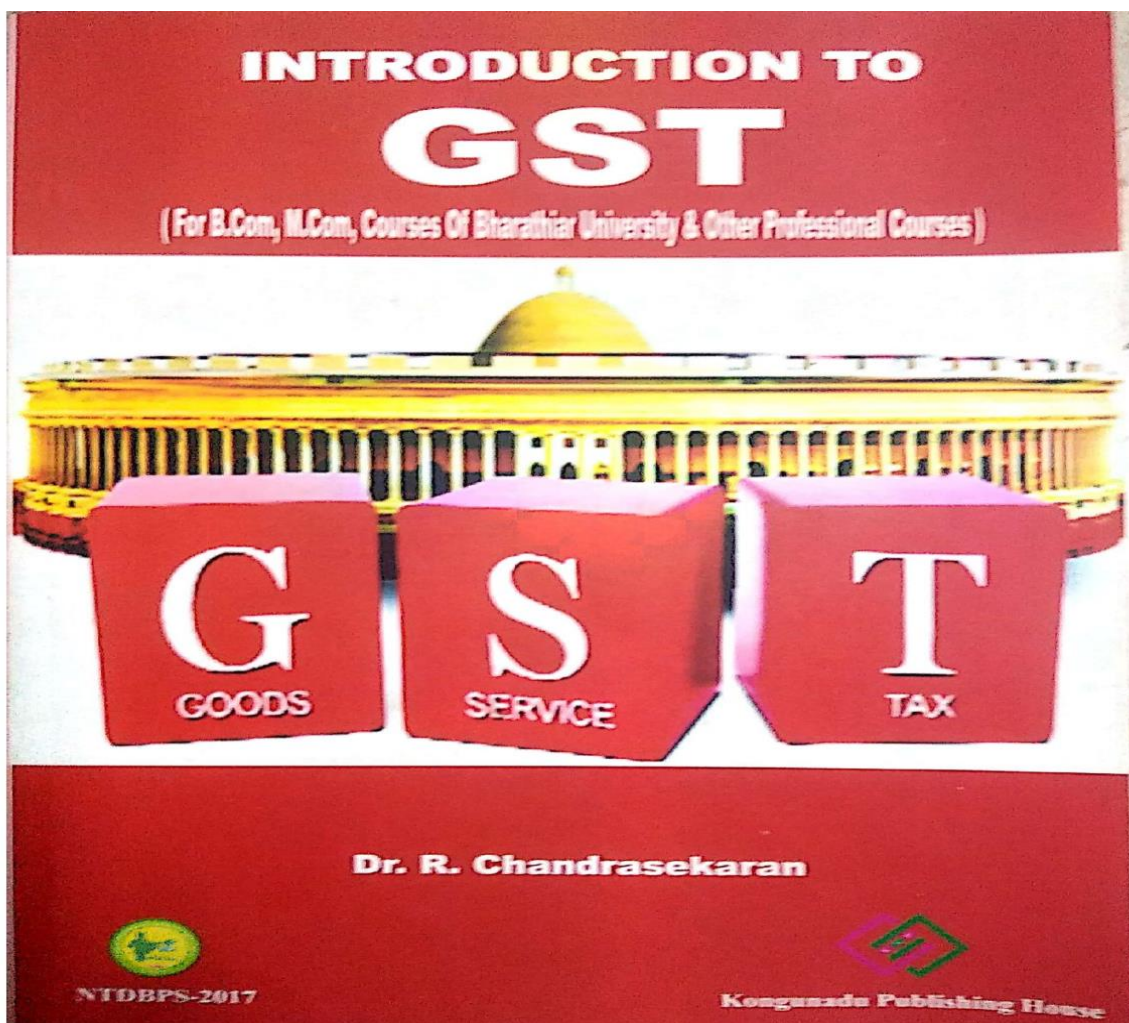


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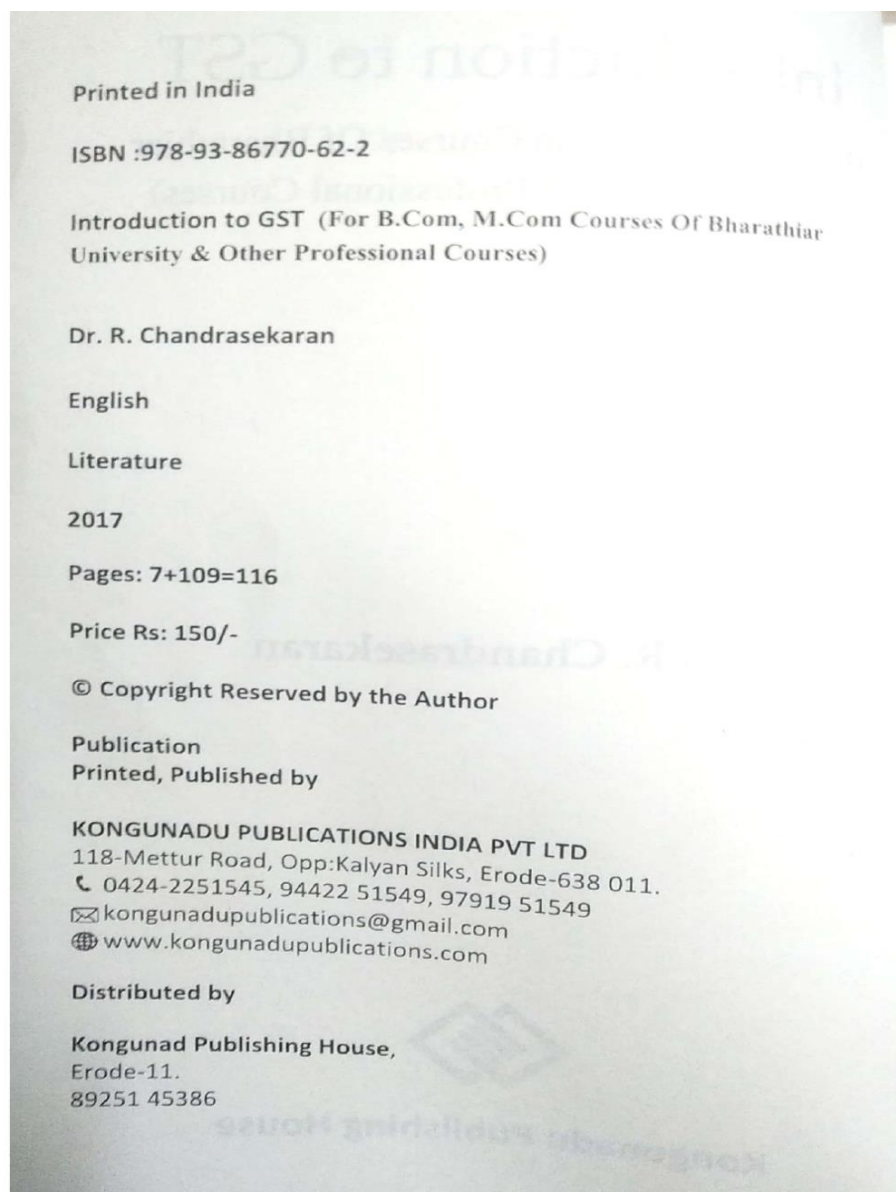
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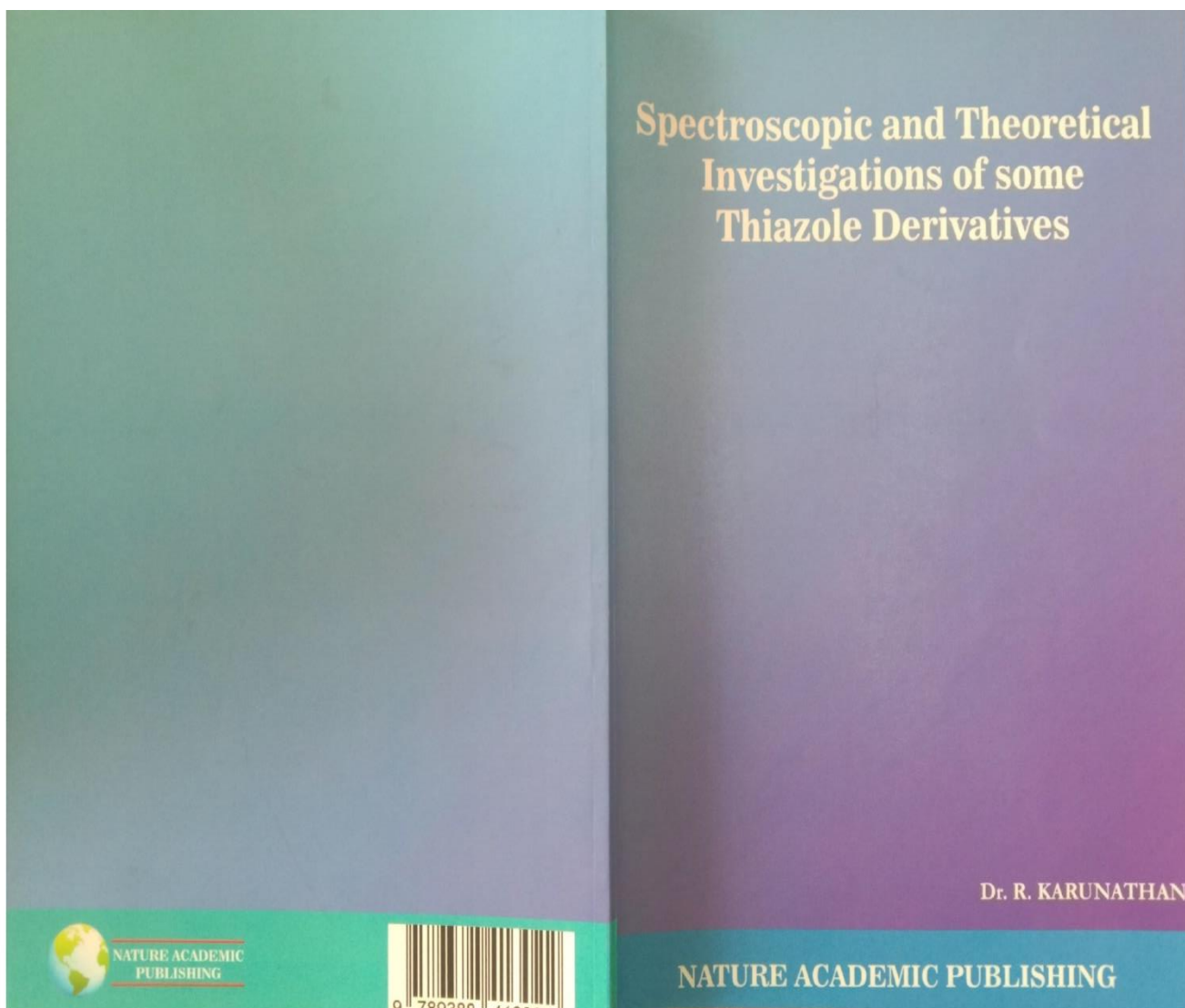
