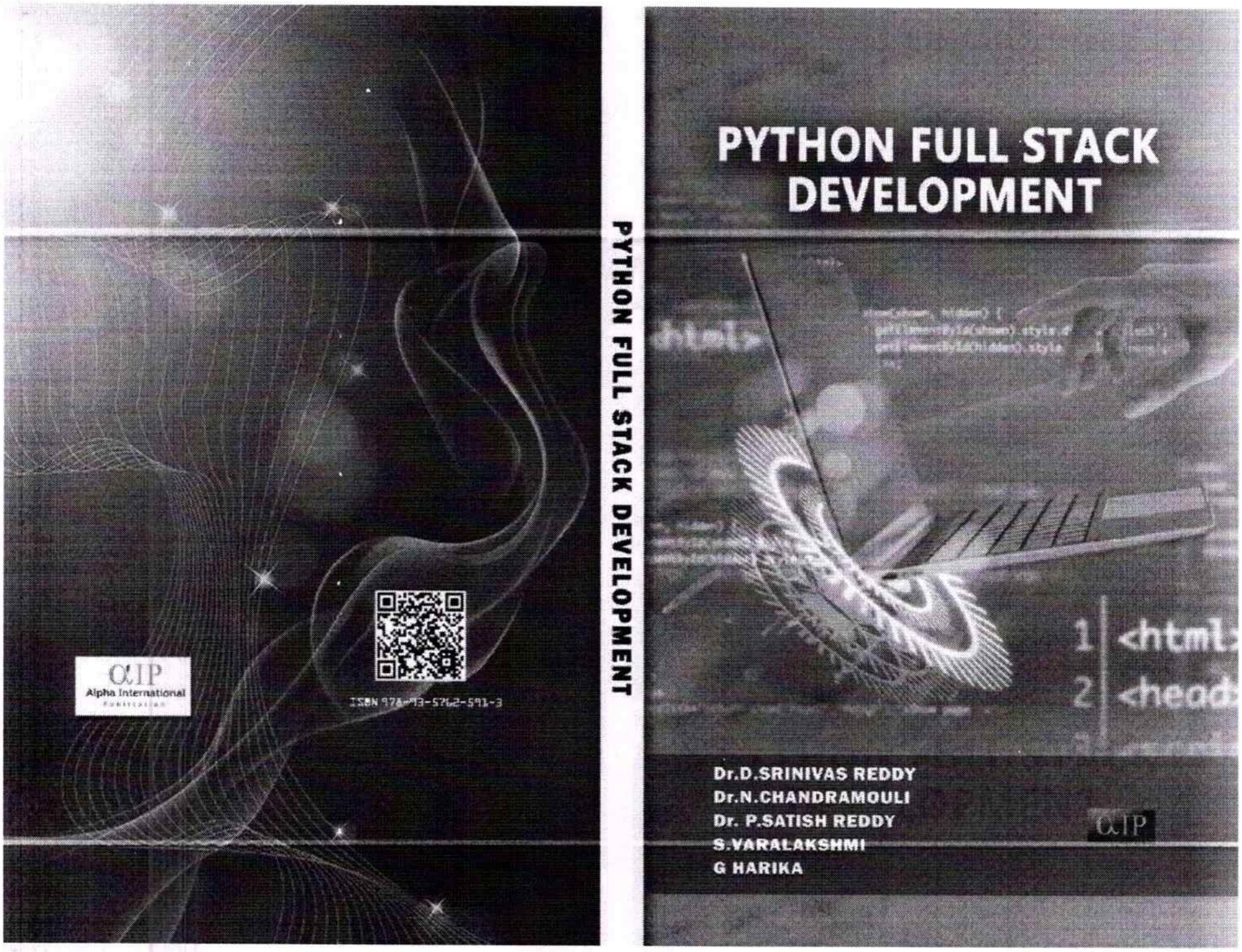
**Disclaimer**

The Authors/Editors are solely responsible for the contents published in this text book. The publishers or editors do not take any responsibility for the samein any manner. Errors, if any, are purely unintentional and readers are requested to communicate such errors to the editors or publishers to avoid discrepancies in future.

