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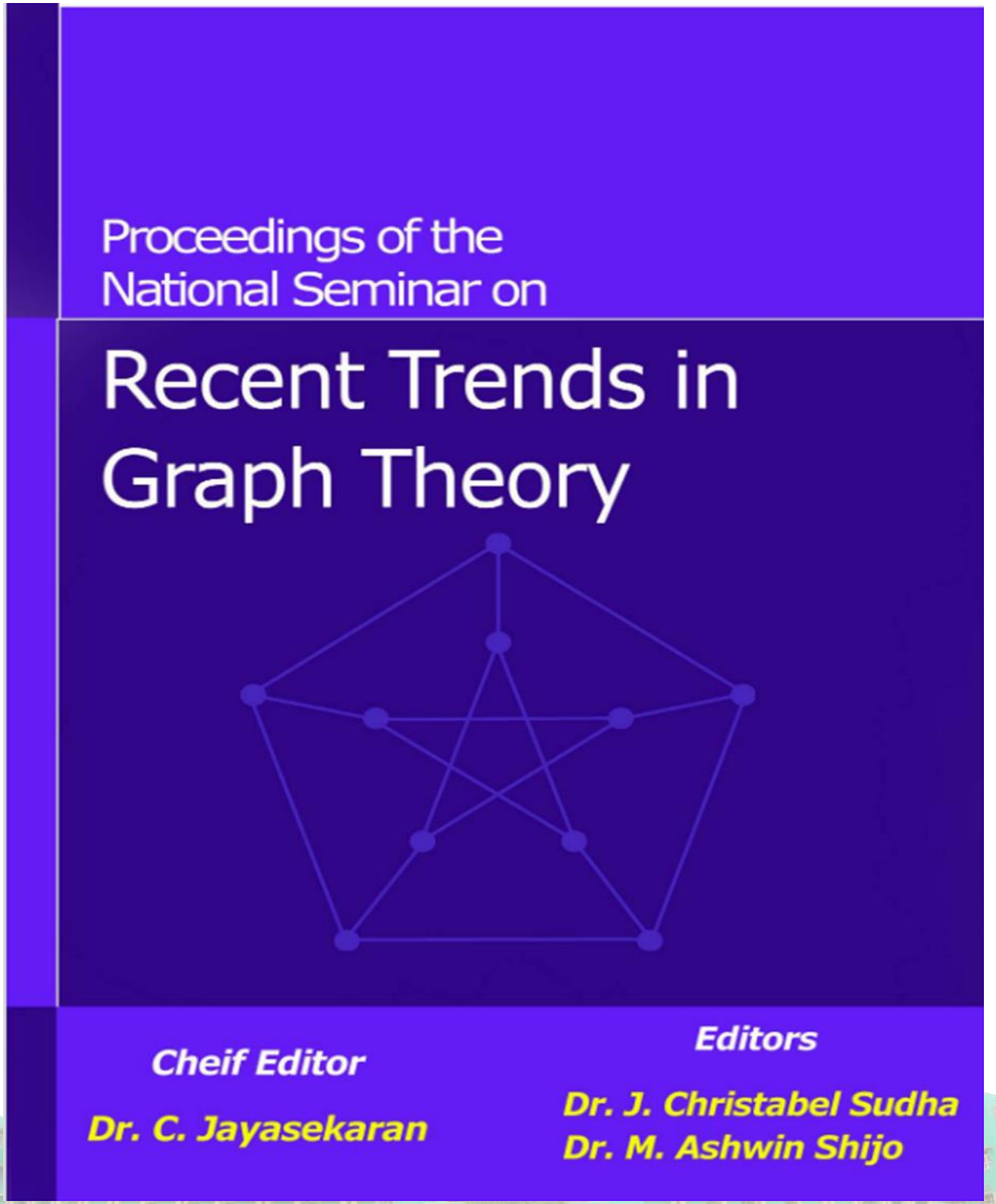

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Strongly*-2 Divisor Cordial Labeling of Some Fan and Ladder Graphs

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Abstract

A Srongly* -2 divisor cordial labeling of a graph G with the vertex set $V(G)$ is a bijection $f: V(G) \to \{1,2,3, \ldots \ldots \ldots |V(G)|\}$ such that each edge uv assigned the label 1 if $\left\lfloor \frac{f(u)+f(v)+f(u)f(v)}{2} \right\rfloor$ is odd and 0 if $\left\lfloor \frac{f(u)+f(v)+f(u)f(v)}{2} \right\rfloor$ is even; then the number of edges labeled with 0 and the number of edges labeled with 1 differs by atmost 1. A graph which admits a Strongly*-2 divisor cordial labeling is called a Strongly*-2 divisor cordial graph. In this paper, we investigate the Strongly*-2 Divisor Cordial labeling of the graphs Fan(F_n), Double Fan($D(F_n)$), Subdivided Fan ($S(F_n)$), Open Ladder($O(L_n)$),Circular Ladder (CL_n) and Mobius Ladder (M_n)

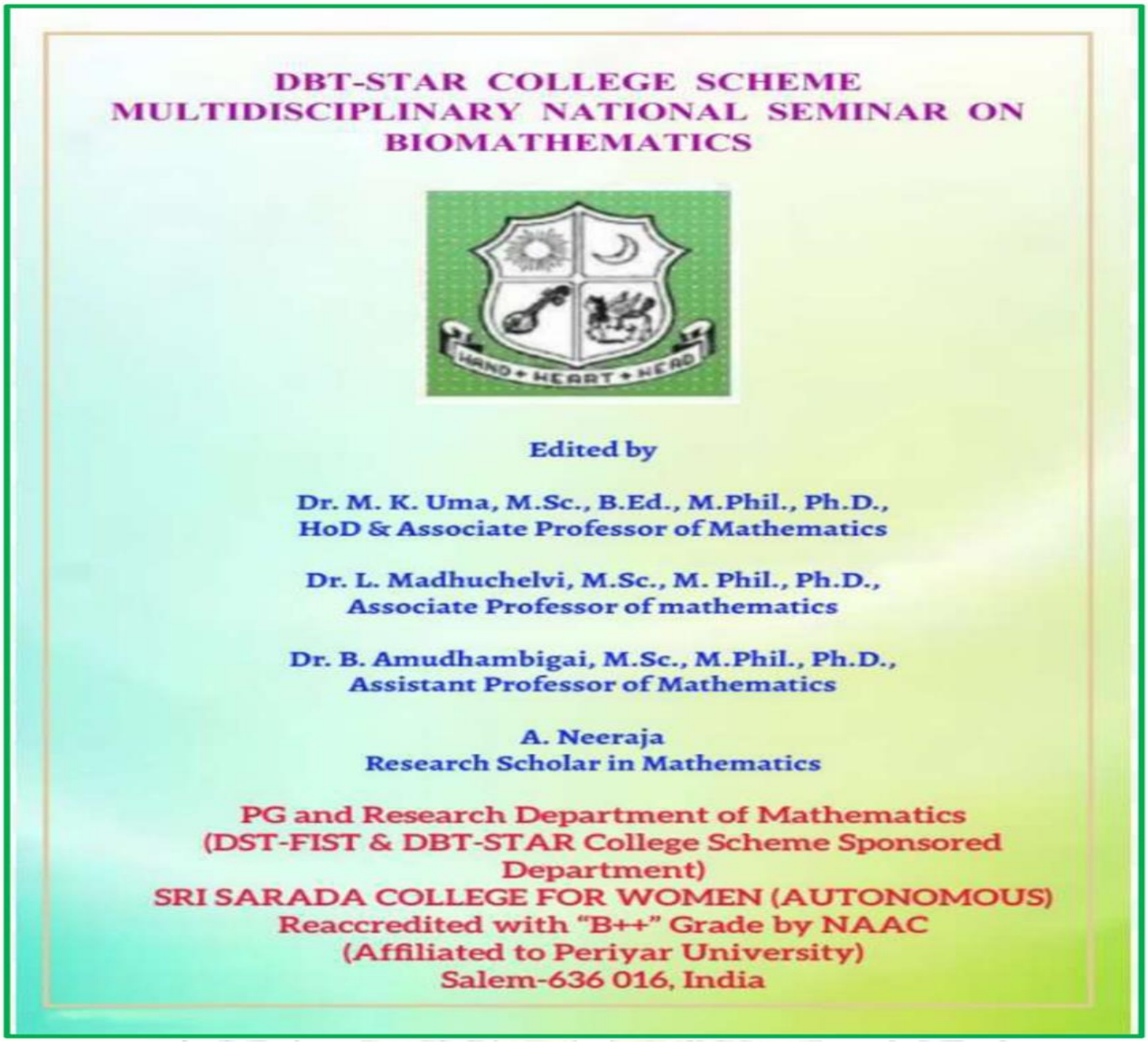
Keywords: Function, Bijection, Cordial labelling, Strongly*-2 divisor cordial labeling.

AMS Subject Classification number (2020): 05C78

1. Introduction

Graph labeling was introduced in 1960's. We refer J. A. Gallian [5] for looking over the detailed view of graph labeling. We persue Harary [4] for fundamental terms and notations. We refer [3], [7] and [6] for further classifications of cordial labeling. In [1] and [2] we study about Strongly*- graph. Stimulated by these, we introduce Strongly*-2 divisor Cordial labeling. In this paper, we investigate the Strongly*-2 Divisor Cordial labeling of the graphs Fan(F_n), Double Fan(($D(F_n)$), Subdivided Fan (($S(F_n)$), Open Ladder($O(L_n)$),Circular Ladder (CL_n) and Mobius Ladder (M_n)

We have given the definitions which is required for our present work. The Fan graph F_n is $P_n + K_1$. The Double Fan $D(F_n)$ is obtained by $P_n + 2K_1$. The Subdivision graph $S(G)$ is obtained from G by subdividing each edge of G with a vertex. A Circular Ladder CL_n is the union of an outer cycle $C_0 : u_1u_2u_3 \ldots\ldots u_nu_1$



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A Novel Fuzzy Time Series Forecasting Model based on Stochastic Process and Hydro Power Generation

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Abstract:

Forecasting accuracy is one of the most favorable critical issues in fuzzy time series models. The study compares the application of two forecasting methods on the amount of hydropower production, the Fuzzy time series model and ARIMA model. Model discussed for the ARIMA model and Fuzzy time series model include the Sturges rule. A forecasting model is, therefore, a promising tool to predict the generation, consumption, and reservation of energy. In this paper, a long term forecasting model for hydropower production using the autoregressive integrated moving average (ARIMA) time series method is proposed. The collected data was obtain from the Secondary data in India. The electricity generation in this plant demonstrates an upward trend in the future. Although the power capacity of the hydropower plant is significantly affected by environmental variability, having a forecasting model and a long-term plan will greatly benefit renewable energy production to keep up with economic growth. Mean Absolute Error (MAE) and Root Mean Square Error (RMSE) were compared. The results were display numerically and graphically.

Keywords:

ARIMA, Fuzzy Time Series, Hydro Power Generation, Mean Absolute Error, Root Mean Square Error, Forecasting.

AMS Classifications: 62M10.62M20, 62G05

INTRODUCTION

In the last decade, fuzzy time series have received more attention to deal with the vagueness and incompleteness inherent in time series data. Different types of models have been developed moreover to improve forecasting accuracy or decrease computation overhead. However, the issues

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The Detour Cototal Domination Number of a Graph

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Abstract

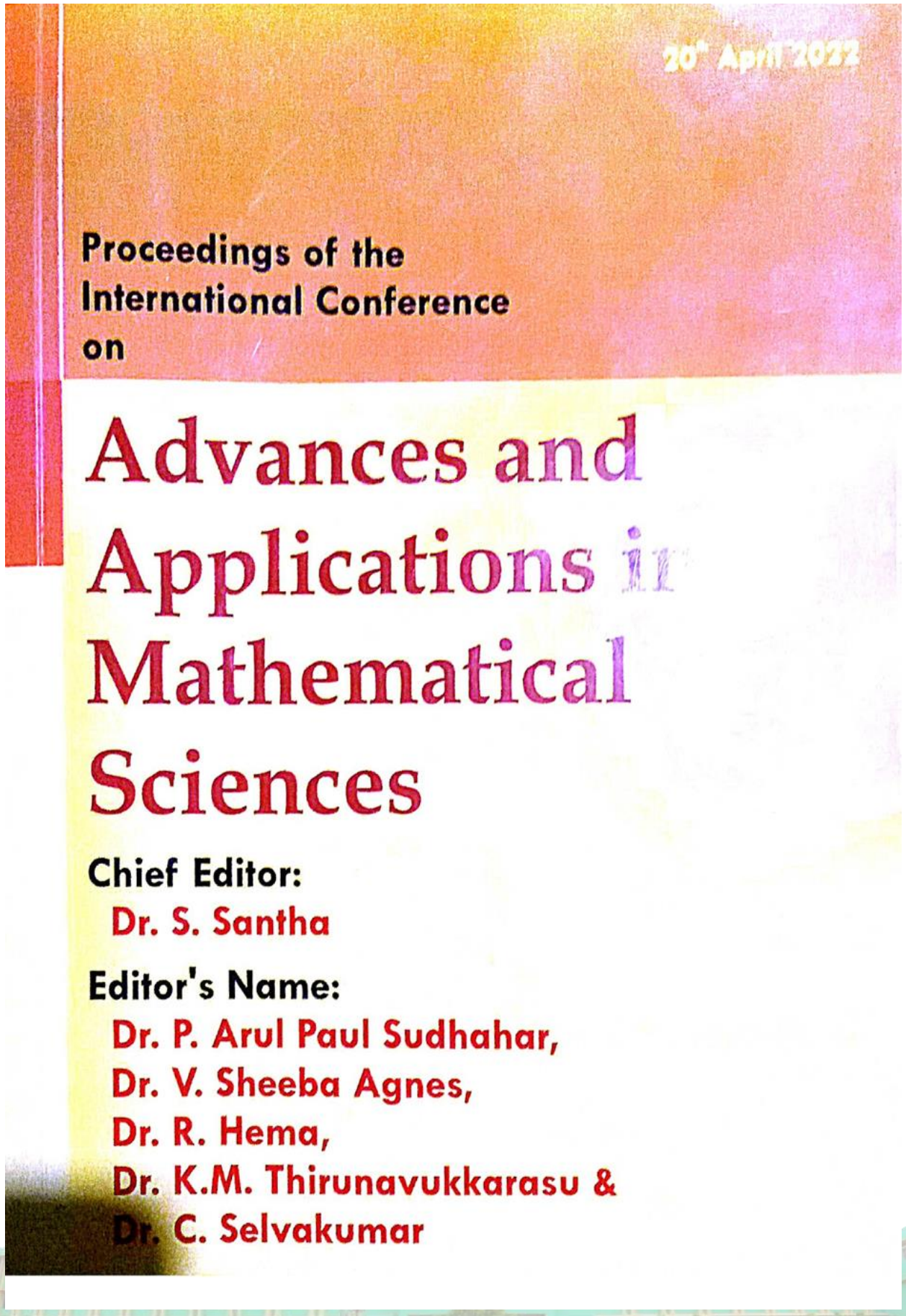
Let $G = (V, E)$ be a connected graph with at least two vertices. A detour dominating set $S \subseteq V$ is called a detour cototal dominating set of G, if $\langle V - S \rangle$ has no isolated vertices. The detour cototal domination number $\gamma_{dct}(G)$ of G is the minimum order of its detour cototal dominating sets of G. Some of its general properties are studied. Connected graphs of order $n \geq 2$ with detour cototal domination number n or $n - 2$ are characterized. It is shown that for every pair a and b of positive integers with $2 \leq a \leq b$, there exists a connected graph G such that $dn(G) = a$ and $\gamma_{dct}(G) = b$.

Keywords: detour cototal domination number, cototal domination number, domination number, detour number, detour set.

AMS Subject Classification: 05C12, 05C69.

1. Introduction

By a graph G we mean a finite, undirected connected graph without loops or multiple edges. Unless and otherwise stated, the graph $G = (V, E)$ has $n = |V|$ vertices and $m = |E|$ edges. For basic definitions and terminologies, we refer [1]. For vertices u and v in a graph G, the detour distance $D(u, v)$ is the length of a detour distance $D(u, v)$ is the length of a longest $u - v$ path in G. A $u - v$ path of length $D(u, v)$ is called a $u - v$ detour. These concepts were studied by Chartrand et al. [4]. The closed detour interval $I_D[u, v]$ consists of u, v and all vertices in some $u - v$ detour of G. For $S \subseteq V(G)$, $I_D[S] = \bigcup_{u,v \in S} I_D[u, v] = V(G)$. A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STRONGLY*-2 DIVISOR CORDIAL LABELLING OF SOME CORONA GRAPHS

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Abstract

A Strongly -2 divisor cordial labelling of a graph G with the vertex set $V(G)$ is a bijection $f: V(G) \to \{1,2,3,\ldots\ldots\ldots |V(G)|\}$ such that each edge uvassigned the label 1 if $\left\lfloor \frac{f(u)+f(v)+f(u)f(v)}{2} \right\rfloor$ is odd and 0 if $\left\lfloor \frac{f(u)+f(v)+f(u)f(v)}{2} \right\rfloor$ is even; then the number of edges labeled with 0 and the number of edges labeled with 1 differs by atmost 1. A graph which admits a Strongly*-2 divisor cordial labelling is called a Strongly*-2 divisor cordial graph. In this paper, we investigate the Strongly*-2 Divisor Cordial labelling of the graphs $L_n \odot K_1$, $SL_n \odot K_1$, $T_n \odot K_1$, $F_n \odot K_1$, $C_n \odot K_1$ and $C_n \odot K_2$.*