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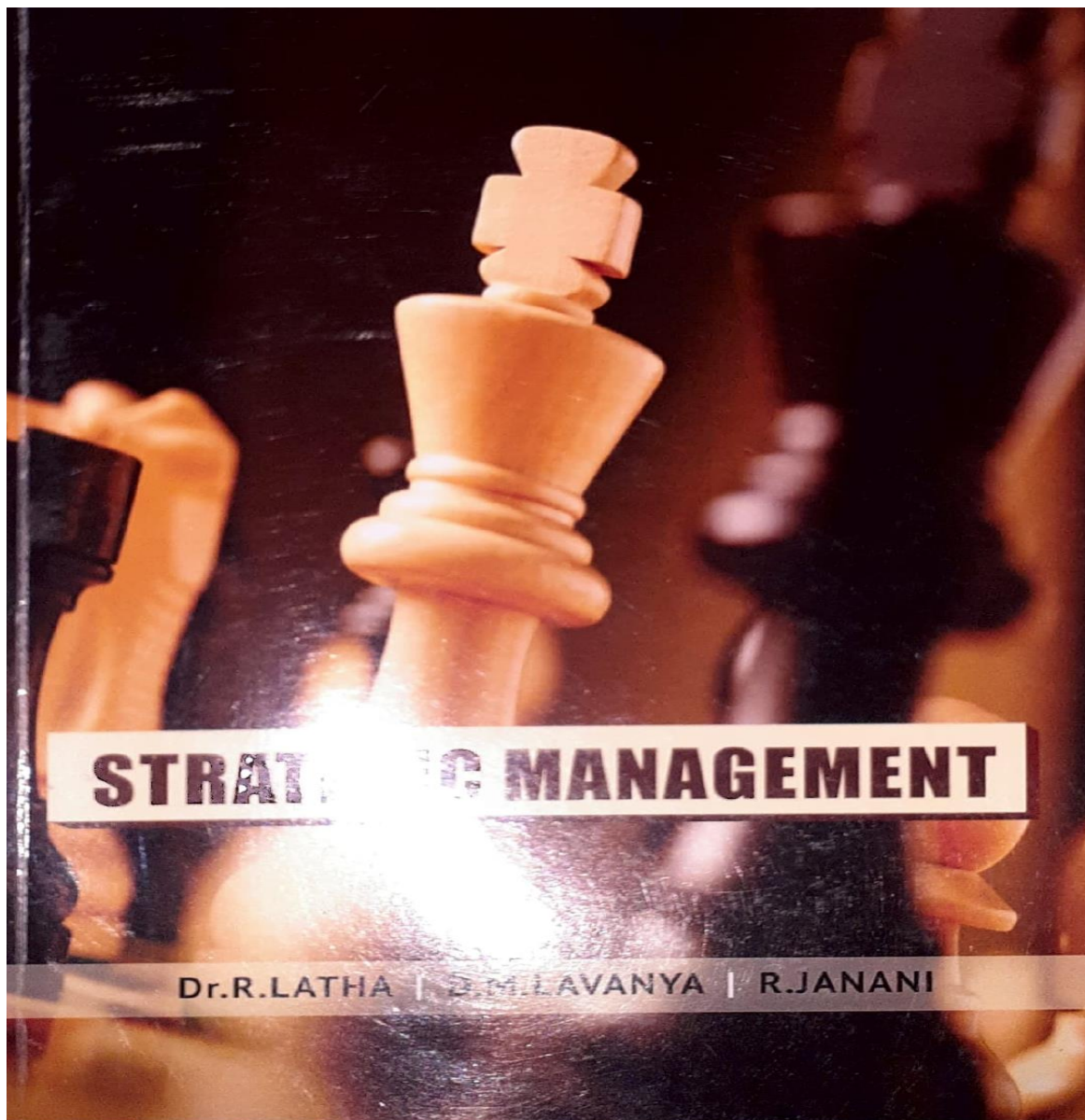
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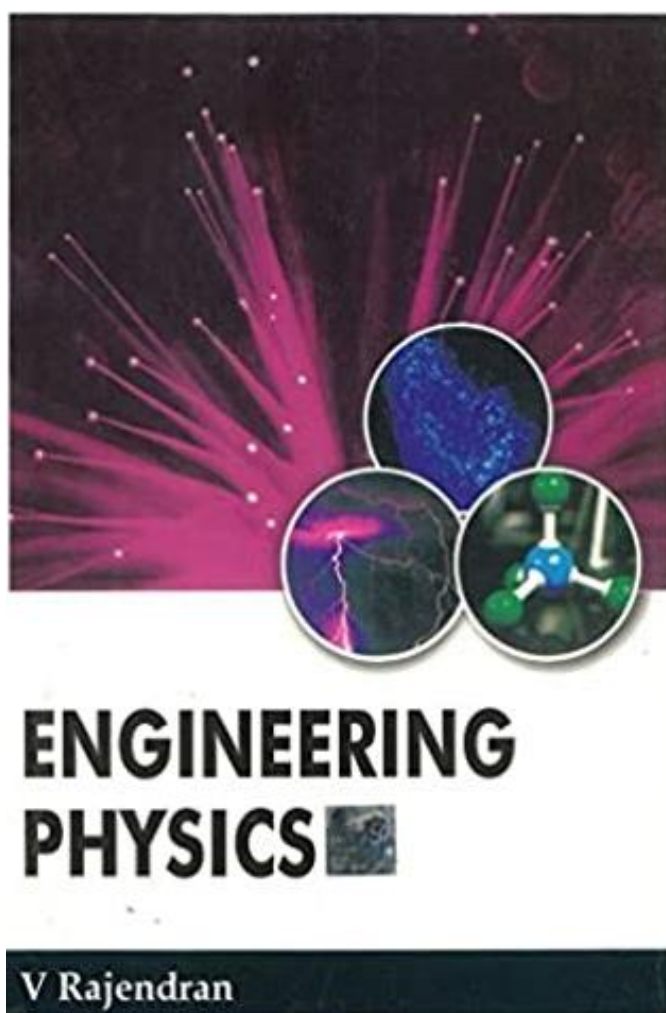