**ISBN: 978-93-6132-011-8**

**MRP: 600/-**

**PUBLISHER & PRINTER:** Scientific International Publishing House,
32B, Mazhuppan Street, Mannargudi,
Tamilnadu, India.
www.sipinternationalpublishers.com
editor@sipinternationalpublishers.com




Principal
Vaageswari College of Engineering
KARIMNAGAR-505 527.

# PYTHON FULL STACK DEVELOPMENT

## FIRST EDITION


**Authors**

**D.SRINIVAS REDDY**
*Professor*
*Vageswari College of Engineering*
*Beside LMD Police Station, Ramakrishna Colony, Karimnagar*
*Telangana- 505 527*

**N. CHANDRAMOULI**
*Professor*
*Vageswari College of Engineering*
*Beside LMD Police Station, Ramakrishna Colony, Karimnagar*
*Telangana- 505 527*

**P. SATISH REDDY**
*Professor*
*Kasireddy Narayanreddy College of Engineering & Research*
*Abdullapur(V), Abdullapur(M), Rangareddy District,*
*Hyderabad,*
*Telangana - 501 505*

**S. VARALAKSHMI**
*Assistant Professor*
*Kasireddy Narayanreddy College of Engineering & Research*
*Abdullapur(V), Abdullapur(M), Rangareddy District,*
*Hyderabad,*
*Telangana - 501 505*

**G. HARIKA**
*Assistant Professor*
*Brilliant Grammer School Educational Society's Group of Institutions*
*Abdullapur(V), Abdullapurmet(M),*
*Rangareddy District*
*Hyderabad,*
*Telangana – 501 505*

**Title of the Book:** PYTHON FULL STACK DEVELOPMENT

**Edition: First - 2022**



**Disclaimer**

The authors are solely responsible for the contents published in this text book. The publishers or editors do not take any responsibility for the same in any manner. Errors, if any, are purely unintentional and readers are requested to communicate such errors to the editors or publishers to avoid discrepancies in future.