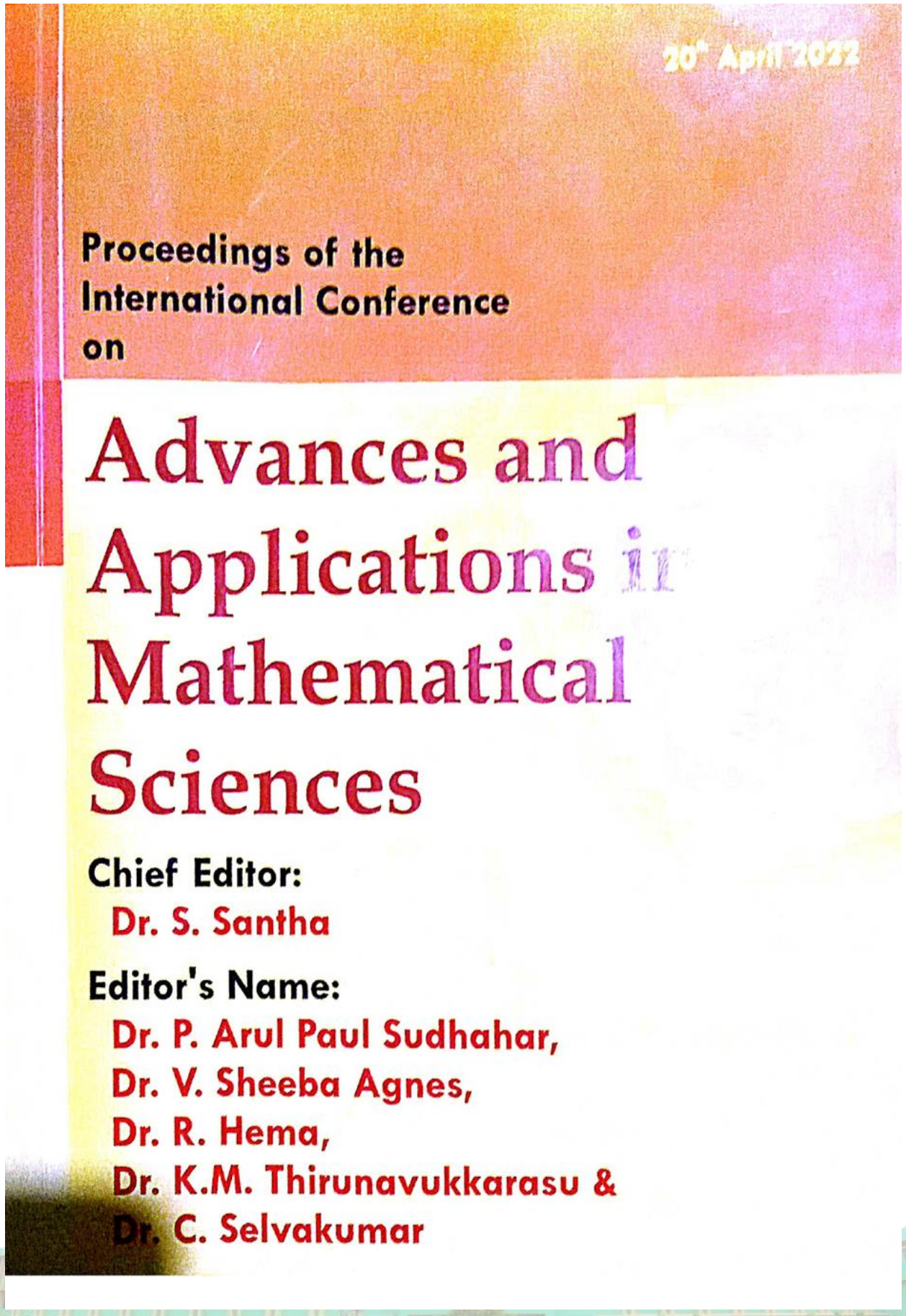
Keywords: *Function, Bijection, Cordial labelling, Strongly*-2 divisor cordial labelling.*
AMS Subject Classification number(2020): 05C78

Introduction

Graph labelling was introduced in 1960's. We refer J. A. Gallian [5] for looking over the detailed view of graph labelling. We persueHarary [4] for fundamental terms and notations. We refer [3], [7] and [6] for further classifications of cordial labelling. In [1] and [2] we study about Strongly*- graph.Stimulated by these, we introduce Strongly*-2 divisor Cordial labelling. In this paper, we investigate the Strongly*-2 Divisor Cordial labelling of the graphs$L_n \odot K_1$, $SL_n \odot K_1$, $T_n \odot K_1$, $F_n \odot K_1$, $C_n \odot K_1$ and $C_n \odot K_2$.

Main Results and Discussion

Definition 2.1.A strongly*-2 divisor cordial labelling of a graph G with the vertex set $V(G)$ is a bijection$f: V(G) \to \{1,2,3\ldots.|V(G)|\}$ such that each edge uv assigned the label 1 if $\left\lfloor \frac{f(u)+f(v)+f(u)f(v)}{2} \right\rfloor$ is odd and 0 if $\left\lfloor \frac{f(u)+f(v)+f(u)f(v)}{2} \right\rfloor$ is even; then the number of edges labeled with 0 and the number of edges labeled with 1 differs by atmost 1. The number of edges labeled with 0 is denoted as $e_f(0)$ and the number of edges labeled with 1 is denoted as $e_f(1)$. A graph which admits a Strongly*-2 divisor cordial labelling is called a Strongly*-2 divisor cordial graph.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ADVANCES AND APPLICATIONS IN MATHEMATICAL SCIENCES 2022

THE GEODETIC CO-TOTAL DOMINATION IN THE JOIN OF GRAPHS

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Abstract

Let $G = (V, E)$ be a connected graph with at least two vertices,a set$S \subseteq V(G)$ is said to be a geodetic cototal dominating set of G,If S is both geodetic and cototal dominating set of G.The geodetic cototal domination number ,γ_{gct} of G is the minimum cardinality of a geodetic cototal dominating set among all geodetic cototal dominating sets of G.A join graph is the complete union of two arbitrary graphs.In this paper,we determine the geodetic cototal domination number for the join of some standard graphs with others.

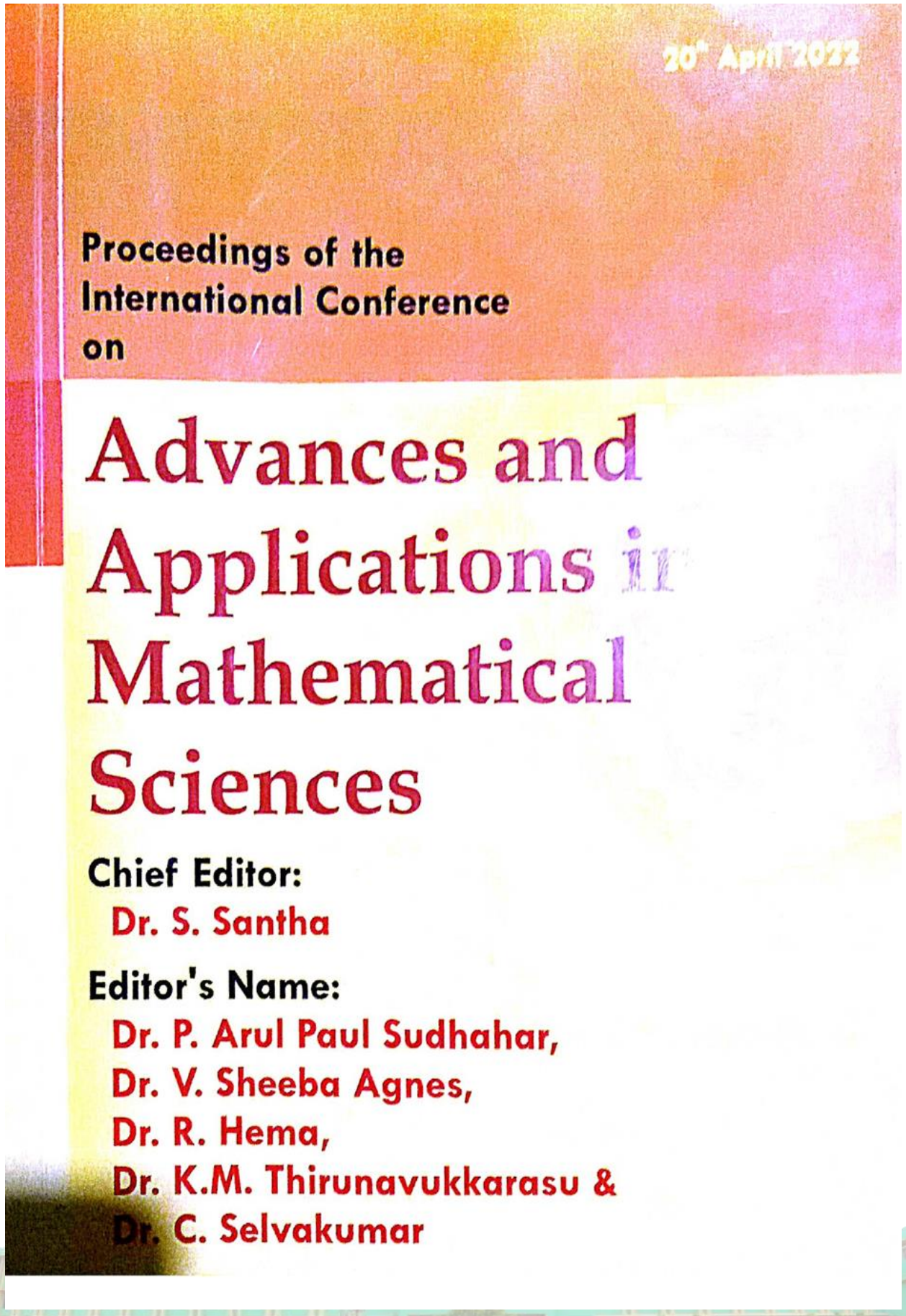
Keywords: *geodetic cototal dominating set, geodetic cototal domination number, join of graphs, geodetic cototal domination number of join of graphs.*

AMS Subject Classification: *05C12, 05C69.*

Introduction

By a graph $G = (V, E)$ we mean a finite, connected, undirected graph withoutloops or multiple edges. The order $|V|$ and size $|E|$ of G are denoted by n and$m$ respectively. For graph theoretic terminologies, we refer to West [9]. If G is a connected graph the distance $d(x, y)$ is the length of a shortest $x-y$path in G.The diameter is defined by $d(G) = diam(G) = max\{d(x, y)/x, y \in V(G)$. A vertex v of G is said to be anextreme vertex of the subgraph induced by its neighborhood is complete. The set ofall extreme vertices is denoted by $Ext(G)$. A vertex v is said to be universal vertex if v isadjacent to all other vertices in G, that is G, that is $deg(v) = n - 1$. An $x-y$ path of length $d(x, y)$ is called a x-y geodesic. A vertex v is said to be lie on ageodesic P if v is an internal vertex of P. The closed interval consists of x, y geodesicof G and for a non-empty set $S \subseteq V(G), I[S] = \bigcup_{x,y \in S} I[x, y]$.

A set $S \subseteq V(G)$ in a connected graph is a geodetic set of G if $I[S] = V(G)$.The geodetic number of G, denoted by $g(G)$, is the minimum cardinality of a geodeticset of G. Variousconcepts inspired by geodetic sets are introduced in [3,8].A set $S \subseteq V(G)$ in a graph G is a dominating set of G if every vertex v in$\langle V - S \rangle$, there exists a vertex $u \in S$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THE UPPER EDGE METRIC DIMENSION OF A GRAPH

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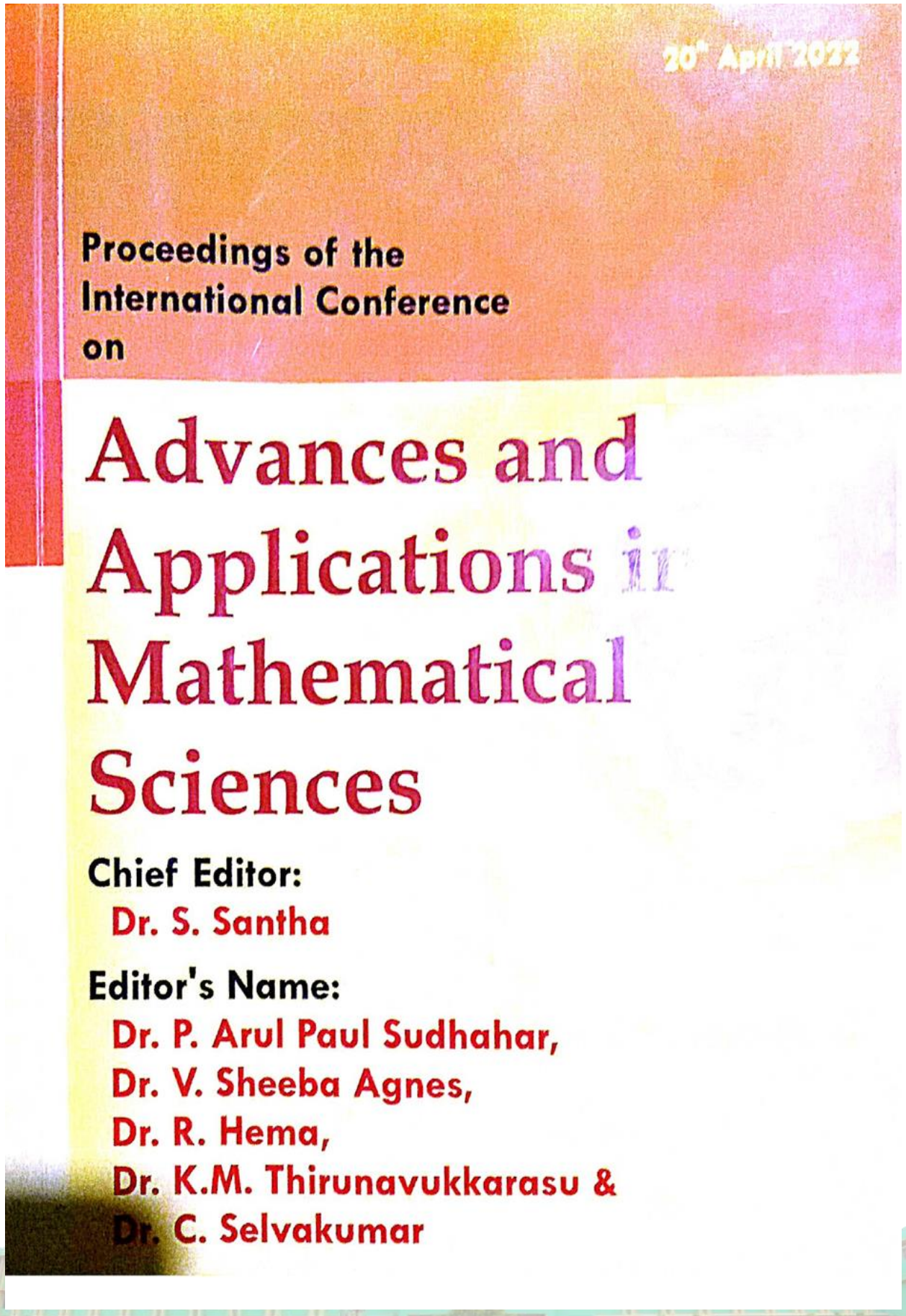
Abstract

Let $G = (V, E)$ be a simple graph. For an ordered set $W = \{e_1, e_2, , \dots, e_k\}$of edges and an edge e in a connected graph G, the edge metric representation of e with respective to W is the k-vectorr$(e/W) = (d(e,e_1), d(e,e_2), \dots, d(e,e_k))$, where $d(e,f)$ represents the distance between the edges e and f.The set W is called an edge resolving set for G if distinct edges of G have distinct edge metric representations. An edge resolving set of minimum cardinality is called the edge metric dimension of G and is denoted by $dim_e(G)$.An edge resolving set W of $G$is called a minimal resolving set of G if no proper subset of W is an edge resolving set of G. The maximum cardinality of a minimal edge resolving set is the upper edge metric dimension of G and is denoted by $dim_e^+(G)$.The upper edge metric dimension of some standard graphs of determined. It is proved that $1 \leq dim_e(G) \leq dim_e^+(G) \leq m-1$, where m is the size of G.Connected graphs of size $m \geq 3$ with upper edge metric dimension1 are characterized.

Keywords: *distance, edge resolving set, edge metric dimension, upper edge metric dimension.*
AMS Subject Classification: *05C12.*

Introduction and Preliminaries

Let G be a simple graph with vertex set $V(G)$ and edge set $E(G)$. The order of a graph G is $|V(G)|$, its number of vertices denoted by n. The size of a graph G is $|E(G)|$, its number of edges denoted by m. The *degree*deg (v) of a vertex $v \in V(G)$ is the number of vertices joining to v. We denote by $\Delta(G)$ the maximum degree of a graph G. The *distance* $d(u,v)$ between two vertices $u, v \in V(G)$ is the length of a shortest path between them. A vertex v with deg (v) is entitled as major vertex. An end-vertex u is said to be a terminal vertex of a major vertex v if $d(u,v) < d(u,w)$ for all major vertex w. The number of terminal vertices of major vertex v is called terminal degree and if a major vertex v has positive terminal degree then it is called an exterior major vertex. The number of exterior major vertices of G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THE UPPER EDGE STEINER GLOBAL DOMINATION NUMBER OF A GRAPH

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Abstract

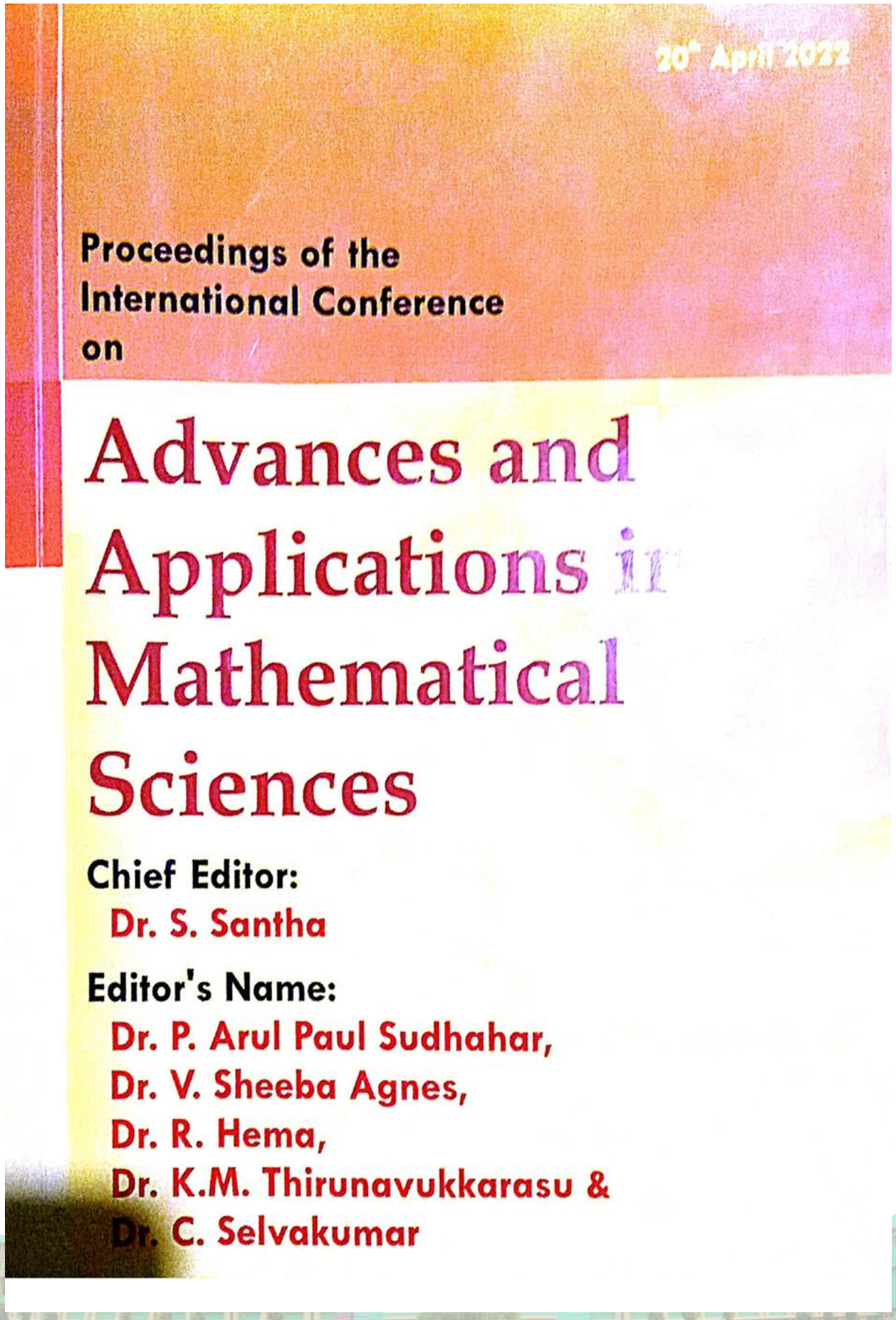
Anedge Steiner global dominating set W in a connected graph G is called a minimal edge Steiner global dominating of setG if no proper subset of W is anedge Steiner global dominating set of G.The upper edge Steiner global dominating set number $\overline{\gamma}_{se}{}^{+}(G)$ *of G is the maximum cardinality of a minimal edge Steiner global dominating set of G.Some general properties satisfied by this concept are studied..It is shown that for every pair of positive integers a and bwith* $3 \leq a \leq b$, *there exists a connected graph G such that* $\overline{\gamma}_{s}(G) = a$ *and* $\overline{\gamma}_{se}(G) = b$, *where* $\overline{\gamma}_{s}(G)$ *is the Steiner global domination number of a graph.*

Keywords: *Steiner global domination number, Steiner domination number, Steiner number.*
AMS Subject Classification: *05C12, 05C69.*

Introduction

Let $G = (V, E)$ be a simple undirected connected graph. The *order* and *size of* G are denoted by n and m respectively.The *neighbors* of a vertex x are the vertices that are adjacent to x, it is denoted by $N(x)$. The *degree of a vertex* x in a graph G is the number of edges incident with v and is denoted by $deg_G(x)$. A vertex $x \in V$ in a connected graph G is said to bea *universal vertex* of G if $deg_G(x) = n - 1$. For any set S of vertices of G, the *induced subgraph* $G[S]$ is the maximal subgraph of G with vertex set S. A vertex $x \in G$ is said to be *extreme* if the $G[N(x)]$ is complete.