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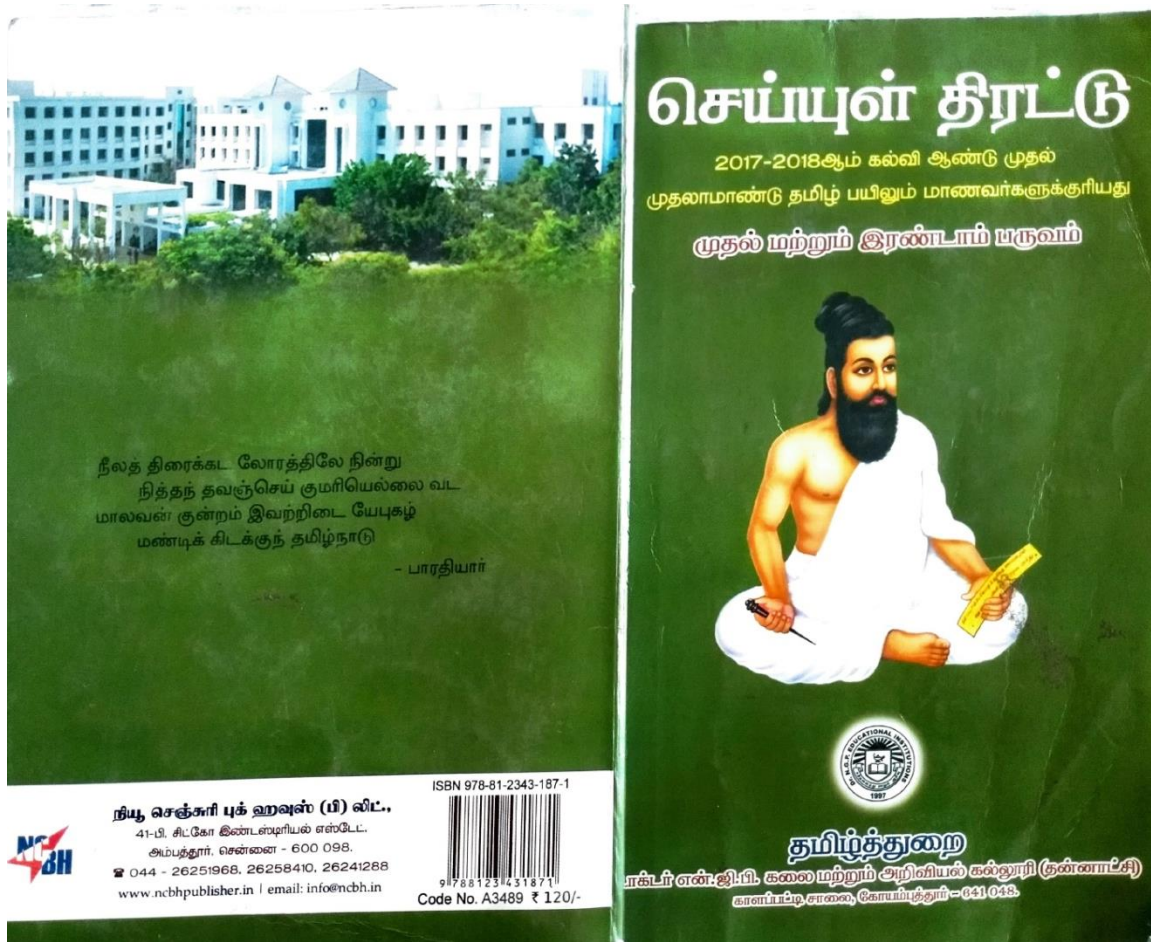
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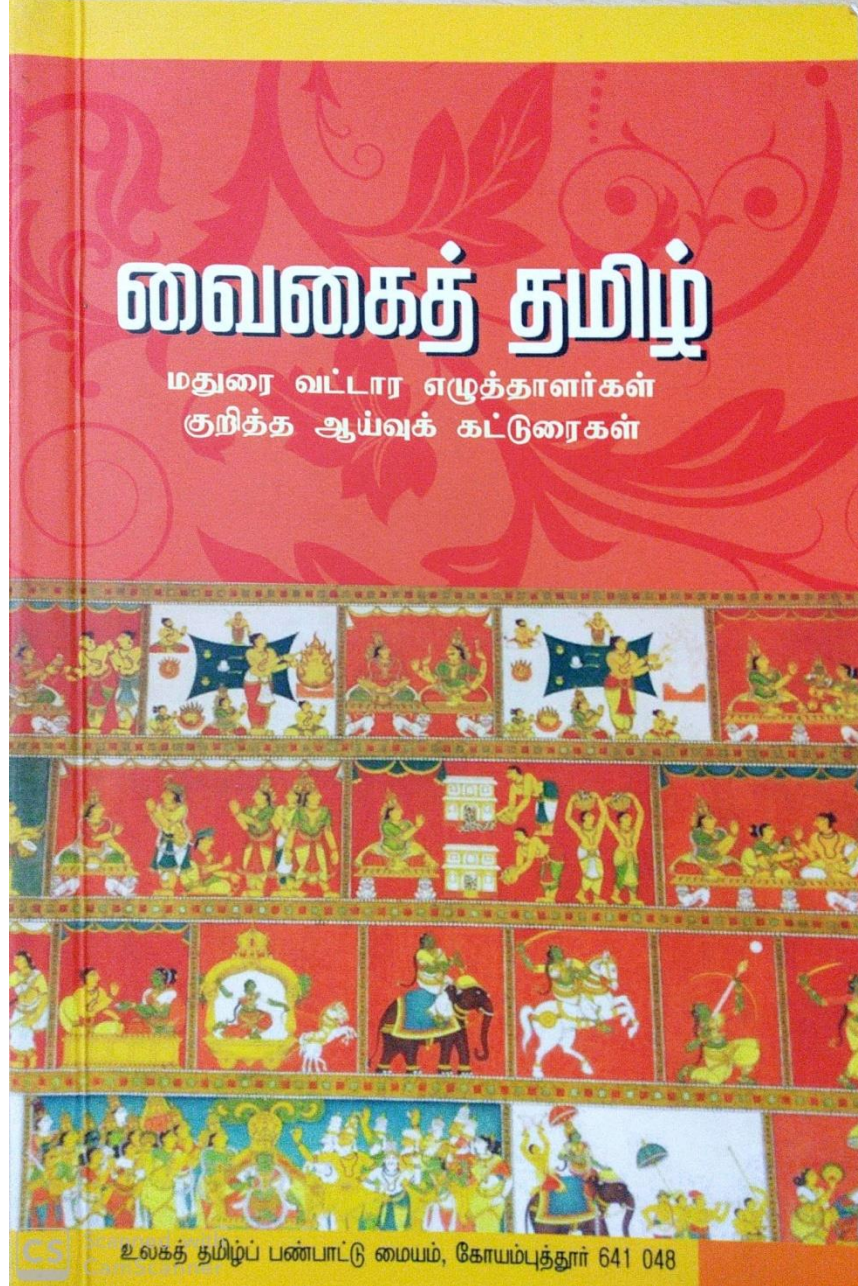
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6. Dr.V.Rajendran