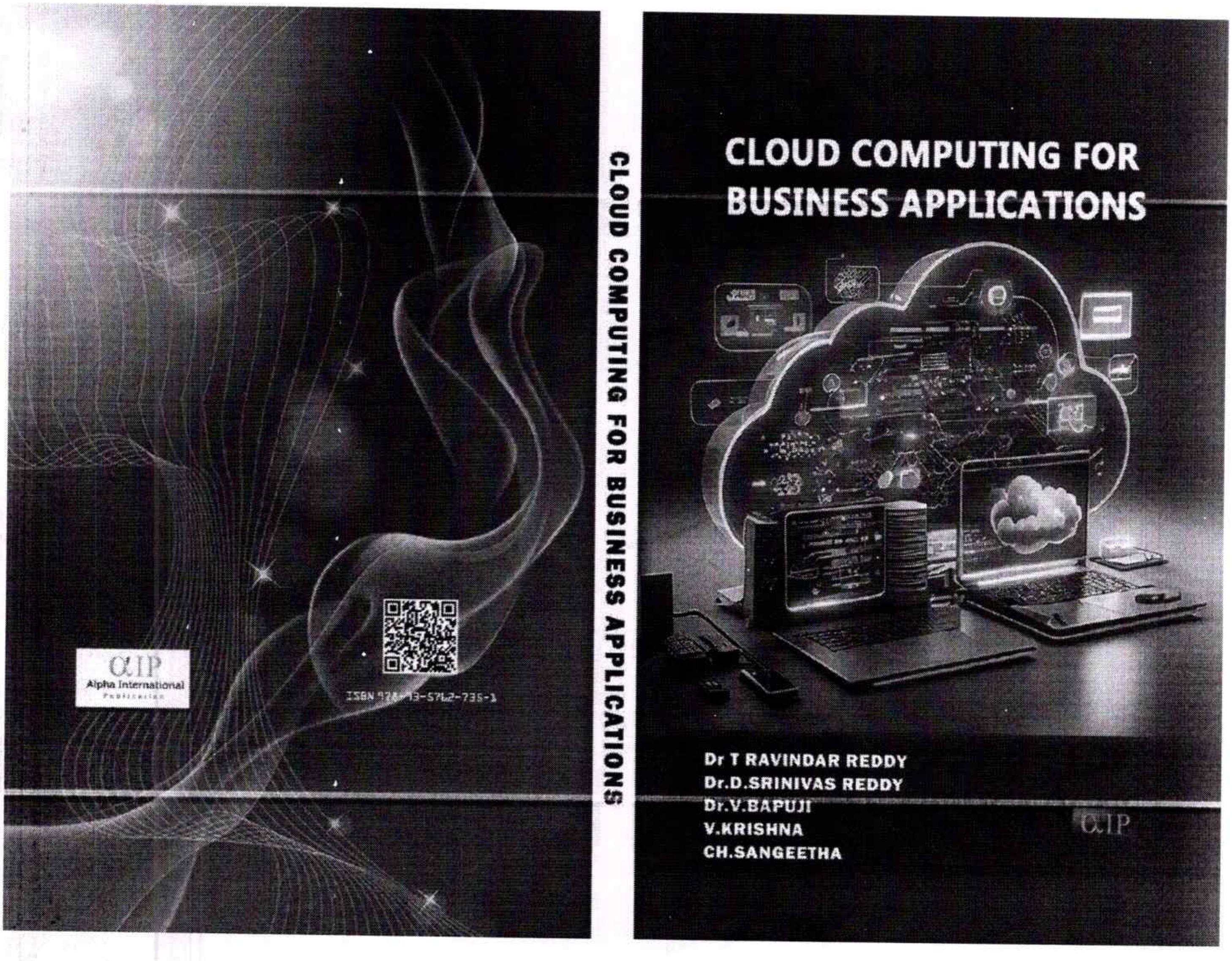
**ISBN: 978-93-5762-591-3**

**MRP: Rs. 600/-**

**PUBLISHER & PRINTER: Alpha International Publication (AIP),**
**3/725/2, Kammangudi, Adichapuram,**
**Thiruvarur District, Tamilnadu- 614717, INDIA**

**Email:** editoraippublications@gmail.com

**Website:** www.alphainternationalpublication.com




Principal
Vaageswari College of Engineering

# CLOUD COMPUTING FOR BUSINESS APPLICATIONS

## FIRST EDITION


**Authors**

**T. RAVINDAR REDDY**

*Professor*

*Brilliant Grammar School Educational Society's Group of Institutions*
*Abdullapur(V), Abdullapurmet(M), Rangareddy District*
*Hyderabad, Telangana – 501 505*

**D. SRINIVAS REDDY**

*Professor*

*Vageswari College of Enginnering*
*Beside LMD Police Station, Ramakrishna Colony, Karimnagar*
*Telangana- 505 527*

**V.BAPUJI**

*Professor*

*Vageswari College of Enginnering*
*Beside LMD Police Station, Ramakrishna Colony, Karimnagar*
*Telangana- 505 527*

**V. KRISHNA**

*Assistant Professor*

*Kasireddy Narayanreddy College of Engineering & Research*
*Abdullapur(V), Abdullapur(M), Rangareddy District,*
*Hyderabad, Telangana - 501 505*

**CH. SANGEETHA**

*Assistant Professor*

*Kasireddy Narayanreddy College of Engineering & Research*
*Abdullapur(V), Abdullapur(M), Rangareddy District,*
*Hyderabad, Telangana - 501 505*



αIP

**Title of the Book:** CLOUD COMPUTING FOR BUSINESS APPLICATIONS

**Edition: First - 2022**



**Disclaimer**

The authors are solely responsible for the contents published in this text book. The publishers or editors do not take any responsibility for the same in any manner. Errors, if any, are purely unintentional and readers are requested to communicate such errors to the editors or publishers to avoid discrepancies in future.

**ISBN: 978-93-5762-735-1**

**MRP: Rs. 600/-**

**PUBLISHER & PRINTER: Alpha International Publication (AIP), 3/725/2, Kammangudi, Adichapuram, Thiruvarur District, Tamilnadu- 614717, INDIA**

**Email:** editoraippublications@gmail.com

**Website:** www.alphainternationalpublication.com