The $x - y$ geodesic represents the shortest path between the vertices x and y in G. The length of the shortest path between any two vertices x and y is the distance between the corresponding vertices and is represented as d(x, y), the greatest distance between any pair of vertices is called the diameter of G, it is denoted by d(G). For a nonempty set W of vertices in a connected graph G, the *Steiner distance* $d(W)$ of W is the minimum size of a connected subgraph of G containing W. Necessarily, each such subgraph is a tree and is called a *Steiner tree with respect to* W or a *Steiner* W*-tree*. It is to be noted that $d(W) = d(u, v)$, when $W = \{u, v\}$. The set of all vertices of G that lie on some Steiner W-tree is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MONOPHONIC GLOBAL DOMINATION IN CORONA OF GRAPHS

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Abstract

A set M is called a monophonic global dominating set of G if M is both monophonic and global dominating set of G. The monophonic global dominating number is the minimum cardinality of a monophonic global dominating set in G. In this paper we determine the monophonic global domination number of the corona of graphs.

Keywords: *monophonic set, dominating set, global dominating set,monophonic global domination number, corona product.*

AMS Subject Classification: *05C38 05C69.*

Introduction

Let $G = (V, E)$ be a graph with a vertex set $V(G)$ and edge set $E(G)$ (or simply V and E, respectively, Furthermore, we say that a graph G has order $n = |V(G)|$ and size $m = |E(G)|$. For basic graph theoretic terminology, we refer to [2].A vertex $v$is said to bean*extreme* vertex if the subgraph induced by its neighbors is complete. A vertex $v$is said to be*auniversal vertex* if $\deg_G(v) = n - 1$.Let $F_x(G)$ denotes set of all universal vertices of G. The *length* of a path is the number of its edges. The corona $G \circ H$of two disjoint graphs G and H is the graphformed from one copy of G and $|V(G)|$ copies of H, where the i^{th} vertex of G isadjacent toevery vertexin the i^{th} copy of H. For every $v \in V(G)$, denoted by $H_v$the copy of Hwhose vertices are adjoint to the vertex v. Denote $v + H_v$be thesubgraph of the corona $G \circ H$ correspondingto the join $\langle\{v\} + H_v\rangle$.For a graph$G$, the graph G^+ is obtained byjoining exactly one end vertex to each vertex of G.

Let u and v be vertices of a connected graph G. A shortest u-v path is also called a u-$v$geodesic. The (shortest path) *distance* is defined as the length of a u-v geodesic in $G$and is denoted by $d_G(u, v)$ *or* $d(u, v)$ for short if the graph is clear from the context.The greatest distance between every pair of vertices in G is diameter of G. It is denoted by $d(G)$ or simply d.A *chord* of a path P is an edge which connects twonon-adjacent vertices of P.A $u - v$ path is called a monophonic path if it is a chordless path. For two vertices u and v,

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A New Method of Fuzzy Time Series Forecasting Based On K-Means Clustering using Hydro power generation data

S.Imalin, V.Anithakumari, V.M.Arul Flower Mary

Abstract: Several forecasting models based on the concepts of Fuzzy time series have been proposed in the past decades. These models have been widely applied to various problem domains, especially in dealing with forecasting problems in which event data are linguistic values. In this paper, we present a new fuzzy time series forecasting model, which uses the historical data as the universe of discourse and uses the K-means clustering method to cluster the universe of discourse, then adjust the clusters into intervals. The proposed method is applied for forecasting hydro power generation data.
Keywords: fuzzy time series; fuzzy sets; K-means; forecasting; hydro power generation;

Introduction:

A drawback of traditional forecasting methods is that they cannot deal with forecasting problems in which the historical data are represented by linguistic values. Using fuzzy time series to deal with forecasting problems can overcome this disadvantage. Song and Chissom were the pioneers of studying fuzzy time series models. The historical enrollment data of the University of Alabama were first adopted by Song and Chissom [1][2]. Because of its better performance in some kinds of forecasting problems, many researchers have proposed different fuzzy time series models in order to improve the forecasting accuracy. Chen [3] presented a simplified method of fuzzy time series forecasting of enrollments using the arithmetic functioning rather than intricate max-min composition operations. Wang, Chen, and Lee [4] considered to use high-order time variant fuzzy time series method to deal with enrollment forecasting. Huarng [5] presented a heuristic model for fuzzy time series using heuristic knowledge to improve the forecast of enrollments. Jilani, Burney, Ardil [6] used a triangular function to define the fuzzy sets. In this paper, we present a new method to forecast based on hydro power generation data k mean clustering techniques. First, we select the hydropower generation data as the universe of discourse. Then we present the k-mean clustering

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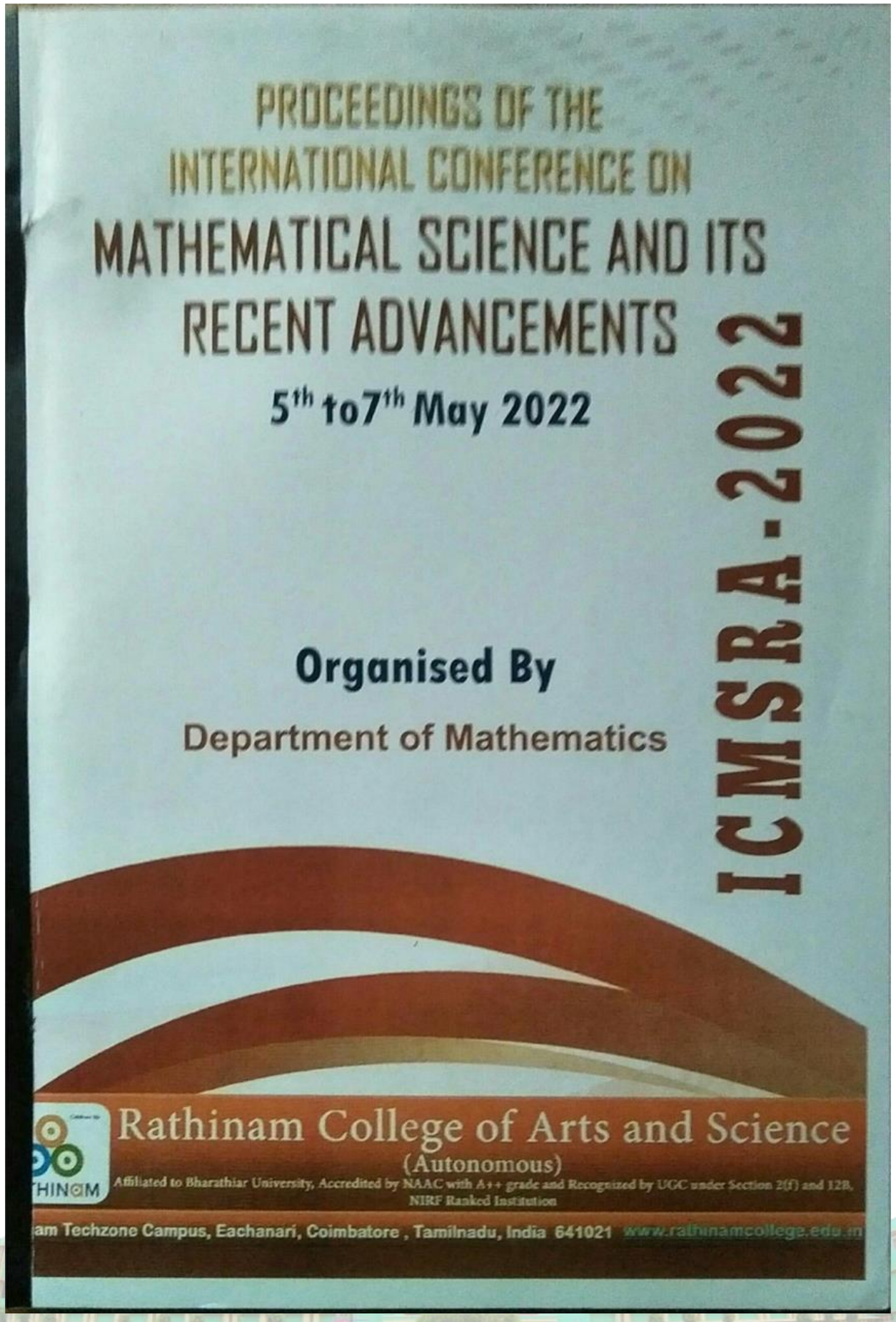
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The Chromatic Domination Number of Square of A Graph

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***Abstract*---**A set S ⊆ V is called a chromatic dominating set of G if S is both a chromatic set and a dominating set of G. The minimum cardinality of a chromatic dominating set of G is called a chromatic domination number of G and is denoted by $\gamma_\chi(G)$. In this article we determined the chromatic domination number of square of some standard graphs.

***Keywords*---**Chromatic Domination Number, Square of a Graph, Chromatic Number, Domination Number.

AMS Subject Classification: 05C15, 05C69.

I. Introduction

THROUGHOUT this paper all graphs are simple. Let G be a graph and $V(G)$ be the vertex set of G. In a connected graph G, for any two vertices $u, v \in V(G)$, let $d_G(u,v)$denote the length of the shortest path between u and v in G. The diameter of a graph is the maximum distance between the pair of vertices of G. The subgraph induced by a set S of vertices of a graph G is denoted by $\langle S \rangle$ with $V(S) = S$ and $E(\langle S \rangle) = \{uv \in E(G): u, v \in S\}$. A set $S \subset V$ is called a clique if $\langle S \rangle$ is complete. The clique number of G is the number of vertices in a maximum clique and is denoted by $\omega(G)$. A Fan graph F_n can be constructed by joined n copies of the cycle graph C_3 with a common vertex. In a graph G, a k-coloring of G is a function $c: V(G) \to \{1, 2, 3, \ldots, k\}$ such that $c(u) \neq c(v)$ for every adjacent vertices $u, v \in V(G)$. The chromatic number of G, denoted by $\chi(G)$, is the smallest k for which G has a k-coloring. For simplicity we denote a $\chi(G)$-coloring of G by χ-coloring. Let G be a k-chromatic graph. A set $S \subseteq V(G)$ is called chromatic set if S contains all k vertices of different colors in G.

A subset $S \subseteq V(G)$ is called a dominating set if every vertex $v \in V(G)\backslash S$ is adjacent to a vertex $u \in S$. The domination number, $\gamma(G)$ of a graph G denotes the minimum cardinality of such dominating sets of G. A minimum dominating set of a graph G is hence often called as a γ-set of G. The domination concept was studied in [5,6,7,8]. For the cycle $G = C_8$ with the vertex set $\{v_1, v_2, v_3, v_4, v_5, v_6, v_8\}$, S $= \{v_1, v_8\}$ is a chromatic set of G but not a dominating set of G. For the complete graph $G = K_n$ $(n \geq 2)$ with vertex set $\{v_1, v_2 \ldots, v_n\}, D = \{v_1\}$ is a dominating set of G but not a chromatic set of G.

Butterfly graph is a planar undirected graph with 5 vertices and 6 edges. It can be constructed by joining 2 copies of cycle graph C_3 with a common vertex and is isomorphic to friendship graph F_2. *Friendship graph* F_n is a planar undirected graph with $2n + 1$ vertices and $3n$ edges. It is constructed by joining n copies of cycle graph C_3 with a common vertex. The *windmill graph* $W_d(k,n)$ is an undirected graph constructed for $k \geq 2$ and $n \geq 2$ by joining n copies of complete graph K_n at a shared universal vertex. A *diamond graph* is a planar undirected graph with 4 vertices and 5 edges. It consists of a complete graph $K_4 - \{e\}$. The *Peterson graph* is an undirected graph with 10 vertices and 15 edges. The Tadpole graph also called a dragon graph is the graph obtained by joining a cycle graph C_m to a path graph P_n with a bridge.

The jump graph $J(G)$ of a graph G is defined as that graph whose points are the lines of G and where two points of $J(G)$ are adjacent if and only if the corresponding lines of G are independent. The cocktail Party graph I_n is the graph consisting of two rows of paired points in which all but the paired rows are connected with a graph line. The Lollipop graph consisting of a complete graph of m points and path graph on n points, connected with a bridge. This motivated us to define a new parameter chromatic domination number of square of a graph. The *square of a graph* is obtained by adding new edges between every two vertices having distance two. The chromatic number has application in Time Table Scheduling, Map coloring, channel assignment problem in radio technology, town planning, GSM mobile phone networks etc. When we apply domination parameter, there is an effective in Scheduling.

Theorem 1.1. For the complete graph $G = K_n$ $(n \geq 4)$, $\gamma_\chi(K_n) = n$.

Theorem 1.2. For the graph $G = K_n - \{e\}$ $(n \geq 4)$, $\gamma_\chi(K_n) = n - 1$.

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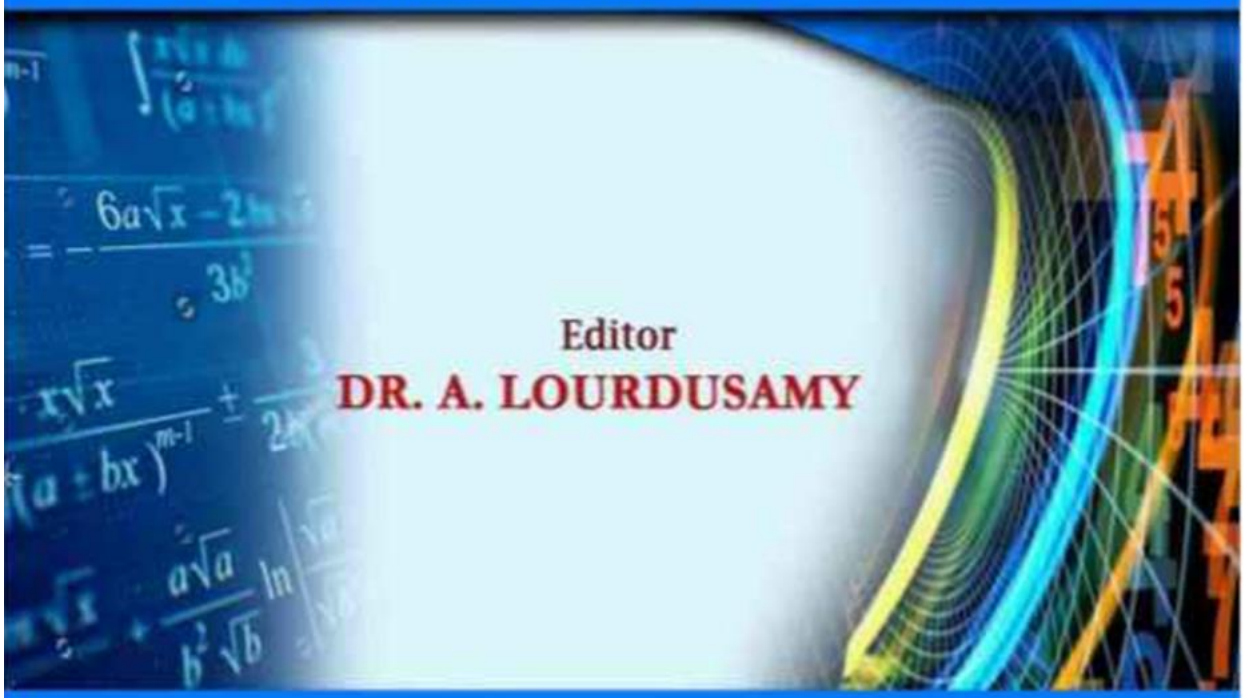

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THE FORCING STEINER DIMENSION OF A GRAPH

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Abstract

Let $G = (V, E)$ be a simple graph. For an ordered set $W = \{w_1, w_2, \ldots, w_k\}$of vertices and a vertex$v$ in a connected graph G, the Steiner metric representation of v with respective to W is the k-vector$s(v/W) = (d_1(v), d_2(v), \ldots, d_k(v), d_{1,2}(v), d_{1,3}(v), d_{1,2,\ldots,k}(v))$, where $d_{i_1,i_2,\ldots,i_j}(v)$represents the Steiner distance$d\left(\{v, w_{i_1}, w_{i_2}, \ldots, w_{i_j}\}\right)$. The set W is called a Steiner resolving set for G if distinct vertices of G have distinct Steiner metric representations. A Steiner resolving set of minimum cardinality is called the Steiner metric dimension of G and is denoted by $\dim_s(G)$. Let Wbe aminimum Steiner resolving setof G. A subset $T \subseteq W$ is called aforcing subset for Wif $W$is the unique minimum Steiner resolving set containing T. A forcing subset for $W$of minimum cardinality is a minimum forcing subset of W. The forcing Steiner dimension number of Wdenoted by $f_{dims}(W)$ is the cardinality of a minimum forcing subset of W. The forcing Steiner dimension number of G, denoted by $f_{pign}(G)$, is $f_{dims}(G) = \min\{f_{dims}(W)\}$, where the minimum is taken over all minimum Steiner resolving sets Win G.The forcing Steiner dimensions of some well-known graphs are determined. Some general properties satisfied by these concepts are studied. It is shown that for all integers a, b with $0 \leq a \leq b$ and $b \geq 1$, there exists a nontrivial connected graph G with $f_{dims}(G)$ and $\dim_s(G) = b$ if and only if $\{a, b\} \neq \{0, 1\}$.