Editorial



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In Focus section: NANO-15

The International Conference on Nanomaterials and Nanotechnology (NANO-15) was organized by the Centre for Nanoscience and Technology, K.S.Rangasamy College of Technology, Tamil Nadu, India and the World Class University (WCU), GIST, South Korea. The third series of conferences on nanoscience and nanotechnology, organised in Tamil Nadu, aimed to provide an interdisciplinary forum for scientists, engineers, technologists and industrialists, engaged in the full spectrum of research and application, to discuss the current status and recent developments of nanomaterials. NANO-15 was afforded the opportunity to publish the best conference papers in an In Focus for the internationally recognized journal Polymer International. Based on the initial double-blind reviews from the NANO-15 Conference reviewers, a select number of papers were invited for submission to the NANO-15 In Focus. These papers went through an additional peer review process with Polymer International reviewers, and the process yielded the three papers that are presented in this In Focus.

The first paper¹ addresses the important natural biopolymer chitosan, consisting of rich hydroxyl and amino groups that facilitate wide applications in many industries. Through a simple condensation method using thiophene-2-carboxaldehyde, the amino group of chitosan was modified to its Schiff base derivative. To investigate the chitosan-thiophene derivative as a corrosion inhibitor for mild steel in an acidic environment, gravimetric and electrochemical techniques were used. Kinetic and thermodynamic parameters revealed a strong adsorption between the inhibitor and the metal surface. Electrochemical techniques were used to investigate the mechanism of the inhibition.

The paper by Viswanathan and Ramaraj² examines polymers and polyelectrolytes as the capping agents to exert control over the nucleation and growth of nanocrystals. The polymer-based capping agent exhibits strong interaction with foreign analytes which are to be catalysed or sensed, and the polymer-capped nanocrystals are attractive materials for various applications. The prepared nanoparticles were found to be an efficient catalyst for the reduction of 4-nitrophenol.

The last paper in this In Focus³, by Praharaj, Kelkar, Raveshia and Mahanwar, addresses the topic of conductive polymer nanofibers. It is believed that a significant opportunity exists in developing a convenient chemical synthetic route for the bulk synthesis of nano-structured poly (3,4-ethylenedioxythiophene) (PEDOT), for potential use in the design of next-generation nano-electronic circuits and field emission devices. The added PEDOT nanofibers improve the conductivity of the solution, thereby improving the electrospinnability of polylactic acid (PLA).

Finally, we would like to thank the authors and the reviewers, as well as the Editor-in-Chief of Polymer International Prof. Kurt Geckeler and the Associate Journal Editor Sonsoles Acosta, for their help with this In Focus. It has been a pleasure, and we have learned a lot. We would also like to thank the initial NANO-15 reviewers for their feedback and hard work, crucial for choosing the final papers. We hope all readers benefit from the papers as much as we did. This In Focus provides the opportunity to make the research from the NANO-15 conference accessible to a wider audience and we hope to continue the collaboration with Polymer International in the future.

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2. Ramaraj R, Viswanathan P, *Polym Int*, **66**:342–348 (2017).
3. Mahanwar P, Praharaj M, Kelkar S, *Polym Int*, **66**:359–365 (2017).



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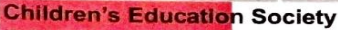


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Abstract

As the well known proverb goes like 'Health is wealth', which emphasis on the importance of healthy life, however, being disabled is not a bane but can be considered a boon, if rehabilitation is gained for the same. The world report on disability produced jointly by WHO and the World Bank stated that more than a billion people in the world today experience disability. In India, as per census 2011, out of the total 121 cr population, 2.68 cr persons are disabled, which is 2.21% of the total population. Disability is any restriction or lack of ability (resulting from impairment) to perform an activity in the way or within the range considered normal for a human being and 'Rehabilitation' is said to be any steps taken medically, socially, economically or even vocational training or retraining provide to the disabled, in order to lead a normal life. The paper focuses more on 'Depression', which is the leading cause of disability around the world; also it is the major reason to the overall burden of disease globally. The study is based on the secondary data collected from various sources. The study is to bring up intelligibility on the disability and greater importance is given to widen the knowledge of depression as it is the start of spark of many flaming hitches in the present young generation available, who is the future of the entire world.

Objectives:

This study focus on the following

- Overview of disability world wide
- The role of the institutions and government in rehabilitating disabled is contemplated in this study.
- To bring up intelligibility on impact of depression.

Keywords: Disability, CBR, Mental illness, Depression, Welfare, Act, Rehabilitation

Introduction:

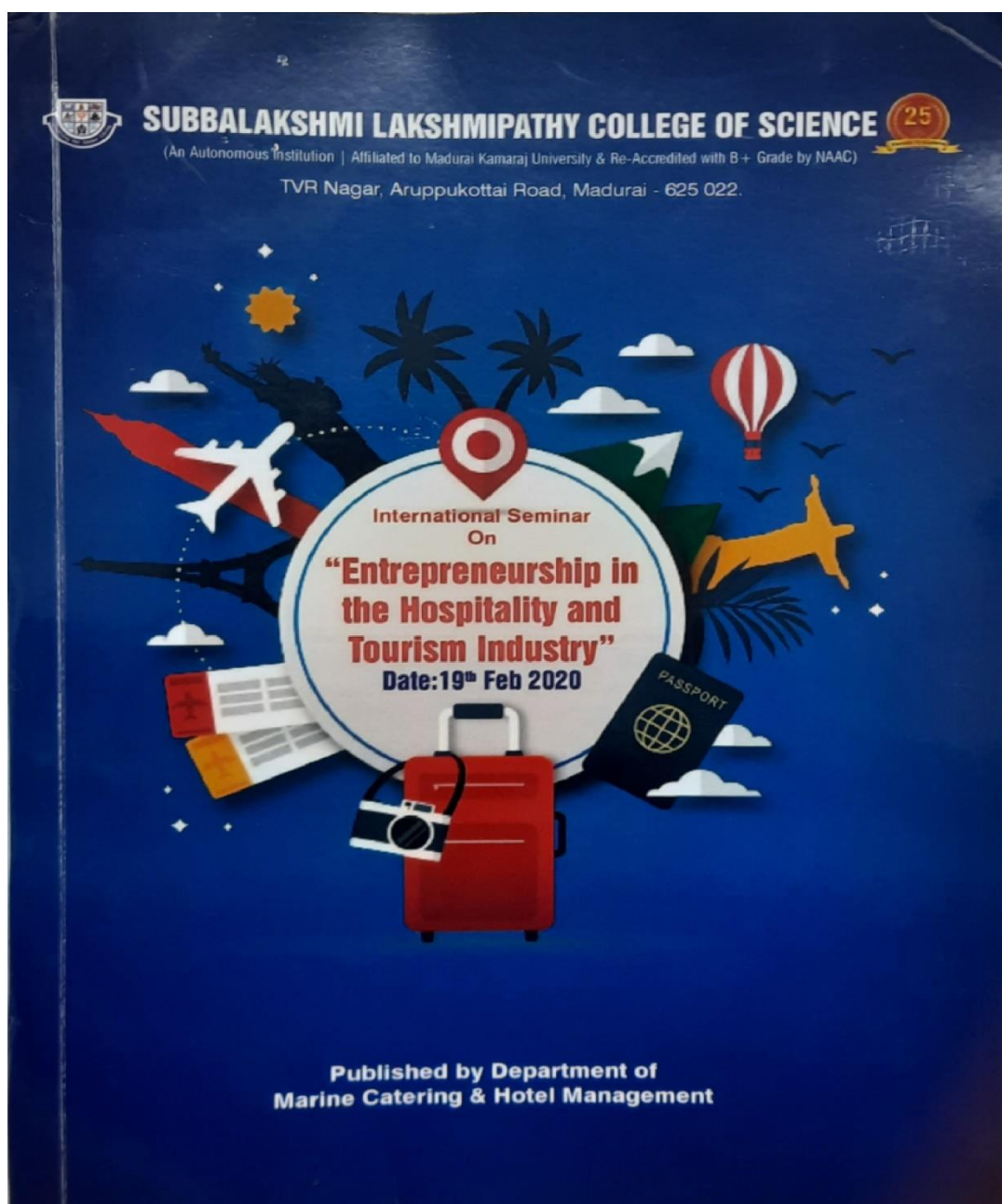
Disability is any mutilation that may be cognitive, intellectual, mental, developmental, physical, sensory, or some combination of these, which highly affects a person's day to day activities, that may be present from birth or occur at any time within a person's lifetime. Most of the people with disabilities do not have equal reach to health care, employment opportunities, and even education. They do not obtain the disability related services that they actually require and hence experience elimination from normal day to day life activities. There have been many studies done on the common term 'disability'.