Keywords: Steiner distance, Steiner resolving set, Steiner dimension, forcing Steiner dimension.

AMS Subject Classification: 05C12.

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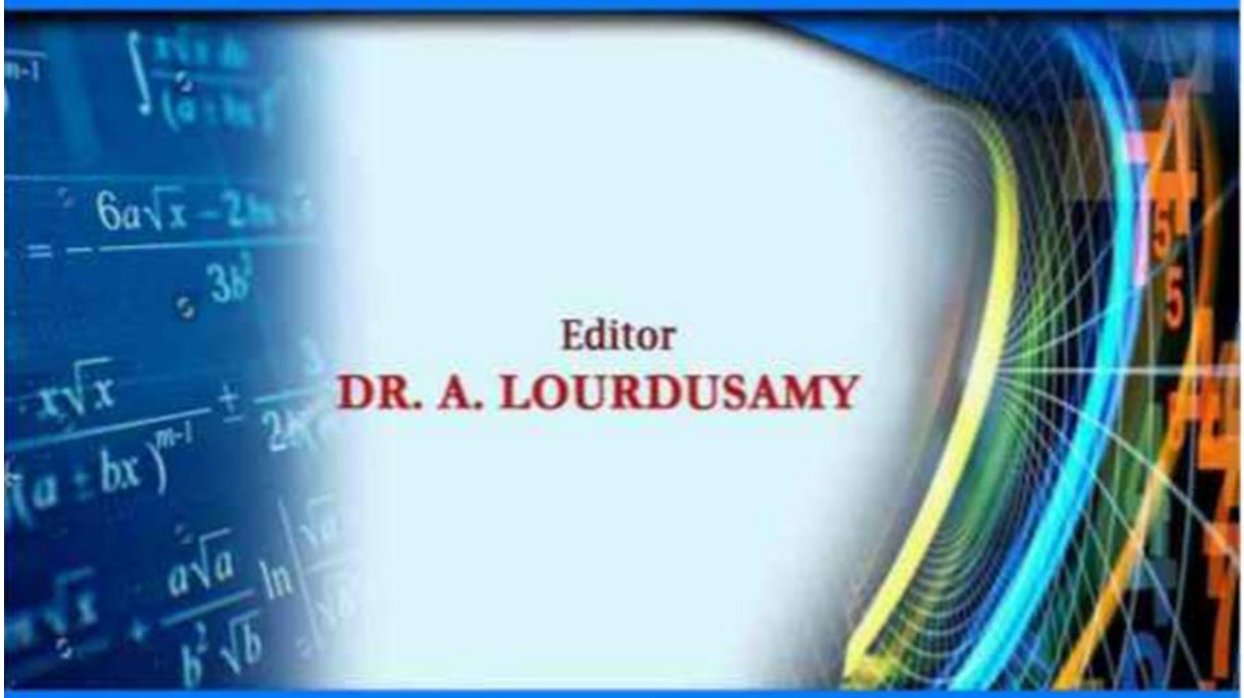

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The Steiner Global Domination Number of Total Graph and Middle Graph of a Graph

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Abstract

The total graph $T(G)$ of a graph G is a graph such that the vertex set of $T(G)$ corresponds to the vertices and edges of G and two vertices are adjacent in $T(G)$ if and only if their corresponding u_1 element are either adjacent or incident in G. A connected graph G has a middle graph $M(G)$ whose vertex set is $V(G) \cup E(G)$, if two points are close together, they must be neighboring edges of G or one must be a point of G and the other an edge incident with it. In this article, we studied the Steiner global domination number of total graph and middle graph of a graph.

Keywords: Steiner and Steiner global domination number, Steiner number, Total graph, Middle graph.

AMS Subject Classification: 05C12, 05C69.

1.Introduction

Let $G = (V, E)$ be a simple undirected connected graph. The *order* and *size of* G are stand for n and m respectively. The *neighbors* of a vertex x are the vertices that are adjacent to x, it is denoted by $N(x)$. The number of edges that are incident with a vertex's degree of x in a graph G is represented by the symbol $deg_G(x)$. A point $x \in V$ in a connected graph G is claimed to be a *universal vertex* of G if $deg_G(x) = n - 1$. For any set S of vertices of G, the *induced subgraph* $G[S]$ is the maximal subgraph of G with vertex set S. A vertex $x \in G$ is said to be *extreme* if the $G[N(x)]$ is complete.

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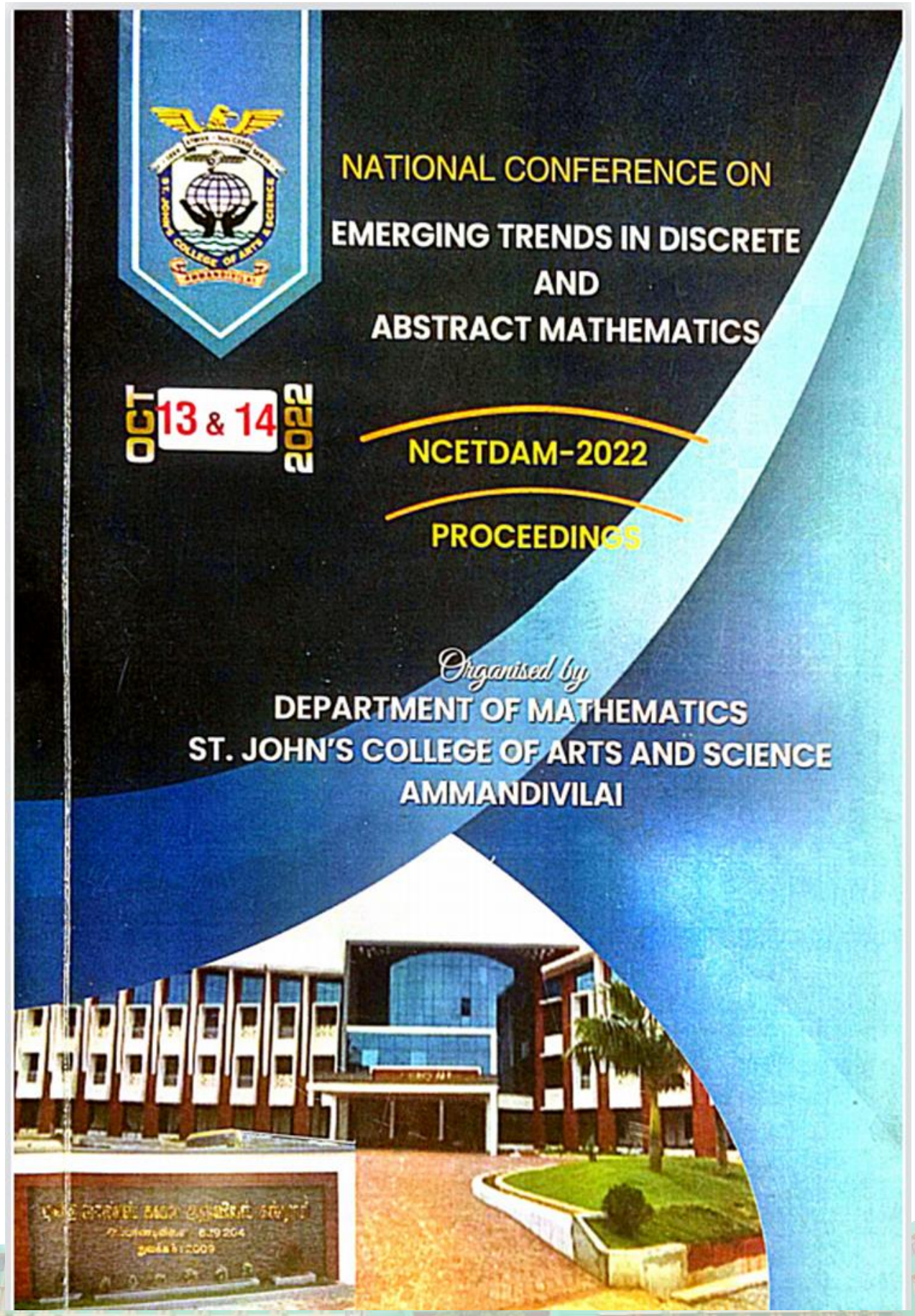
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- Cari Friedrich Gauss

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TOTAL CERTIFIED DOMINATION NUMBER OF SOME LADDER AND SPLITTING GRAPHS

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ABSTRACT

The total dominating set is said to be total certified dominating set if every vertices in D has zero or at least two neighbors in $V(G) - D$. The minimum cardinality taken over all the total certified dominating set is called the total certified domination number and is denoted by $\gamma_{tcer}(G)$. In this paper the total certified domination number is computed for corona of some ladder graphs like closed ladder, open ladder, triangular ladder, slanting ladder and splitting of some standard graphs.

Keywords: Domination, Total domination number, Total certified domination number.

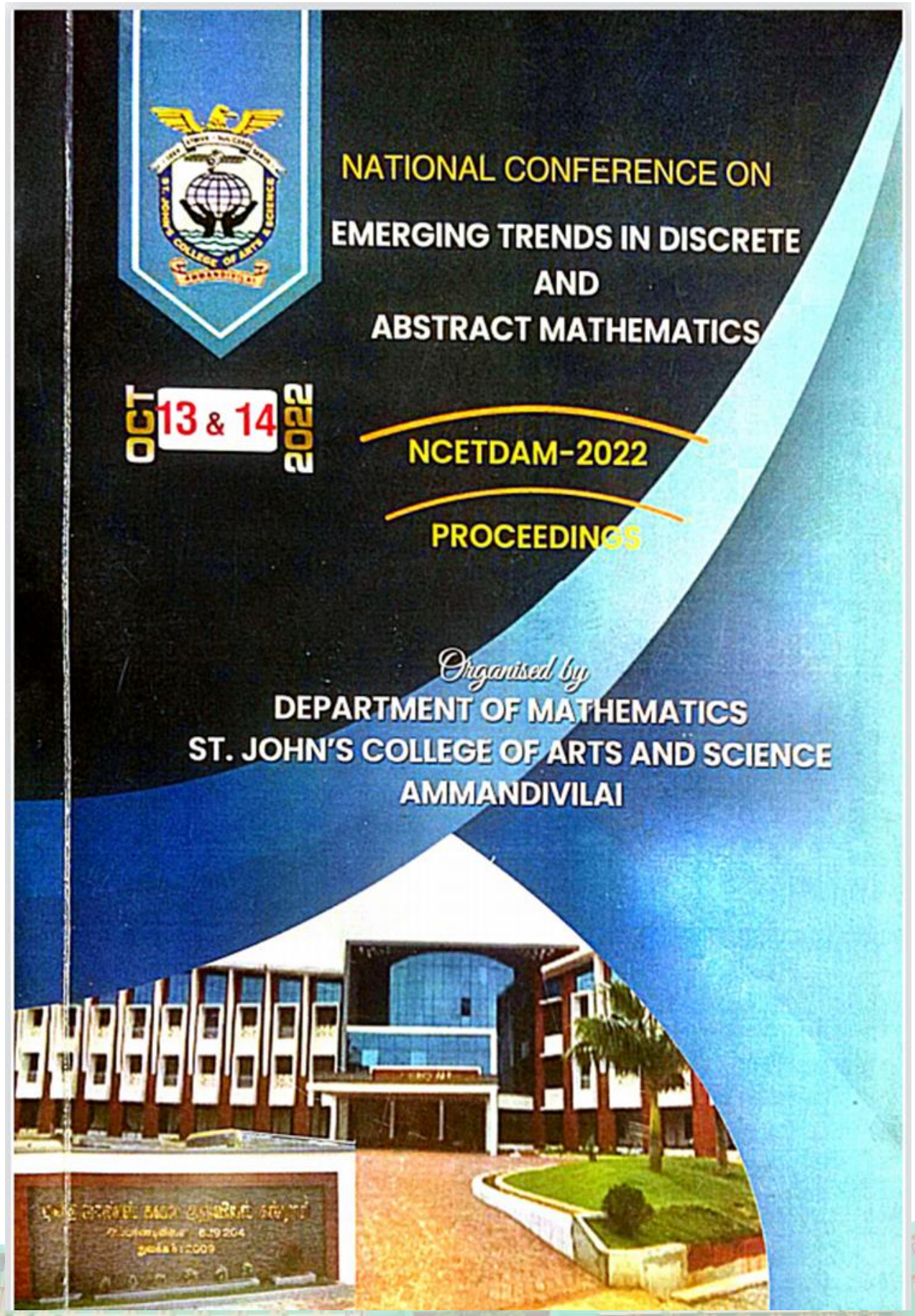
AMS Subject Classification : 05C40.

INTRODUCTION

Let $G = (V, E)$ be a finite, undirected graph without loops and multiple edges. A subset D of V of a non trivial graph G is called a dominating set of G if every vertex in $V(G) - D$ is adjacent to atleast one vertex in D. The domination number $\gamma(G)$ of G is the minimum cardinality taken over all dominating set in G.

A dominating set D of a graph G is said to be certified dominating set if every vertex in D has either zero or atleast two neighbors in $V(G) - D$. A dominating set D is said to be total dominating set if $\langle D \rangle$ has no isolated vertices. The minimum cardinality taken over all total dominating set is called the total domination number and is denoted by $\gamma_t(G)$.

The concept of total certified domination number of graphs was introduced by V.G.Bhagavathi Ammal and A.Janani in 2019 [2]. A **corona product** G o H of two graphs G and H is obtained by taking one copy of G and $|V(G)|$ copies of H and by joining each of the i^{th}copy of H to the i^{th} vertex of G where $1 \leq i \leq |V(G)|$. A **closed** ladder graph $L_n, n \geq 2$ is obtained from two copies of the paths of length $n-1$ with vertex set $V(G) = \{u_i, v_i : 1 \leq i \leq n\}$ and edge set $E(G) = \{u_i u_{i+1}, v_i v_{i+1} : 1 \leq i \leq n-1\} \cup \{u_i, v_i : 1 \leq i \leq n\}$. An **open ladder** graph $O(L_n), n \geq 2$ is a ladder graph with 2n vertices and is obtained from the two paths of length $n-1$ with $V(G) = \{u_i, v_i : 1 \leq i \leq$ n and $E(G) = \{u_i u_{i+1}, v_i v_{i+1} : 1 \leq i \leq n-1\} \cup \{u_i, v_i : 2 \leq i \leq n-1\}$. **A triangulal** ladder graph $T(L_n)$, $n \geq 2$ is a graph obtained from a ladder graph $L_n = P_n \times P_2$ by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DOMINATION IN FUZZY MAGIC GRAPHS

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ABSTRACT

Let G= (V,τ,μ) be a Fuzzy Magic Graph. A graph G is said to be a **Dominating Fuzzy Magic Graph** if there is a v∈ F* then there exists a u∈ F such that $(i)\mu(u,v) < \min(\tau(u),\tau(v))$ for all v∈ F* and u∈ F. (ii) $\tau(u),\tau(v)+\mu(u,v)\leq 1$. In this paper, Dominating Fuzzy Magic Sets, Regular Fuzzy Magic Graph and Dominating Regular Fuzzy Magic Graphs are introduced and its basic characters are discussed.

Keywords:

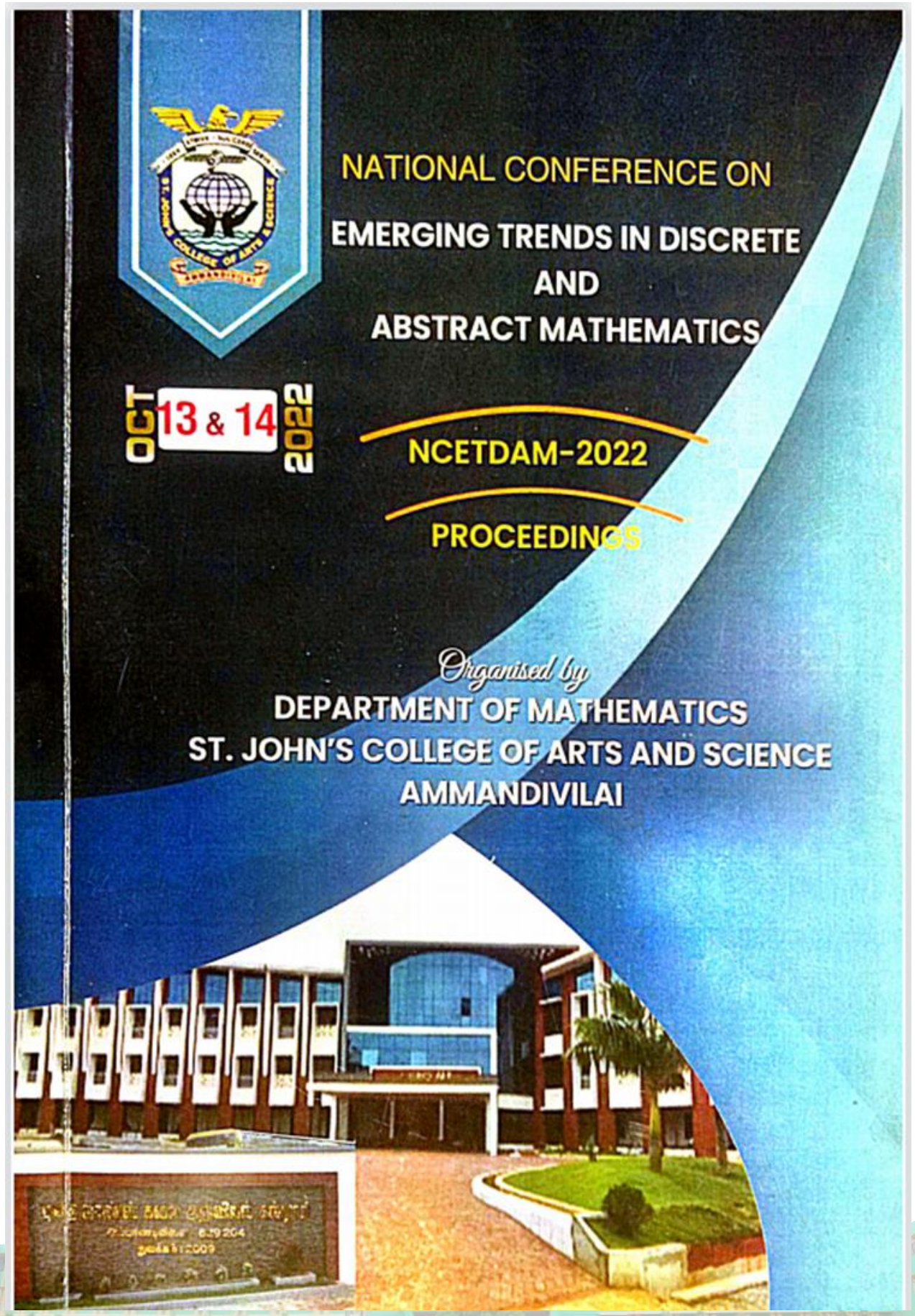
Dominating Fuzzy Magic Sets, Dominating Fuzzy Magic Number, Regular Fuzzy Magic Graph, Dominating Regular Fuzzy Magic Graph.

1. Introduction

In 1736, the concept of graph theory was first introduced by Euler. The concept of Domination in a recent year becomes a subject of interest for many researchers due to the immense application to other field. In 1973, Kaufmann gave the first definition of a Fuzzy Graph which was based on Zadeh's Fuzzy Relations. In 1975, Rosen field introduced the notation of Fuzzy Graph and several Fuzzy analogs of Graph theoretic concepts such as path, cycles etc. A Fuzzy Graph is the generalization of Crisp Graph. A Fuzzy Graph structure is an extension of a Fuzzy Graph.

2. Preliminaries

A subset D of V is said to be a **Dominating Set** of G if every vertex not in D is adjacent to at least one vertex in D. It is denoted by γ (G). Let U and V be two sets. Then ρ is said to be a **Fuzzy Relation** from U into V if ρ is a Fuzzy Set of U x V. Let G* be a simple graph. Then $G=(\sigma,\mu)$ is called a **Fuzzy Graph** on G* if $\sigma : V\rightarrow [0,1]$ and $\mu : E\rightarrow [0,1]$ for all xy ∈ E, we have $\mu(x,y)\leq \min(\sigma(x),\sigma(y))$. The Fuzzy Set $\sigma(V)$ is called the **Fuzzy Vertex Set** of G and $\mu(E)$ is called the **Fuzzy Edge Set** of G. A Fuzzy Graph G = (V,σ,μ) is called a **Fuzzy Magic Graph** if there are two bijective functions $\sigma : V\rightarrow [0, 1]$ and $\mu : VxV\rightarrow [0,1]$ with restricted the conditions $\mu(u,v) < \sigma(u) + \sigma(v) \leq 1$ for all u,v ∈ G.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- Cari Friedrich Gauss

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EDGE DOMINATION AND EDGE COVER IN CLUSTER HYPERGRAPHS ANDK -UNIFORM HYPERTREE

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STRACT

A hypergraph H is an ordered pair $(V(H), E(H))$where V(H) is a non-empty finite set $E(H)$ is a family of non-empty subsets of $V(H)$ such that their union equal to $V(H)$. The ...ent of $V(H)$ are called vertices and the members of $E(H)$ are called the edges of ...ergraph H. Edge domination and edge cover in cluster hypergraphs and also the edge ...ination number and edge cover number of k −uniform hypertree have been discussed in ... paper.

...ywords: Edge domination, Edge cover, Cluster hypergraph, (m, n) −Uniform cluster ...ergraph, Complete cluster hypergraph, k −Uniform hypertree.

...S Subject Classification: 05C65.

...troduction

A graph is a pictorial representation of a set of objects where some pairsof objects are ...nected by edges. In 1878, Sylvester introduced the term graph. In 1736, Euler has written ... first paper in graph theory also he settled a famous unsolved problem known as ...igsberg Bridge problem. The term domination set and domination number was ...oduced by Oystein ore [8]. The domination was studied from 1950s onwards, but the rate ...esearch on domination significantly increased in the middle of 1970. Mitchell and ...keniemi introduced the concept of edge domination [7]. The Hypergraph is a ...eralization of a graph in which edge can connect any number of vertices. In 1973 Berge ...oduced the concept of hypergraphs [2]-[3]. Edge dominating set and edge domination ...ber have been explored by several authors. The concept of edge domination requires the ...ency relation among the edges of a graph. The same relation is also available in ...rgraph. D.K. Thakkar and V.R Dave introduced the concept of edge domination and ... cover in hypergraphs [4]-[5]. An cluster hypergraph are introduced to generalize the ...pt of hypergraph, where cluster nodes are allowed. The cluster hypergraph was ...oduced by S.Samantha in 2020 [10].

...liminaries

...inition 2.1. Let H be a hypergraph and $S \subseteq E(H)$ then S is said to be an **Edge ...inating Set** of H if for every $e \in E(H) - S$ and there is some f in S such that e and f ...djacent edges. The edge dominating set with minimum cardinality is called a **Minimum**

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Zagreb matrix and Energy of a 2-Uniform T_2 Hypergraph

Sujitha.S & Sharmila.D

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Abstract

Let H be a 2-uniform T_2 hypergraph with $n \geq 4$. The Zagreb matrix of H denoted by Z(H) is defined as the square matrix of order n, whose $(i,j)^{th}$ entry is d_i+d_j if x_i and x_j are adjacent and zero for other cases. The Zagreb energy of the 2-uniform T_2 hypergraph is sum of the absolute values of the eigenvalues of Z(H). It is shown that $ZE(H) \leq n(n-1) + \delta(3\Delta - 1) + \sqrt{\frac{\delta-1}{2m}}$.

Keywords:T_2 hypergraph,Zagreb matrix,Zagreb energy.

Mathematics Subject Classification
: 05C65

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The Forcing Geodetic Cototal Domination Number of a Graph

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Abstract:-

Let S be a geodetic co-total domination set of G. A subset $T \subseteq S$ is calleda forcing subset for S if S is the unique minimum geodetic cototal dominationset containing T. The minimum cardinality T is the forcing geodetic cototaldomination number of S is denoted by $f_{\gamma gct}(S)$, is the cardinality of a minimumforcing subset of S. The forcing geodeticcototal domination number of G,denoted by $f_{\gamma gct}(S)$, is $f_{\gamma gct}(G) = min\{f_{\gamma gct}(S)\}$, where the minimum is takenover all γ_{gct}-sets S in G. Some general properties satisfied by this concept arestudied. It is shown that for every pair a, b of integers with $0 \leq a < b, b \geq 2$,there exists a connected graph G such that $f_{\gamma gct}(G) = a$ and $\gamma_{gct}(G) = b$. Where$\gamma_{gct}(G)$ isthe geodetic cototal dominating number of G.

Keywords:-

Forcing, geodetic set, cototal domination,geodetic cototaldomination,forcinggeodeticcototal domination.

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Neutrosophic Transportation Problem

Mahizha J.C[1], M. Immaculate Mary[2]
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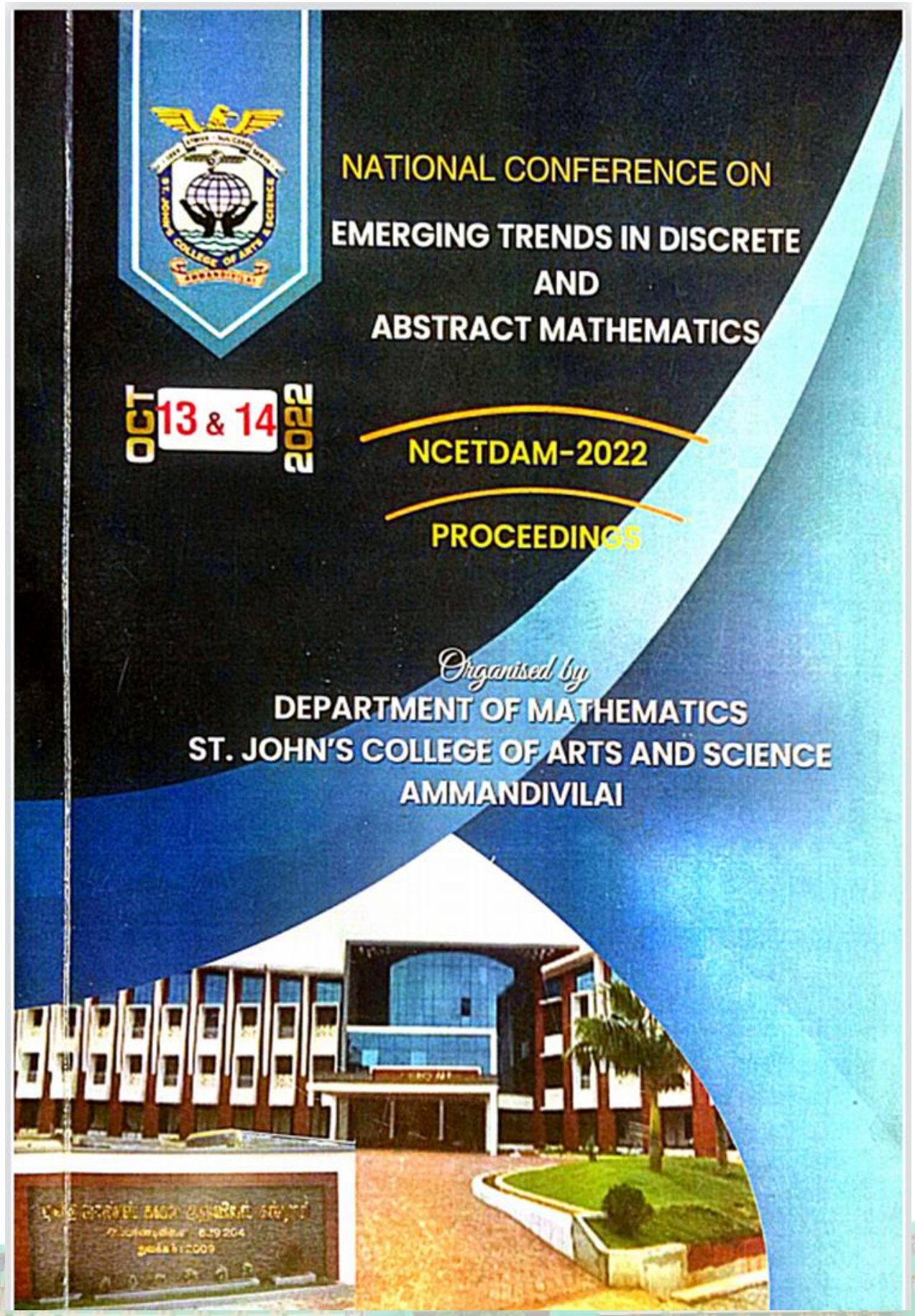
Abstract

In real-world Transportation problems have uncertain and uncontrolled parameters as the transportation cost, supply and demand are in fuzzy quantities. Therefore, neutrosophic sets have been introduced as an extension of fuzzy sets to represent uncertainty, inconsistent and indeterminate information. The Interval valued Neutrosophic fuzzy sets are characterized by an interval valued membership function, interval valued indeterminacy function, and interval valued non-membership function, which is a more realistic way of expressing the parameters in real life problems. In this paper, the researcher presents the optimal solution of an interval valued neutrosophic transportation problem by using triangular interval valued neutrosophic number. The problem has been solved by evaluating score function technique. Hence the uncertainty in real world problems can be solved in an optimized way. The new method has been demonstrated with numerical example.

Keywords: Interval valued neutrosophic transportation problem, Triangular interval valued neutrosophic number.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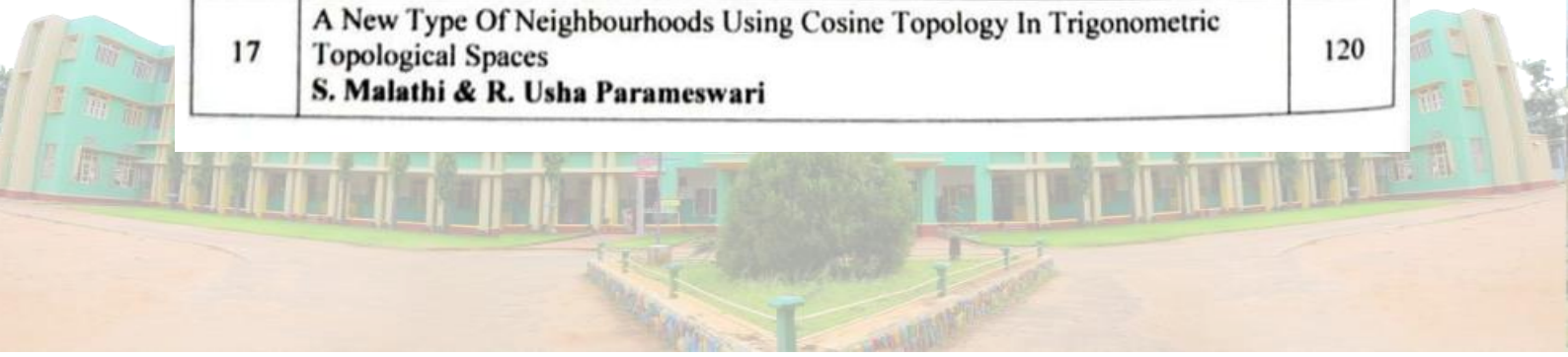

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THE CONNECTED OPEN GEODETIC VERTEX COVERINNUMBER OF A GRAPH

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ABSTRACT

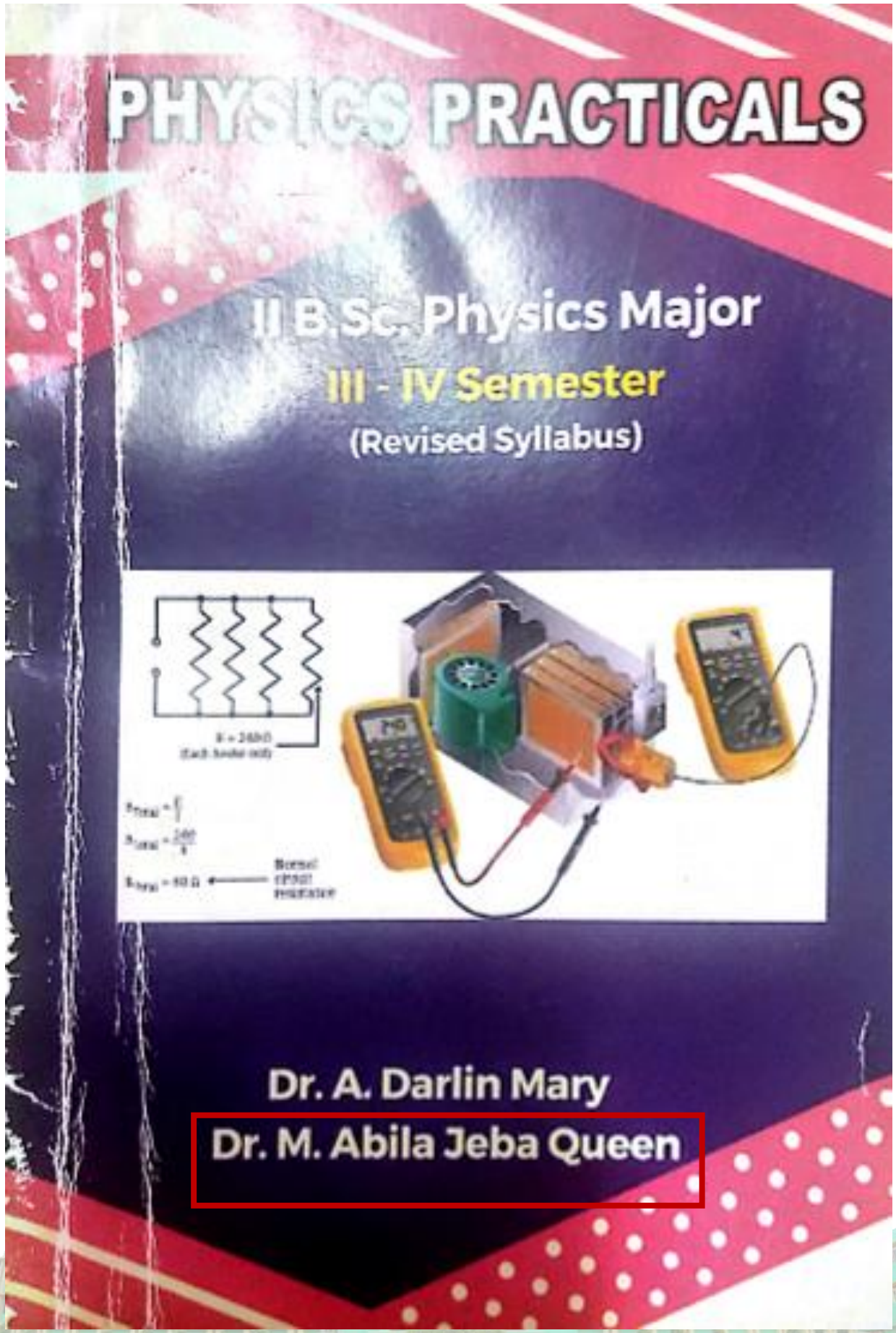
A subset S of vertices of a connected graph G is called an open geodetic vertex cover of G if S serves both as an open geodetic set and a vertex cover of G. An open geodetic vertex cover having smallest number of vertices is called a minimum open geodetic vertex cover of G and this number is called the open geodetic vertex covering number $og_{\alpha}(G)$ of G. A minimum open geodetic vertex cover of G is called an og_{α}-set of G. A connected open geodetic vertex cover of G is an open geodetic vertex cover S such that the subgraph induced by S is connected. The minimum cardinality of a connected open geodetic vertex cover of G is the connected open geodetic vertex covering number of G and it is denoted by $og_{ac}(G)$. A connected open geodetic vertex cover of cardinality $og_{ac}(G)$is called an og_{ac}-set of G. Some general properties satisfied by connected open geodetic vertex cover are studied. The connected open geodetic vertex covering number of some standard graphs are determined. Connected graphs of order n with connected open geodetic vertex covering number 2 and 3 are characterized. A few realization results are given for the parameter $og_{ac}(G)$.