This paper involves more on 'mental illness' emphasizing more on 'Depression', which is a common mental disorder worldwide and one of the main cause of disability. Around the world, more than 300 million people suffer from depression. It is a true saying that the strength of our mind determines the quality of our lives. Mental strength will always boost up physical power, working on gym can be done every day, however unless we work out our mind, we won't get very far. The paper concentrates on



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2. Mr.S. Vijayakumar & Mr.M.Venkateswaran



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ROLE OF GOVERNMENT IN MOTIVATING ENTREPRENEURSHIP IN TOURISM

ISBN : 978-93-5396-810-6

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Assistant Professor (SG), Department of Catering Science and Hotel Management
Dr. N.G.P. Arts and Science College, Coimbatore – 48.

Abstract

The Tourism Industry is one of the growing industries and also evergreen where always people will have an intention to explore new places inbound as well as outbound. So for this the tourists have to depend on some accommodation facilities in and around the tourist areas for enjoying their trip in a peaceful way without any hurry. If the tourist areas does not have adequate facilities, then tourism cannot exist and prevail in that area. So the basic tourism products are very much important for the growth of tourism in a tourist spot. So the entrepreneurs play a vital role in the existence of tourism in a particular area. So the Government has to motivate the local people in developing their skill sets which is very much necessary for the hospitality industry. For this special skill development centres has to be established by the government to improve the skill sets of the young entrepreneurs. Also the government should take necessary arrangements for the development in the local areas, by providing places for resource development. Also the government should provide loan facilities as well as subsidy in loan repayment. All these will make tourism established in a area, which is helpful in two ways – Provision of facilities for the tourists, as well as employment opportunities for the local people.

Keywords: Tourism Products, Employment opportunities, Skill development, Loan facilities, subsidy, local development.

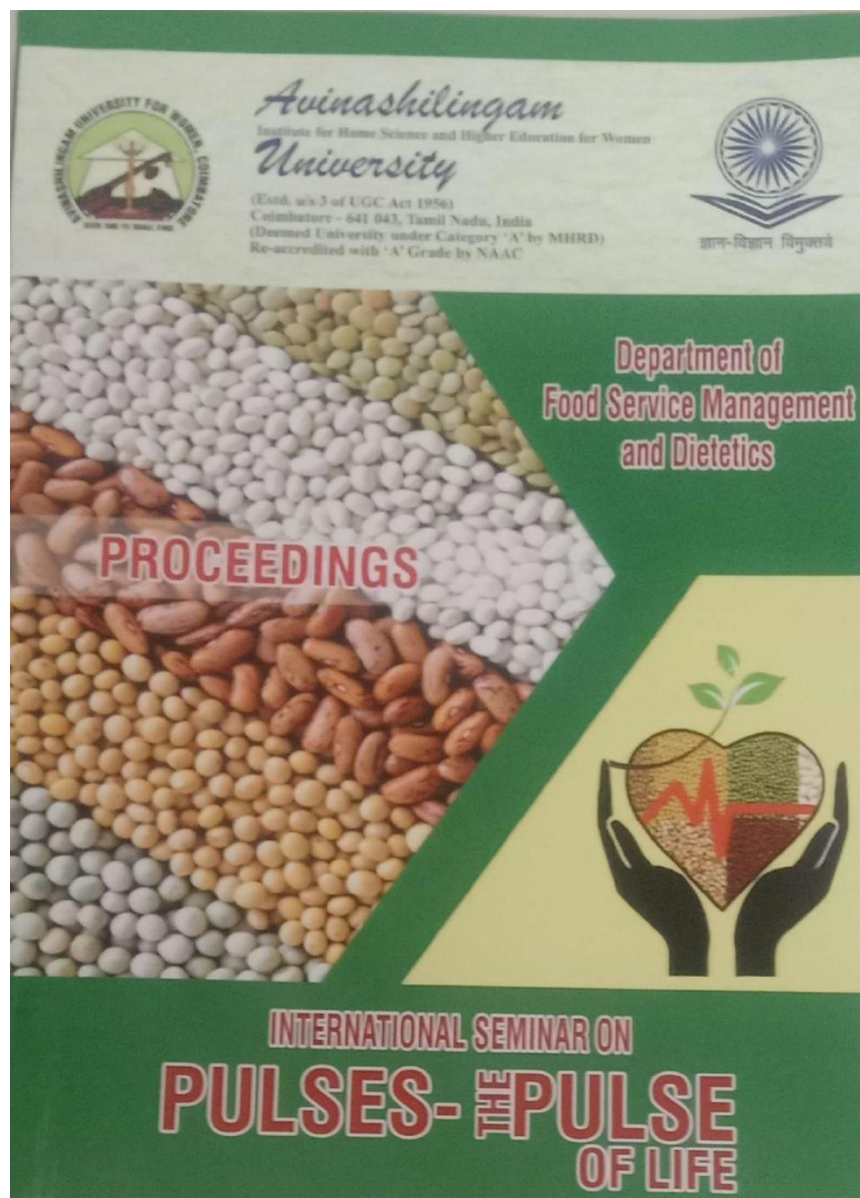
Introduction:

Tourism is a very important phenomenon, which is prevailing all over the world, and everyone has the intention to visit or explore new areas, in search of various aspects like cultural differences, leisure activities, medicinal purposes, architectural importance, ethnic groups, etc. Each and every person will be visiting some areas in their life time for any one of the above reasons. So tourism is having its own importance and it is an evergreen industry. The tourism industry is one of the largest industries in the world, which grows substantially and which adds to the economic growth of the country. This also doesn't stop with the economic growth of the country, but also adds to the development of the local community by providing employment opportunities as well as developing the entrepreneurial opportunities in the local areas.