AMS Subject Classification (2010): 05C12

Introduction

For basic graph theoretic terminology and basic definitions not given here we refer to Harary [9]. For any two vertices x and y in a connected graph G, the distance $d(x,y)$ is the length of a shortest x–y path in G. An x–y path of length $d(x,y)$ is called an $x-y$ geodesic. A vertex v is said to lie on an $x-y$ geodesic P if v is a vertex of P including the vertices x and y. For a vertex v of G, the eccentricity $e(v)$ is the distance between v and a vertex farthest from v. The minimum eccentricity among the vertices of G is the radius, r and the maximum eccentricity is its diameter, d. A vertex v is a simplicial vertex or an extreme vertex of G if the subgraph induced by its neighbors is complete.

Let $I[u,v]$ denote the set consisting of u, v, and all the vertices lying on a $u-v$ geodesic and for $S \subseteq V(G)$, $I[S]$ denote the union of all $I[u,v]$ for $u, v \in S$. A set S of vertices is said to be a geodetic set if $I[S] = V(G)$. The geodetic number $g(G)$ of G is the minimum cardinality of its geodetic sets and any geodetic set of cardinality $g(G)$ is a minimum geodetic set or a g-set of G. The geodetic number of a graph was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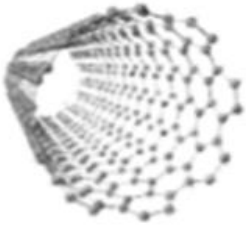

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OP - 26

Synthesis and Characterization of Vanadium Pentoxide Nanoparticles using Hydrothermal method

A.Remila and Dr.V.Shally

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Abstract

Vanadium pentoxide nanoparticles were synthesized by surfactant assisted hydrothermal method. The synthesized nanoparticles were characterized by using XRD, FESEM with EDX, TGA-DTA, UV-DRS and PL technique. The main objectives of the study is to produce good quality of vanadium pentoxide nanoparticles at a quick synthesis time. XRD analysis shows that samples contain the Orthorhombic structure with the average crystallite size of 45 nm. FESEM image also indicated that high-porosity structure can be observed on the sample surface when the annealing temperature is 400^{0}C. The morphology of the synthesized nanoparticles of vanadium pentoxide is observed to be nanoflakes due to the annealing temperature of 400^{0}C. SEM images revealed that V_2O_5 nanoparticles are distributed randomly and are agglomerated having good crystalline morphology. The energy gap is found to be 3.6 eV when the sample was annealed at 400^{0}C, while it is decreased to 3 eV when the sample was annealed at 600^{0}C. The absorption bands of V_2O_5 nanoparticles show a blue shift due to the quantum confinement effect of developed nanoparticles. PL spectra were recorded for as prepared V_2O_5 nanoparticles at excitation wavelength of 280 nm. The thermal treatment of V_2O_5 shows that the nanoparticles are highly stable at 700^{0}C, where as the weight loss is due to the loss of water molecules. It may be used in photocatalytic and electro chemical applications.

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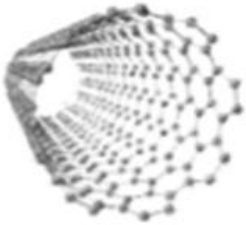

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PP -

Chitosan extracted from collected Fresh Shrimp shell and analyzing its solubility in various Acids

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Abstract

The shrimp shell waste from industry collected were subjected to chemical method of extracting the natural polymer named "Chitosan". In this method demineralization and deproteinization was the initial process to extract the chitin by removing mineral, protein content and impurities. Degree of deacetylation is the final process that converts the chitin to chitosan, plays a major role in the solubility of chitosan. The obtained chitosan is insoluble in highly acidic solvents; however, in low pH acids, it becomes soluble, can swell, and is only partially soluble. Meanwhile the insoluble chitosan calcined at 200 degrees be soluble in HCl, be applied in synthesis of nanoparticle. The solubility of chitosan can be improved by applying mild temperature in solvents. The cation of chitosan reacts with the anion of dilute acids shows improved solubility and binding. Chitosan soluble in acetic acid can be a suggested reaction for the synthesis of nanoparticle which can be utilized in biomedical applications, in agriculture and water treatments.

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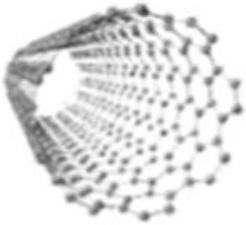

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GROWTH AND CHARACTERISATION OF NEW NATURAL CELLULOSIC ROOT FIBRES OF ZEA MAYS

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Abstract

"Go green and Earth will be clean" is the current trend of the modern world. This mantra drives scientists and engineers to find new materials based on natural fibres. With this motto,the present work concentrates in the growth and characterisation ofthe roots fibres of Zea mays (Zm) plants grown by Hydroponic method. Thedried untreated and alkali treated root fibres are sent to various structural, morphological, thermal, elemental and mechanical studies such as PXRD, FTIR, SEM-EDAX, TGA-DTA, CHNS, Chemical Analysis and Tensile Strength analysis. From PXRD, it is found that the crystallinity index of both the samples are high and the crystallite size is found in the range of 1.5 – 2.5 nm. FTIR studies clarifies the different vibrational groups associated with the fibre samples. SEM images show that the surface roughness increases for the chemically treated samples so that it can be used as efficient reinforcement in polymer composites. The diameter of the fibre samples is found to be between 392 – 414 µm. Both the raw and treated Zm fibres have the high amount of Carbon (C) and Oxygen (O) than the other elements as obtained from EDAX spectrum. From TGA-DTA studies, it can be noticed that the natural fibre samples are stable upto a considerable limit.CHNS studies show that Carbon content is high when compared to other elements such as Hydrogen, Nitrogen and Sulphur. Chemical analysis indicates the presence of high cellulose content in both the samples. The density of the fibres is foundto be 0.3 – 0.6 g/cc. The tensile strength of the root fibres is within 10 – 13 MPa. Thus, these fibres can be used in powdered form than continuous form as reinforcement in natural rubber or epoxy composites

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Analytical Properties of Green Synthesized Nano Particles using *Anisomeles indica* and *Amaranthus viridis*: A Comparative Study

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Abstract: In this modern era, Nanotechnology has gained more attention due to its potential properties which contribute novel innovations in many fields. Nanotechnology deals with production of materials in nanoscale dimensions infields like medicine, biotechnology, photonics, biomedical areas, nano-diagnosis, luminescence *etc.*, as nanometer-sized particles possess good structural, optical and electronic properties. Nanoparticles are the building block of nanotechnology which deals with designing, developing and application of devices-structure and particles in nanoscale. The synthesis of nanoparticles is the most demanding and thrust area of research in nanotechnology. Green synthesis of nanoparticles has garnered wide interest among researchers due to inherent features, eco-friendliness and cost effectiveness. When compared to physical and chemical methods, this green approach eliminates the use of toxic chemicals. This research paper proposes a comparative study of green synthesized zinc oxide nanoparticles using leaf extracts of *Anisomeles indica* and *Amaranthus viridis*. The synthesized nanopowder was characterized using analytical techniques such as UV-visible spectroscopy and Fourier Transform Infrared spectroscopy (FTIR). In addition, the UV and IR results of the two species were analyzed and compared.

Keywords: Anisomeles Indica, Amaranthus viridis, UV-Visible, FTIR, Zn oxide nanoparticles.

1. Introduction

Nanotechnology is a fast growing field that covers the basic understanding of physical, chemical and biological properties in subatomic levels with potential applications in fields ranging from electronics to cosmetics. This field tells the unique properties of materials in the nanoscale in all fields of science to develop new capabilities and properties. Nanotechnology is deployed in all fields such as engineering, medicine, environmental, pharmaceutical, biotechnology, water purification, sensors, electronics, catalysis *etc*[1]. In the size determination of nanoparticles, the morphology and crystalline structure influences their magnetic, catalytic, optical and electronic properties.[2]

Based on the size and shape of nanoparticles, they possess certain therapeutic properties[3]. Spherical shaped nanoparticles possess high antibacterial activity and hence it is expected to have more extensive applications in food packing industry to prevent bacterial contaminations.[4] In some nanoparticles, bactericidal potential depends on band gap energy, due to large surface area and increased grain size while, the smaller particle size hold enormous potential for use in cosmetics, nutraceutical and pharmaceutical industries[5]. Zinc oxide possesses large surface area, high reactivity, high binding energy and it is safe to human as it produces no allergic reactions when tested for curing various diseases. Zinc Oxide nanoparticles are more stable and have more photo-catalytic activity depending on the

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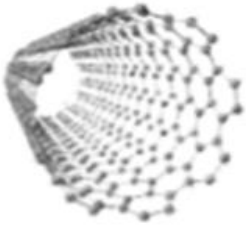

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OP - 17

The influence of pH on the complexation of cyclodextrin and the solubility of stigmasterol

K.Francy, J.Premakumari and Lizt Roselet

Abstract

Stigmasterol, a secondary metabolite has been reported to possess antimicrobial, cytotoxicity, anti-oxidant and anti-inflammatory properties. Its effectiveness is restricted due to its poor solubility. Cyclodextrin complexation and pH adjustments have been reported as useful tools to increase the solubility of drug. The aim of this study was to investigate the influence of cyclodextrin pH modulation on the overall solubility of stigmasterol thereby its bioavailability. Inclusion complex was synthesised by solvent evaporation method and characterised by UV, FTIR, ^1H NMR and DSC studies. It was found that the solubility of stigmasterol significantly increased with decreasing pH.Complexation with HPα-CD accompanied by pH modulation could be a suitable strategy for enhancing the aqueous solubility and bioavailability of stigmasterol in the pharmaceutical and food industries.

Key words: Cyclodextrin, Stigmasterol, Inclusion complex

Introduction

Sterols are the secondary metabolites (Luhata, L.P., Munkombwe, N.M., 2015) and are used as health-promoting constituent of natural food. Phytosterols are a group of steroidal alcohol that play a significant role in structural component in the cell membrane and play a role in membrane stability(Padmasri, G., Sarada, D.V.L., 2011).Stigmasterol exhibits a broad spectrum of pharmacological properties including antiosteoarthritic, hypoglycemic, anti mutagenic, antioxidant, anti inflammatory,(Ali et al) antimicrobial antidiabetic(Ayaz.M et al 2018), antigenotoxicity,(Bag B.G.2020) anti hypercholesterolemic, antitumor and cytotoxicity.(Aboobucker and Suza 2019). It also acts as a precursor in the synthesis of progesterone and as intermediate in the biosynthesis of estrogens, androgens and in the synthesis of Vitamin D_3 (Kaur et al) stigmasterol is shown to reduce blood cholesterol and thus lowering may reduce the rules of coronary heart disease(Osunokuton 2018).

The therapeutic effectiveness of this well-known phytosterol is restricted due to its poor bioavailability thus ultimately upon the solubility of those drug molecules. Solubility is one of the key parameters to achieve the desired concentration of drug in the systematic circulation to show the pharmacological response.To augment the aqueous solubility of lipophilic moieties, scientist have developed myriad of traditional and novel approaches.

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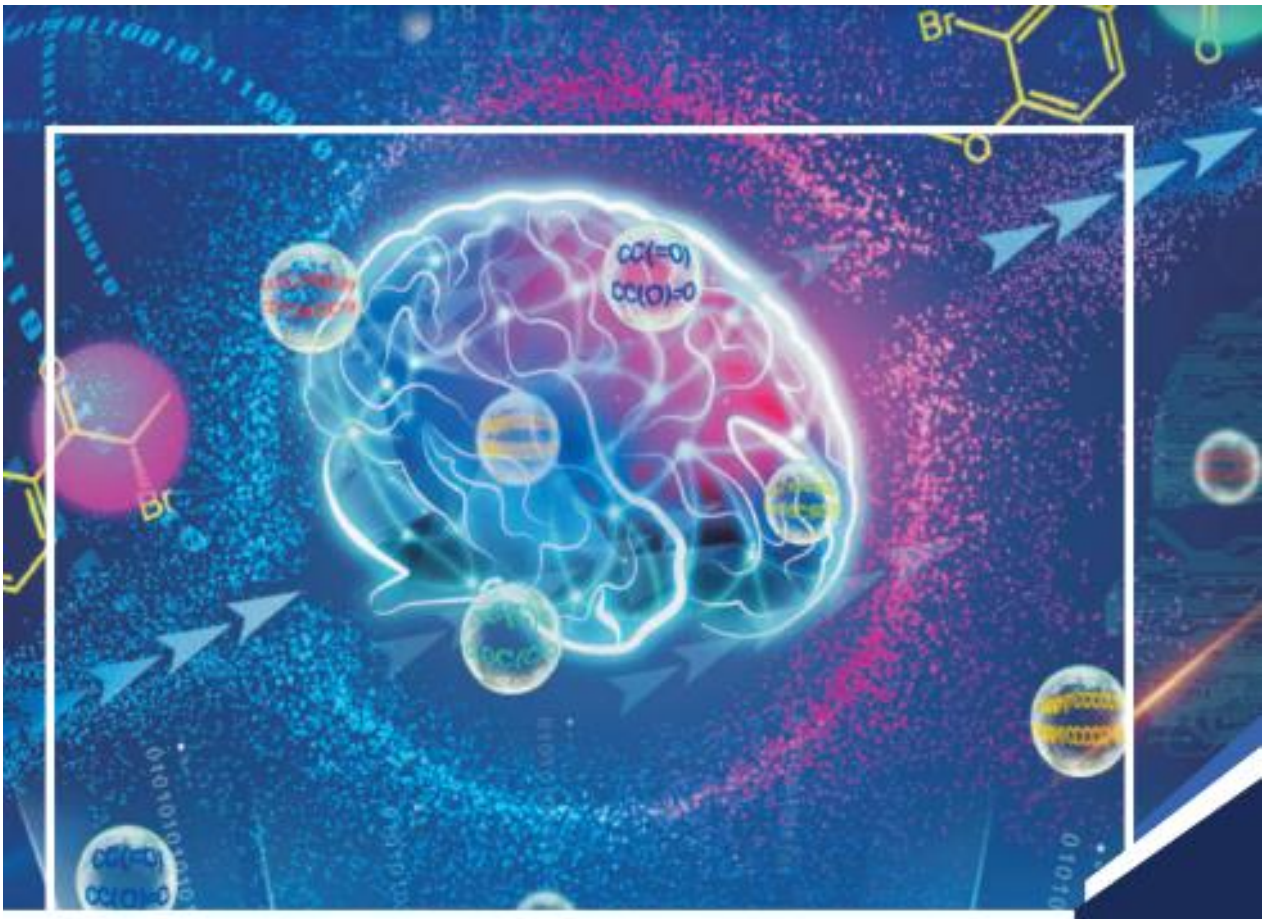

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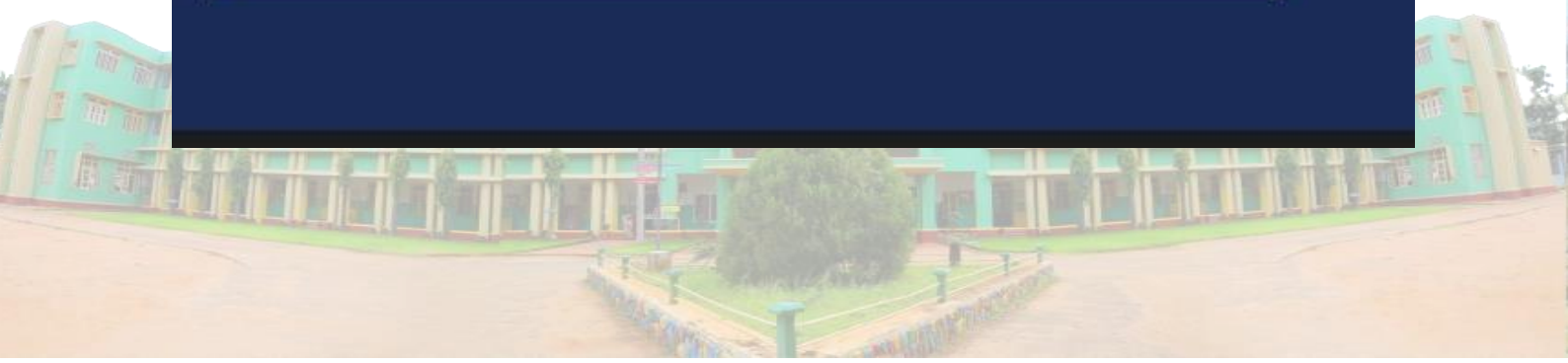

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19	Polymers for Probiotics Encapsulation **Sunija. A.J & Kumar. P.I**	OP-19	20

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5	Effect PH on The Magnetic and Optical Properties of GD Doped NICO Soft Magnetic Thin Film **T. Siva Sakthi Rani & P. Sathishkumar**	OP-5	26
6	Biosynthesis of Silver Nanoparticles using Vegetable and Fruit Peel Extract and their Biological Activities **Michael Benjamin, Marianthony Antilin Princela Ganesan Anushya, Vickramangrija Darsana& Ramasamy Mahesh**	OP-6	27
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OP-02