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3. S.Uma Maheswari





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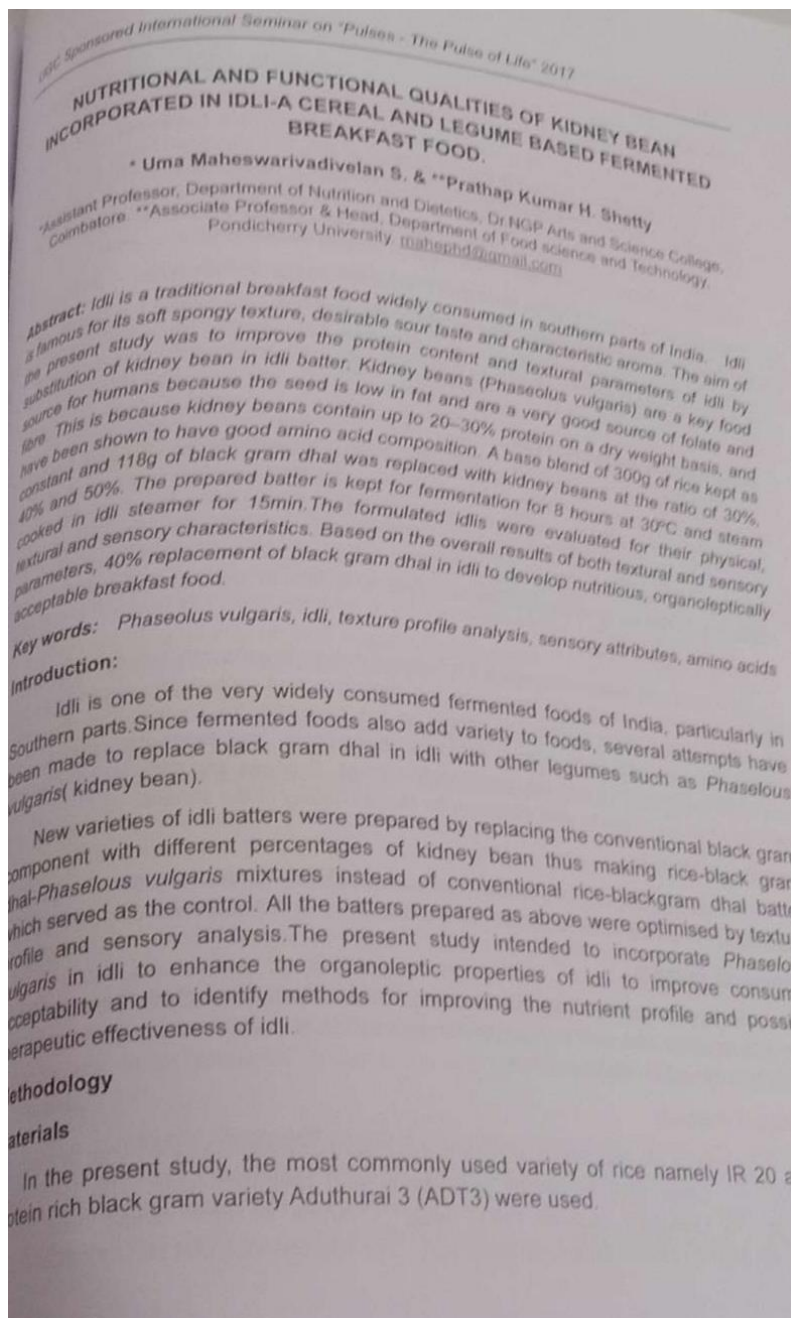
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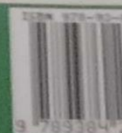
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About the Department

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GLYCAEMIC INDEX OF KIDNEY BEAN(*PHASEOLUS VULGARIS*) INCORPORATED IDLI – A CEREAL AND LEGUME BASED FERMENTED FOOD

S.UmaMaheswari Vadivelan¹ and Prathap Kumar H. Shetty²

1. Assistant professor, Department of Nutrition and Dietetics, Dr. N.G.P. Arts and science college, Coimbatore.

2. Head & Associate professor, Department of Food Science and Technology, Pondicherry University, Pondicherry.

ABSTRACT

The aim of the present study was to improve the nutritional and glycaemic index of idli by substitution of kidney bean in idli batter. Fasting blood glucose level was taken and post prandial blood glucose level (at 30 min interval till 2 hours) was checked with bread as standard to assess the glycaemic index of control idli and developed idli. Based on the overall results of both textural and sensory parameters, the present data suggest that kidney bean could be substituted up to a level of 40% in idli batter to develop organoleptically acceptable breakfast food. The mean blood glucose levels were increased after the intake of idli at 30 and 60 minutes, after which there was a decrease from 60 minute to 90 minute and 120 minute. The glycaemic index of control idli was 98 and significantly higher ($p \leq 0.05$) than idli incorporated with *Phaseolus vulgaris*. From the results it is possible to identify food preparations in the traditional Indian diet having attributes of desired glycaemic effect, delayed peak rise, low glucose response curves. However in the present study, value added idli has high hypoglycaemic effect than control idli.

KEYWORDS: Idli, *Phaseolus vulgaris*, textural and sensory parameters glycaemic index

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5. Leelavathi.B

Proceedings of the 2nd International Conference on Inventive Computation Technologies (ICICT 2017)
IEEE Xplore Compliant - Part Number:CFPI17K52-ART, ISBN:978-1-5090-6697-1

An Efficient Worm Detection System using Multi Feature Analysis and Classification Techniques

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Abstract— one of the popular ways of detecting worm is signature based pattern matching. However, the signature of worm should be stored in advance for the pattern matching detection. Moreover, it calculates the similarity of input data using stored signature. Therefore, the storage problem and calculation overheads occur undoubtedly. Also, detection possibility is dropped, when malicious code is modified. So we use machine learning algorithm technique for detecting malicious worm executable and benign executable. In this paper, distinguished features of Portable Executable headers, Application Programming Interface (API) function calls and DLL files are used. The machine learning algorithm, Adaboost ensemble classifier, Naive Bayesian classifier and Decision tree are applied for improving to detection rate. The performance of each algorithm firstly evaluated to find the most outperformed algorithm each for classifying benign executable and malicious worm executable. And then, these features were combined to detect worm more precisely.

Keywords— *Portable Executable Header, DLLs, API function calls, Machine Learning algorithms, Efficient Worm Detection.*

I. INTRODUCTION

While the computer application technology develops at full speed, the security of computer system makes people worried. The security of the computer system becomes more vulnerable than ever and faces more security threats because the technological progress brings the complexity of the application environment. Computers in the network cannot be protected due to the open characteristic of the internet and its lack of central control and global view. Under this network environment, malware and worm has stronger reproduction and destructive ability. Modern computer and communication infrastructures are highly susceptible to various types of attacks. A common way of launching these attacks is using malware (malicious software) such as worm, virus, Trojan or spyware [1,2]. Propagation of worm might result in havoc to private users, commercial companies and governments. As a

communication channels enable malware to propagate and infect hosts very quickly and so it is essential to detect and eliminate new (unknown) malware in a prompt manner.

A majority of antivirus vendors deploy signature based worm detection techniques that utilized predefined signatures' set (signature is unique hex code strings in each malware or infected files). Its procedure is as follows: (1) a new worm starts propagating on a large scale, (2) forensic experts of antivirus companies get its samples to study its behavior, (3) they assign it a signature which is effectively a sequence of its instructions, (4) the signature is added to the database, (5) customers are notified to update their signatures' set, and (6) customers update their signatures' set and are finally protected against this worm. It suffers from three main shortcomings: (1) it is unable to detect new worm and unknown worm, (2) the size of the signatures' set and the time of matching signatures will increase exponentially, and (3) during the period between the appearance of a new (unknown) worm and the update of the signatures' set of the anti-virus clients, millions of computers are vulnerable to the new worm. Moreover, worm writers often use sophisticated packing techniques to evade signatures and the advent of more sophisticated worm writing techniques such as polymorphism and metamorphism makes it even harder to detect a malware. Polymorphic and metamorphic malware change their appearance every time when they propagate.