MASKING OF BITTERNESS OF ERYTHROMYCIN MALEATE BY A-CYCLODEXTRIN COMPLEXATION

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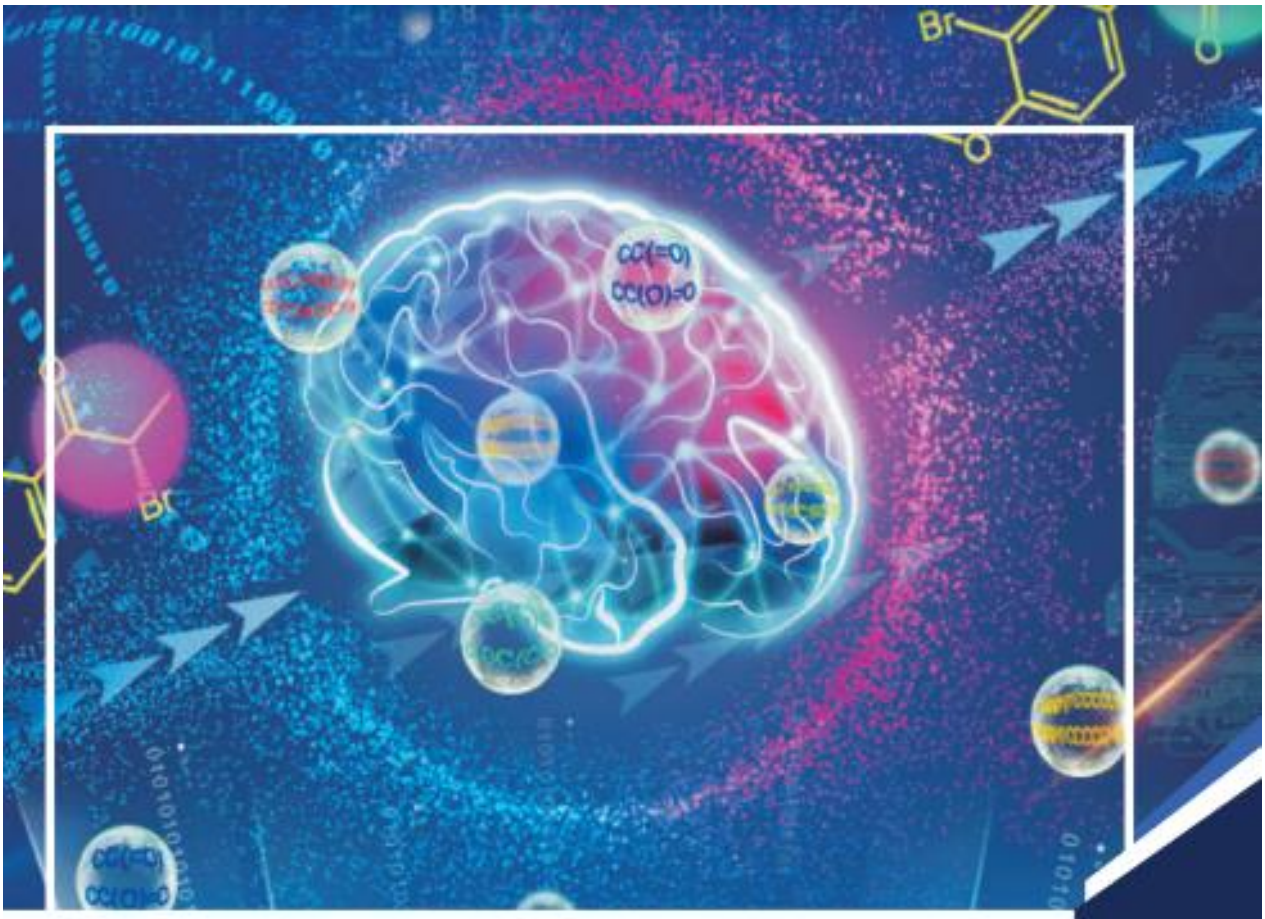
Abstract
Drugs having bitter tastes cause low patient compliance. Erythromycin maleate is one such drug with bitter taste. Many taste-masking techniques such as physical barrier coatings, chemical modification and sensory masking have been developed. Among chemical modification, the inclusion complexation of drugs with cyclodextrins can provide the effective bitter taste-masking effects without complicated formulation and/or delayed dissolution of drugs. Many drugs have bitter tastes, and the unpleasant taste can cause low patient compliance. It was reported that one of the reasons most frequently mentioned by patients for noncompliance was bitter taste of drugs. The inclusion complexation of bitter drugs is easy to construct and simultaneously provides the rapid dissolution of drugs Herein, we evaluate the taste-masking effects of **α**-cyclodextrin complexes with Erythromycin maleate in solution and the solid state. The inclusion complexes were characterized by spectrophotometric and spectrofluorimetric methods. The solid inclusion complex was characterized by ^{1}H NMR. The inclusion complexation with **α**-cyclodextrin improved the dissolution rate and also facilitated the suppression of the bitter taste of Erythromycin maleate.

Keywords: *Erythromycin maleate, compliance, **α**-cyclodextrin, inclusion complexation, dissolution rate.*



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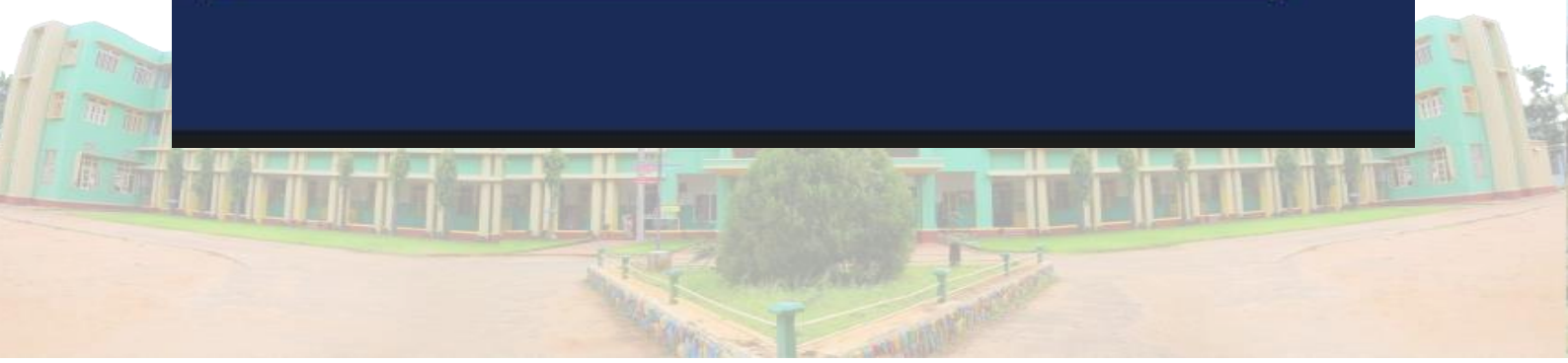

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OP-03

GREEN SYNTHESIS OF COBALT OXIDE NANOPARTICLES USING CUMIN, FENUGREEK, BLACK PEPPER AND THEIR ANTIMICROBIAL ACTIVITY

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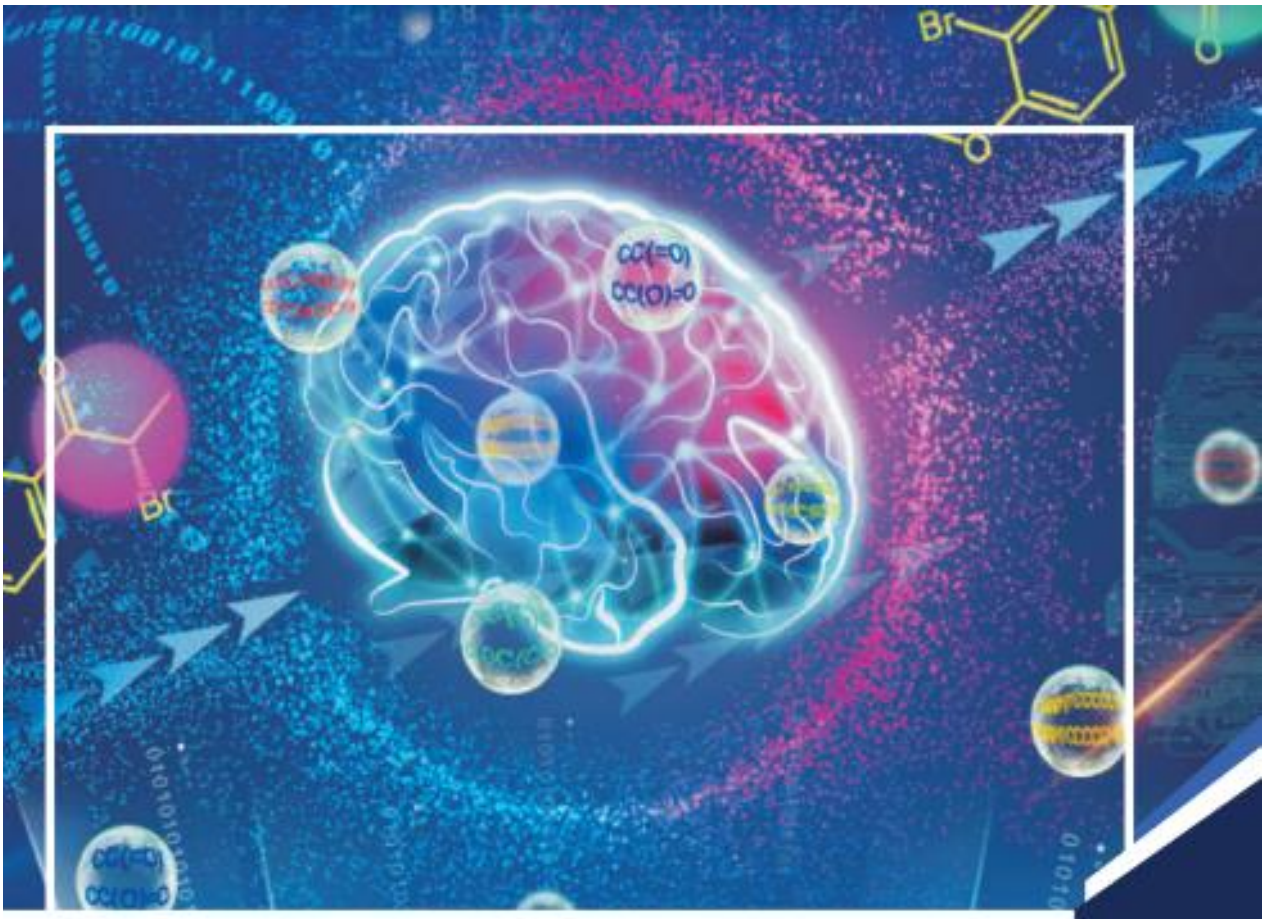
Abstract
The seeds of cumin, fenugreek, and black pepper were utilized to synthesize cobalt oxide nanoparticles. The fabrication of cobalt oxide nanoparticles with very well-defined dimensions brought out the result of the reduction of metal ions using seed extracts. X-ray powder diffraction, scanning electron microscopy, energy-dispersive X-ray, Fourier transform infrared and UV-visible spectroscopy techniques were used to analyze the synthesized nanoparticles. According to X-Ray Diffraction investigation, the particle size of the cobalt oxide nanoparticles is less than 10 nm. The produced cobalt oxide nanoparticles effectively resisted Escherichia coli bacteria. This approach does not require the use of harmful chemicals, high temperatures, high pressures, or energy sources. It is an eco-friendly method of creating cobalt oxide nanoparticles are easy to use and doesn't harm the environment.

Keywords: *Green synthesis, Cobalt oxide nanoparticles, Eco-friendly, Escherichia coli*



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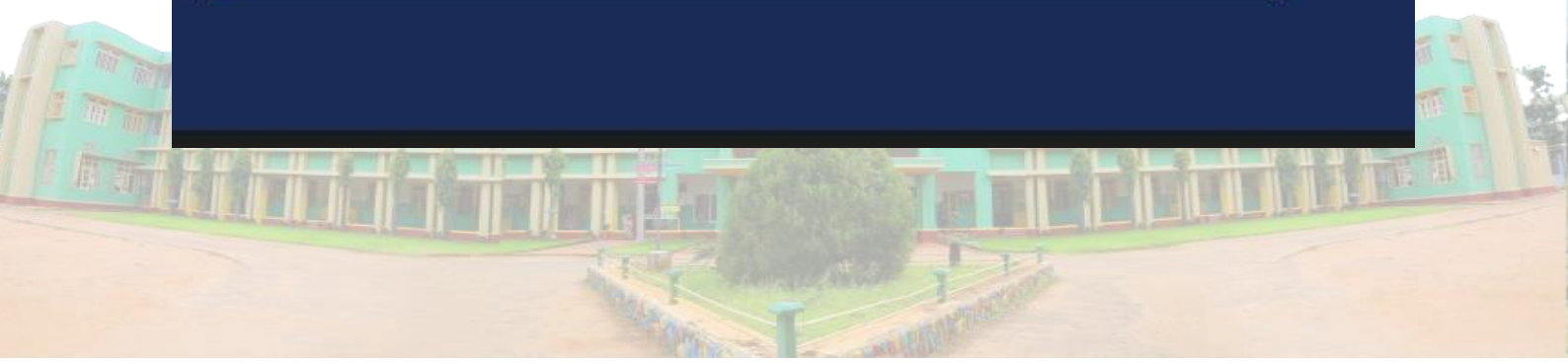

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OP-13

EVALUATION OF PHYTOCHEMICAL SCREENING, ANTIMICROBIAL, ANTIOXIDANT AND ANTIDIABETIC ACTIVITY OF ANDROGRAPHIS PANICULATA LEAF EXTRACTS

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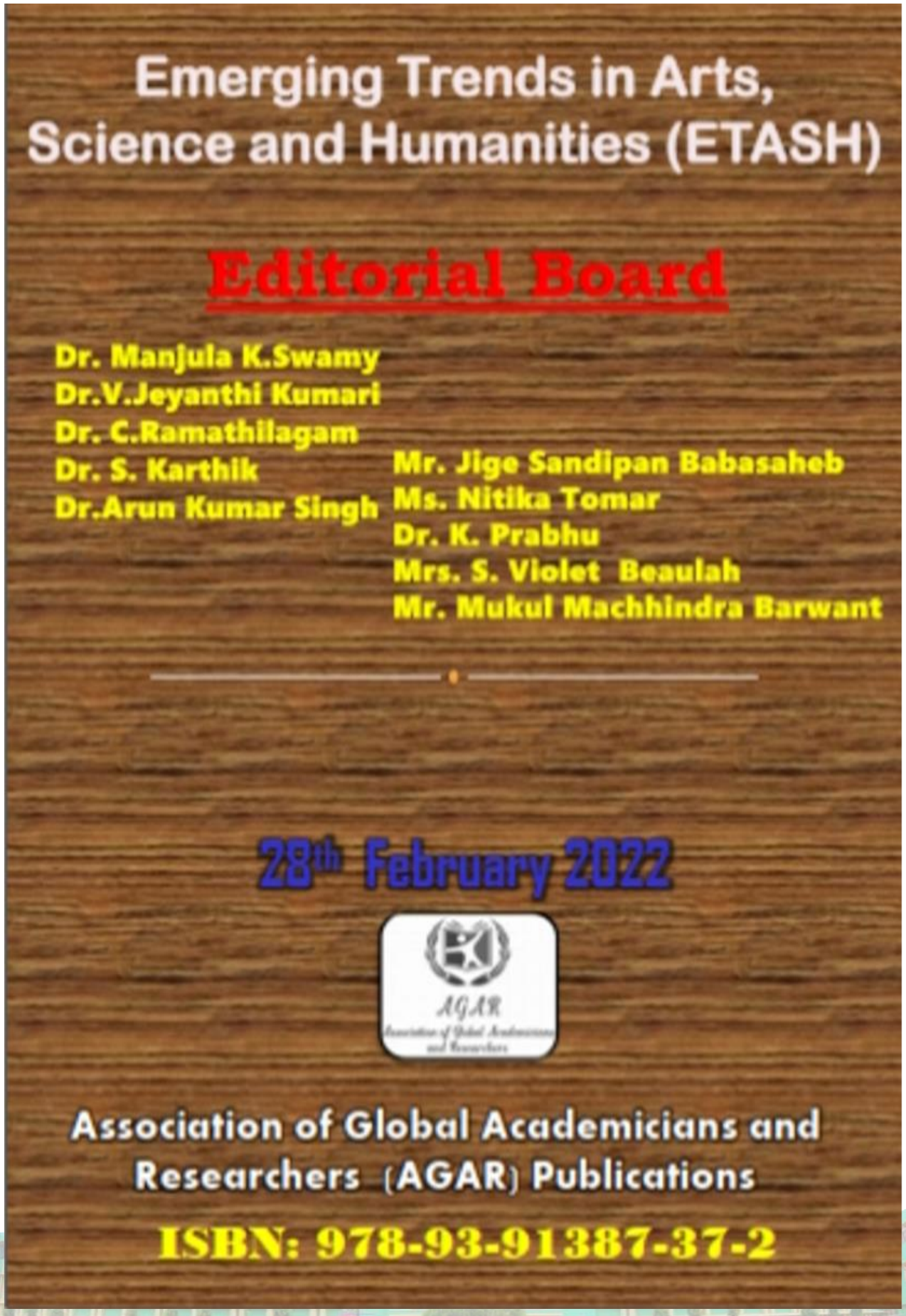
Abstract

Herbs have provided mankind with therapy from the earliest beginning of civilization. People prepared the plant extracts from plants and cured even the most dangerous diseases known as Herbalism. It enriched health care and paved the way for well-being. Hence, these plant materials show activity against many microorganisms which are survived after chemical or synthetically produced antibiotics. Nilavembu is a bitter herb and also named as *Andrographis paniculata*. It is widely cultivated throughout Asia. The present work deals with the study of phytochemical constituents of *Andrographis paniculata* and also evaluated the antimicrobial, antioxidant and anti-diabetic activity. The phytochemical screening showed the presence of carbohydrates, flavonoids, tannins, alkaloids, saponins, and phytosterols in the different extracts (hexane, ethyl acetate and ethanol) of dried leaves of *Andrographis paniculata*. Antimicrobial activity was assessed by disc diffusion method. Moreover, the free radical scavenging activity of nilavembu was assessed using 1,1-diphenyl-2-picrylhydrazyl (DPPH) and 2,2'-azinobis-3-ethylbenzothiazoline)-6-sulfonic acid (ABTS) assay. Also, the extracts were checked by anti-diabetic activity. The results showed that the *Andrographis paniculata* leaf exhibiting moderate antimicrobial, antioxidant activity than compared with the standard. Hence, this plant can be used as a medicine for various diseases.