Spinellis [3] has proved that the detection of bounded length viruses is an NP-complete problem. Therefore, we should use a variety of heuristic knowledge to identify malware and improve the accuracy of judgments. A number of non-signature based malware detection techniques have been proposed recently. These techniques analyze several features of malware, such as machine-level code, disassembled code, static calls from the disassembled code, and run-time API (application programming interface) calls. The common bottlenecks of such techniques are their high false positive rate





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6. K.Gomathy

National Conference on Emerging Trends in Big Data Technologies and Research issues (NCEBTR2K17), 24th February, 2017

A SURVEY OF CLUSTER BASED KEY MANAGEMENT TECHNIQUES FOR SECURED DATA TRANSMISSION IN MANET

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Abstract - In Mobile Ad Hoc Networks (MANETS), Clustering based routing protocol can sufficiently enhance Performance, Scalability and Energy Efficiency. In this research Improved weight based clustering technique integrated along with a routing protocol is proposed. Our approach is inspired from bird flocking behavior where birds travel long distances in flocks and conserve energy by constantly changing the leader of the flock. We have mainly concentrated on clustering algorithm and designed our clustering algorithm based on moment-to-moment decisions of individual nodes during communication. In this protocol, the network is divided into chunks of nodes known as clusters. The clusters are actively maintained and reassembled using specific algorithms and techniques. Due to nature of inconstant wireless medium data transfer is a major problem in ad hoc it lacks security and reliability of data. Our clustering scheme utilizes request suppression to reduce the number of responses in searching process. Consideration of alternative paths to a node facilitates to overcome link failure. The improved weight based routing scheme is a position based routing approach which incorporates dynamic selection of gateway nodes to reduce the number of control packets flooded in the network.

KEYWORDS: MANETS, Clustering Techniques, Routing protocol and Key Management

1.INTRODUCTION

Mobile Ad Hoc Networks (MANETs) have received drastically increasing interest, partly owing to the potential applicability of MANETs to myriad applications. The five components of a security mechanism are confidentiality, integrity, authenticity, availability and non-reputability. Out of these, authenticity is the most fundamental issue, since a breach of authenticity leads to a system-wide compromise. One of the widely used authentication mechanisms in conventional wired networks is the public key management system using certificates. One of the main issues to consider in a certificate-based scheme is the secure distribution of the public keys to all the nodes in the network. The Public Key Infrastructure (PKI) [1] defines methods to handle public key management using X.509 certificates.

Clustering is an approach used to reduce traffic due to the large number of nodes in the network.

O. Member Nodes: Member nodes are also called as ordinary node. Member nodes are members of a cluster and these nodes have neighbors belonging to their own cluster.

P. Guest Node: Guest node is a node associated to a cluster.

1.1 Need for Clustering

Rekeying or refreshing GK for large a dynamic group is difficult one, because MANET devices are energy constrained, bandwidth constrained, battery operated and wireless device. One of the proposed architecture for efficient resource and Group key management in MANET is clustering. The clusters are sub groups of the network that simplifies group key management by rekeying done only for the cluster.





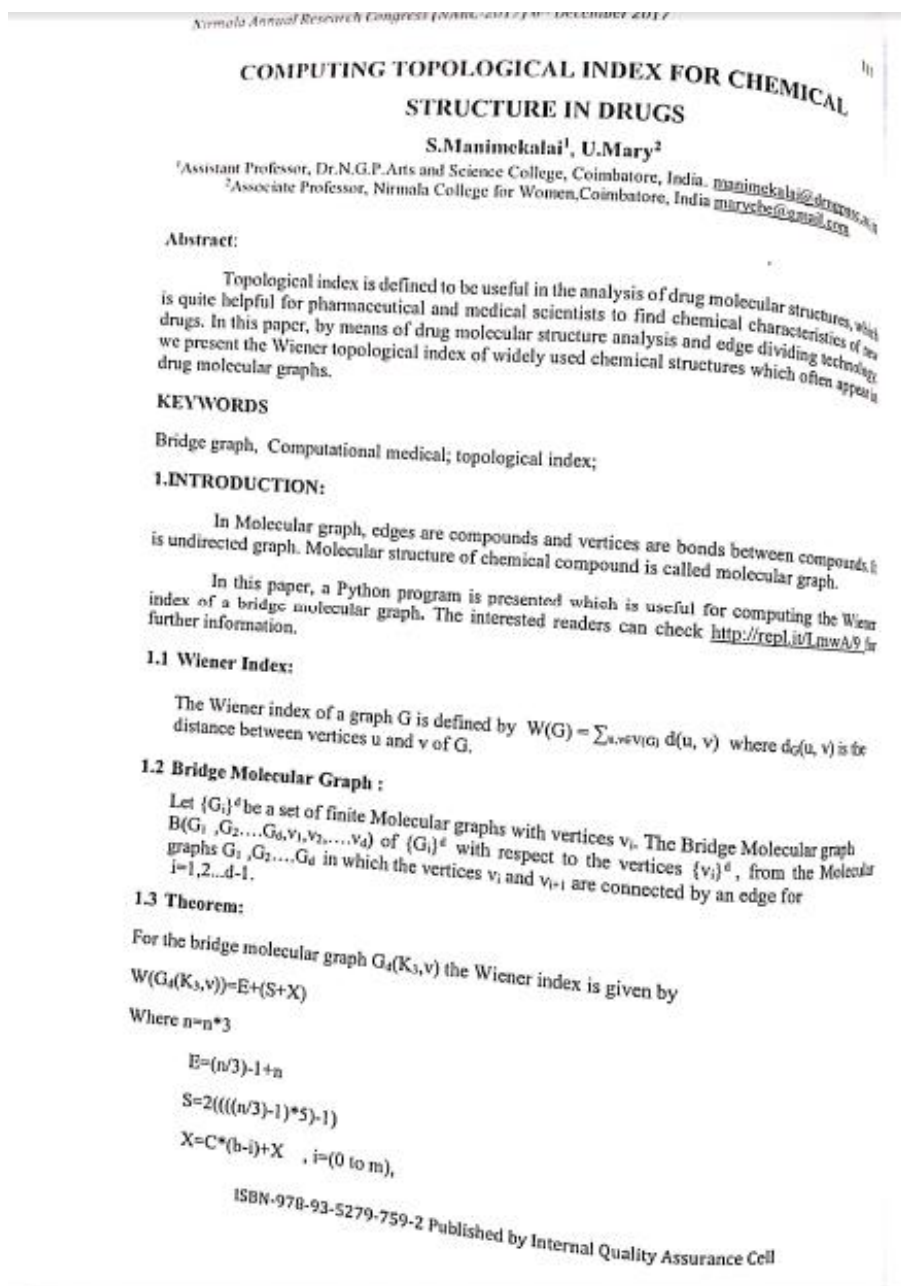
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7. S. Manimekalai





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8. Dr..C.Kumuthini

A VEHICULAR AD-HOC NETWORKS IN WIMAX TECHNOLOGY

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Assistant Professor, Dr NGP Arts and Science College, Coimbatore

[2] Dr. A. Nithya,

Associate Professor, RVS College of Arts and Science, Coimbatore

Abstract:

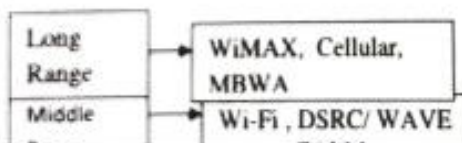
Many recent researchers focused on the wireless communication technology in Vehicular Ad-hoc Networks (VANETs) which addressed various issues in VANET such as traffic congestion, information dissemination, accident and road damage information etc. Vehicular Ad-hoc Networks is similar to Mobile Ad-hoc Networks (MANET) is random movement of nodes and VANET move on a predefined roads. This paper surveys some of the key issues in vehicular wireless access technology standards such as 802.11p, WiMax which serve as a base for supporting both safety and non-safety applications.

1. Introduction

Today Vehicular Ad-hoc Networks is the main challenges in wireless communication systems due to high mobility, high traffic, randomly changing topology and congestion when compare to MANET. Typically, it can connect to vehicles within the range of 100 to 900 meters if using 802.11p. It is aimed to support both vehicular to vehicular communications (V2V) and vehicular to infrastructure communication (V2I) over infrastructure-less network. It is essential to realize that the Intelligent Transportation System aims to improve road safety and provides a comfortable travel experience to driver and passengers [1][2].

2. VANET Communication Technologies based on signal range

In VANET, vehicles employ a number of wireless access technologies to communicate with other vehicles and roadside base stations [3]. Generally, this is to improve traffic management and monitoring and to enable the driver and passengers to access infotainment/entertainment services. These protocols are broadly classified into five categories: Cellular systems, WLAN/Wi-Fi Standards, DSRC/WAVE Standard, CALM Standard and miscellaneous standards including Bluetooth, ZigBee, and Infrared. These protocols can also be grouped into three categories based on their range are



increases throughput. The new standard, IEEE 802.16m, uses advanced modulation techniques such as Adaptive Modulation and Coding (AMC), Hybrid Automatic Repeat Request (HARQ) and Fast Channel Feedback (CQI/CH) to offer broadband access to mobile users [4]. It can offer downlink data rates of up to 63 Mbps and uplink data rates of 28Mbps. J.S Huang et al [5] have used WiMax for implementing road safety applications in streaming real time videos.

The IEEE 802.16 family of standards specifies air interface for both fixed and mobile broadband wireless access (BWA) systems supporting multimedia services. WiMAX system is based on these technologies, IEEE 802.16-2004 for fixed and IEEE 802.16e for mobile access, respectively, are the IEEE standards which define current structure of WiMAX system. WiMAX has licensed worldwide spectrum allocations in 2.3 GHz, 2.5 GHz, 3.1 GHz and 3.5 GHz frequency bands and is capable of up to 31.68 Mbps data rates with a single antenna system and up to 63.36 Mbps with a multiple antenna system. The WiMAX is capable of supporting to moving users in a mesh network structure. Systems with users moving at speeds up to 60 km/h have been reported. However just recently there has been lot of discussion whether WiMAX will ever achieve commercial success, due to long delivery delays and problems in large scale WiMAX network deployment projects (e.g. Sprint nationwide WiMAX network in U.S.A.) [6]. Highway monitor network system based on WiMAX technology contributes to dealing with accident and improving road managing level of highway, which is helpful to form high efficient highway system.





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9. Dr.R.Kousalya

SURVEY ON BIG DATA ANALYTICS AND HADOOP FRAMEWORK

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Abstract:

The term 'Big Data' describes innovative techniques and technologies to capture, store, distribute, manage and analyze petabyte- or larger-sized datasets with high-velocity and different structures. Big data can be structured, unstructured or semi-structured, resulting in incapability of conventional data management methods. Data is generated from various different sources and can arrive in the system at various rates. In order to process these large amounts of data in an inexpensive and efficient way, parallelism is used. Big Data is a data whose scale, diversity, and complexity require new architecture, techniques, algorithms, and analytics to manage, extract value from hidden knowledge. Hadoop is the core platform for structuring Big Data, and solves the problem of making it useful for analytics purposes. Hadoop is an open source software project that enables the distributed processing of large data sets across clusters of commodity servers. It is designed to scale up from a single server to thousands of machines, with a very high degree of fault tolerance.

Keywords-Big Data, Hadoop, Map Reduce, HDFS, Hadoop Components

1. Introduction

1.1 Big Data: Definition

Big data is a term that refers to data sets or combinations of data sets whose size (volume), complexity (variability), and rate of growth (velocity) make them difficult to be captured, managed, processed or analyzed by conventional technologies and tools, such as relational databases and desktop statistics or visualization packages, within the time necessary to make them useful. While the size used to determine whether a particular data set is considered big data is not firmly defined and continues to change over time, most analysts and practitioners currently refer to data sets from 30-50 terabytes (10¹² or 1000 gigabytes per terabyte) to multiple petabytes (10¹⁵ or 1000 terabytes per petabyte) as big data.

1.2 The challenges of big data

1. Volume: Volume refers to amount of data. Volume represent the size of the data how the data is large. The size of the data is represented in terabytes and petabytes.

2. Variety: Variety makes the data too big. The files comes in various formats and of any type, it may be structured or unstructured such as text, audio, videos,

important for businesses, IT infrastructure system to store large amount of values in database.

5. Veracity: Veracity refers to noise biases and normality. When we dealing with high volume, velocity and variety of data, the all of data are not going 100% correct, there will be dirty data.

1.3 Problem with Big Data Processing

i. Heterogeneity and Incompleteness

When humans consume information, a great deal of heterogeneity is comfortably tolerated. In fact, the nuance and richness of natural language can provide valuable depth. However, machine analysis algorithms expect homogeneous data, and cannot understand nuance. In consequence, data must be carefully structured as a first step in (or prior to) data analysis. Computer systems work most efficiently if they can store multiple items that are all identical in size and structure. Efficient representation, access, and analysis of semi-structured data require further work.

ii. Scale

Of course, the first thing anyone thinks of with Big Data is its size. After all, the word "big" is there in the very name. Managing large and rapidly increasing volumes of data has been a challenge





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Effect of Various Substrate Sterilization Methods and Days of Spawn Maturity on the Growth, Yield and Bioefficiency of Pleurotuseous, Pink Oyster Mushroom

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ABSTRACT

This study was designed to investigate the effect of various substrate sterilization methods and days of spawn maturity on the growth, yield and bioefficiency of Pleurotuseous, pink oyster mushroom. The well grown culture of the mushroom was used and mushroom spawn was developed and used for the cultivation of mushrooms. Three types of substrate sterilization methods viz. chemical, boiling water and steam sterilization was employed. The spawn used for inoculation was with 25 days, 35 days and 45 days maturity. The days of spawn run, days of pin headed appearance, days of first, second and third harvest were observed. The yield in first, second and third harvest from the substrates sterilized by three different methods were recorded. The bioefficiency of mushroom was greater in steam sterilized substrate followed by boiling water sterilized substrate and chemical sterilized substrate. The 35 day spawn was very effective in producing more mushrooms followed by 45 day spawn and 25 day spawn. It is inference that steam sterilized substrate and 35 day spawn is the preferable choice for the cultivation of Pleurotuseous.

Keywords— Pleurotuseous, spawn, substrate, steam sterilization, bioefficiency.

INTRODUCTION

Mushrooms are defined as macrofungi with distinctive and visible fruiting bodies that may grow above or below ground [1]. Higher Basidiomycetes represent a taxonomically, ecologically, and physiologically extremely diverse group of eukaryotic organisms. Recently, extensive research on these fungi has markedly increased, mainly due to their potential use in a variety of biotechnological applications, particularly for the production of food, enzymes, dietary supplements, and pharmaceutical compounds [2,3,4]. It is estimated that there are approximately 1.5 million species of mushrooms in the world of which approximately 70,000 species are described. About 10,000 of the known species belong to the macrofungi of which about 5,000 species are edible and over 1,800 species are considered to have medicinal properties [5].

Present use of mushrooms is totally different from traditional because, lot of research has been done on the chemical composition of mushrooms, which revealed that mushrooms can be used as a diet to combat diseases. The early history regarding the use of mushrooms in different countries has been reviewed by number of workers [6,7,8].

A vast body of evidence indicates that edible and medicinal mushrooms contain many biologically active compounds disclosing anti-inflammatory, antitumor,

antibacterial, antiviral and antioxidant activity. Moreover, their antiallergic, antiatherogenic, hypoglycemic and hematological properties have been demonstrated [9]. Amongst bioactive constituents occurring in mushrooms, phenolic compounds focus much attention due to their antioxidant activity. Since oxidative stress resulting from imbalance between the level of free radicals and the body's defense system is considered a serious cause of many diseases, including cancer and other civilization diseases, it is essential to search for natural sources of antioxidants. Numerous epidemiological studies indicate that polyphenol-rich food and beverages of plant origin consumed in human everyday diet reduce the risk of cardiovascular diseases, stroke and certain types of cancer [10]. These properties are commonly correlated with the antioxidant activity of phenolic compounds, which makes them useful for decreasing oxidative damage in the human body [11]. In addition, edible mushrooms usually contain various bioactive molecules, such as phenolic compounds, polyketides, terpenes and steroids [12].

Mushrooms can substantiate the sufferings from malnutrition to some extent, because they produce large quantities in a short time and provide more protein per unit area than other crops [13].

Pleurotus species are commonly called Oyster mushrooms. There are about 40 species of this mushroom. They enjoy worldwide distribution. It is one of the most commonly used edible mushrooms and is also used as a

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