Keywords: *Andrographis paniculata, antimicrobial activity, Antioxidant activity, Phytochemical screening.*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11

ASSESSMENT ON INVITRO SHOOT REGENERATION AND ROOTING OF *PIPER LONGUM* LINN FROM NODAL EXPLANTS

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ABSTRACT

In the present investigation, *invitro* propagation was performed for the medicinal plant, *Piper longum* L. by using the

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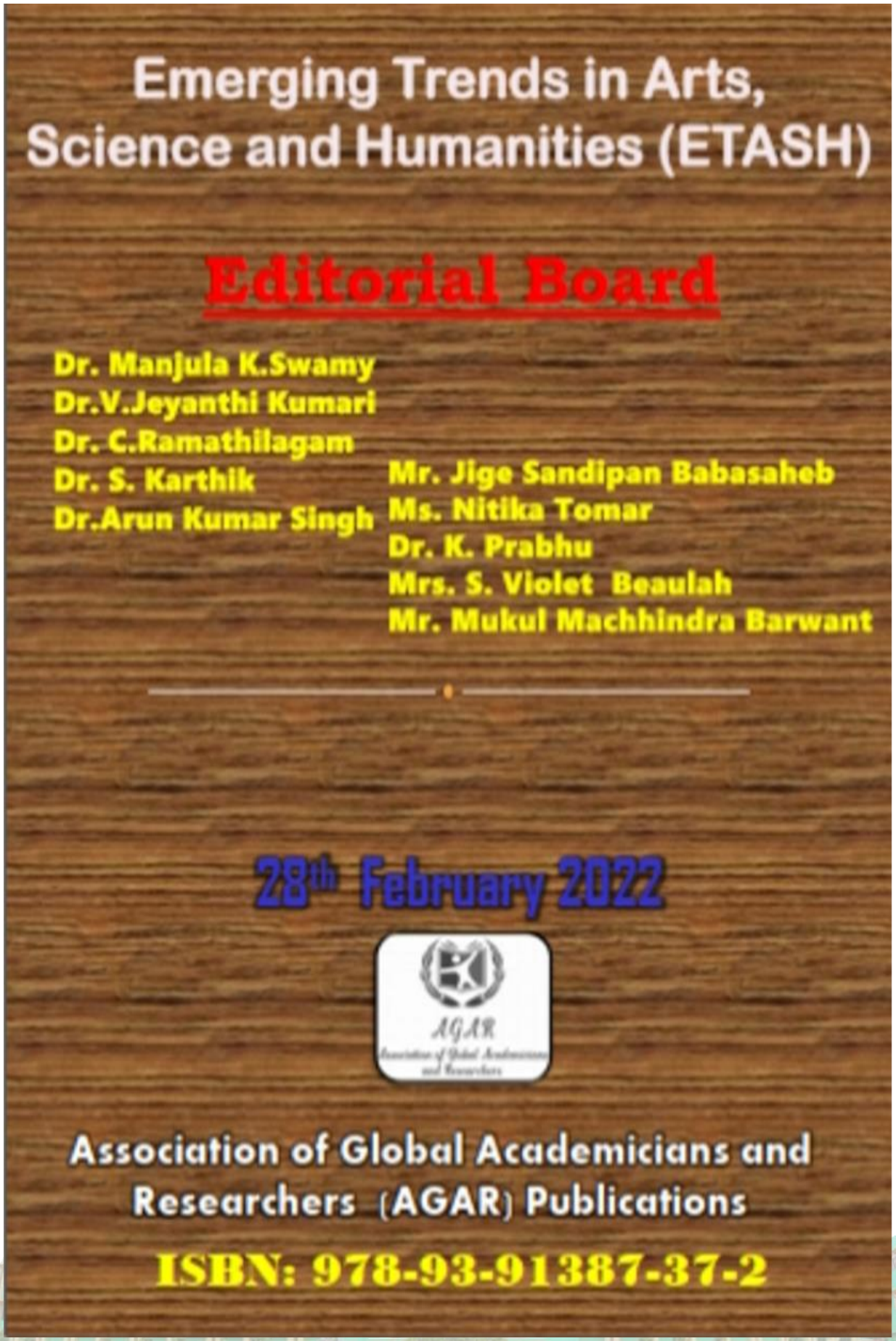
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Chapter –XXI

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A REVIEW ON ETHNOBOTANY OF TRIBES OF INDIA

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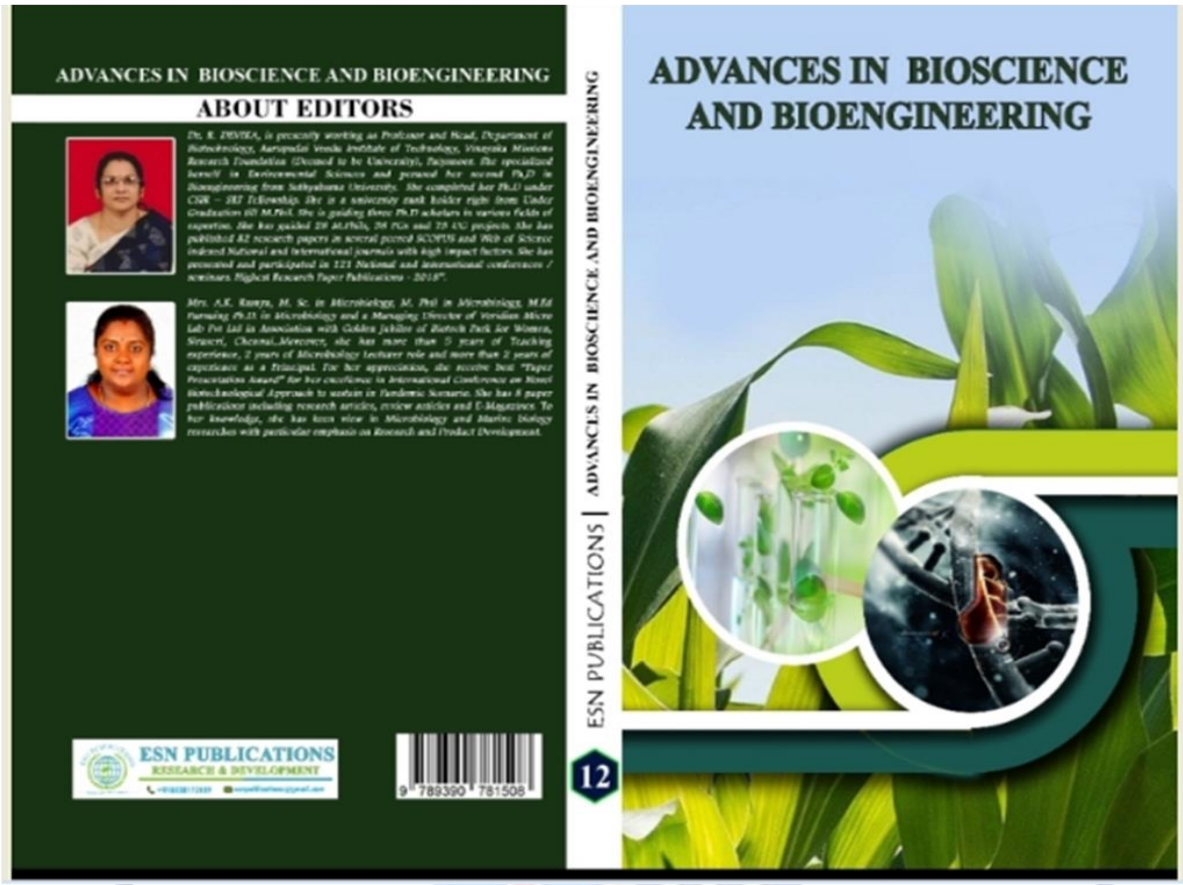
Abstract

Ethnobotany is the study of past and present inter-relationships which exist between the tribal societies and their surrounding vegetal environment. Ethnobotany was a rapidly growing science, attracting people with widely varying academic background and interests.

Keywords, Tribes, Medicinal plants

Origin and Development of Ethnobotany

Since time immemorial, people have used plants as medicine. Powers (1873- 1874) used the term "Aboriginal Botany" to refer to a study of all the forms of vegetable which the aborigines used for



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A Review on Polonium 210 and Lead 210 in Lower Group Flora

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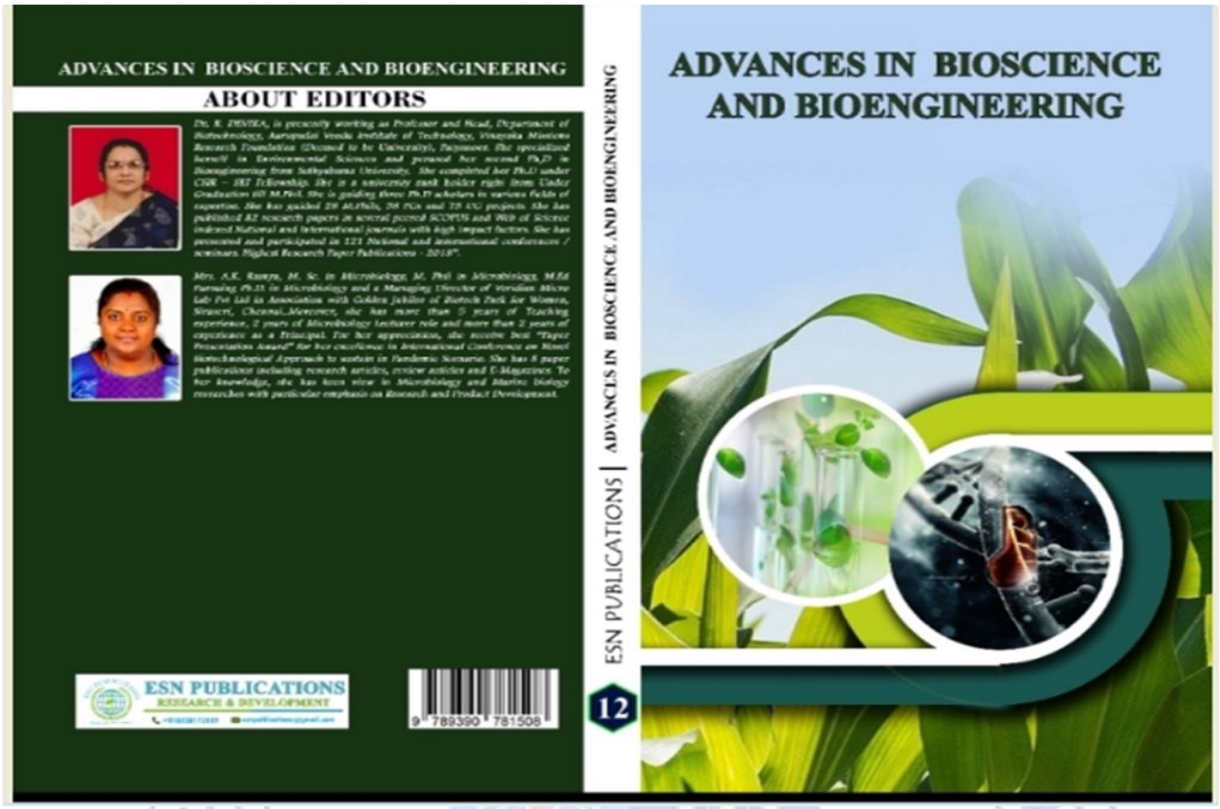
ABSTRACT

Polonium 210 a alpha emitting radioactive element. It is the predominant naturally occurring radioactive material and is most widely available radioisotope of polonium. It has the property of accumulating in soft tissues of lower group flora and can be used as radioactive indicator of pristine regions.

KEYWORDS: Polonium 210, Flora, Radioactive decay

DISCOVERY OF POLONIUM-210

Polonium, element number 84, was discovered byMarieSklodowska Curie and her husband Pierre in 1898 by purifying it from pitchblende. They had discovered that refined pitchblende was still significantly radioactive after the uranium had removed, leading them to conclude that at least one other radioactive element was present. element was named after Marie Curie's native Poland. Polonium is the first radioactive element of the periodic table for which all of its isotopes are radioactive. Polonium with 33 isotopes with ranging from 188 to 220. Polonium-210 is the predominant naturally occurring radioactive material and is most widely available radioisotope of polonium. It is a radioactive decay product in the natural uranium – 238 decay series. Polonium-210 is an alpha emitter that has a half life of 138.4 days [1]



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A REVIEW ON SELECTED MEDICINAL PLANTS OF KANYAKUMARI DISTRICT, TAMILNADU, SOUTH INDIA

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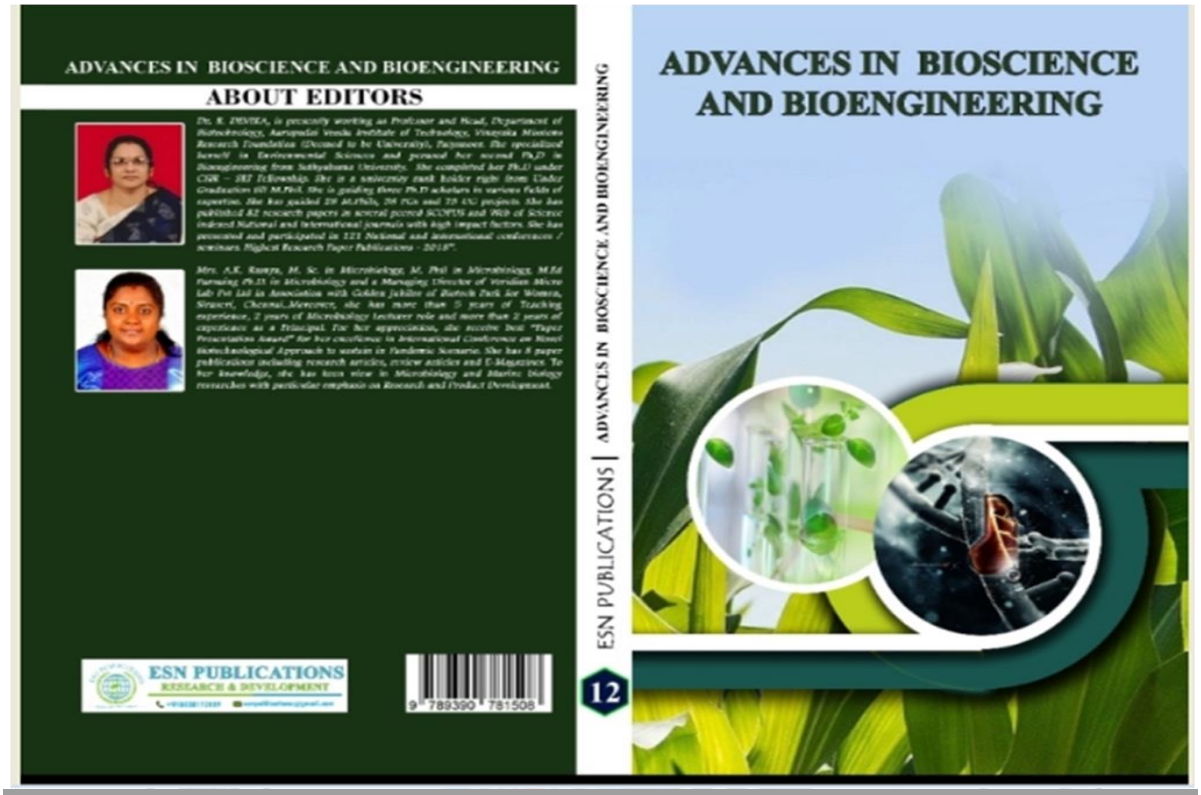
INTRODUCTION:

Nature becomes a great source of medicinal treatment for millions of years. Much of the world's biological diversity remains unexplored as a source of novel biological compounds and the search for new bioactive agents from natural sources, including extreme environmental niches is expanding (Cragg and Newman, 2001). India is blessed with a fashionable wealth of medicinal plants. The medicinal plants have created smart contribution to the event of ancient Indian systems of medicine or drugs are conjointly to native medicine among social group etc. India represents a store house of genetic diversity of medicinal plants. India is sitting on a gold mine of well-recorded and traditionally well-practiced knowledge of herbal medicine. India is perhaps the largest producer of medicinal herbs and is rightly called the "botanical garden of the world". India officially recognizes over 3000 plants for their medicinal value. It is generally estimated that over 6000 plants in India are used in traditional, folk and herbal medicine, representing about 75% of the medicinal needs of the third world countries (Godghate and Sawant, 2013).

India is a land of immense biodiversity in which two out of eighteen hot spots of the world are located. India is also one of the twelve mega biodiversity countries in the world. It is well known



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POTENTIAL DEGRADATION OF INDUSTRIAL EFFLUENTS USING MICROBES – A LOW COST AND ECONOMIC REMEDIATION TECHNOLOGY

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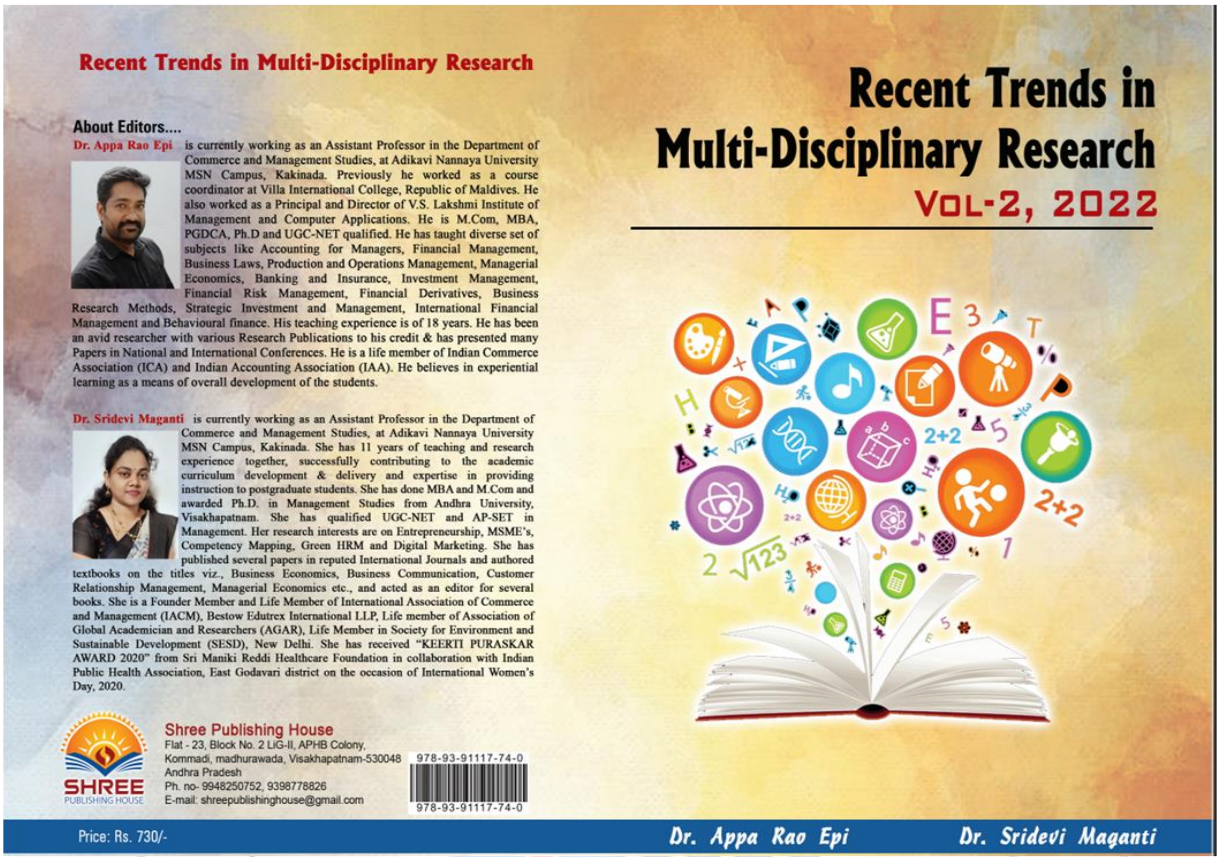
ABSTRACT:

The tremendous advancements in the technology of industrial growth, strongly emphasize the population explosion, which paves way for the root cause of environmental deterioration. The sudden growth of industries has become the important cause of environmental pollution. Besides that, deterioration occurs with soil contamination, sediment contamination, water contamination and air contamination with release of hazardous and toxic chemicals. The industrial effluents possess persistent organic pollutants, which continually disturb the ecosystem, leading to climate changes, disturbing the ground water levels, icecapmelting and ozone depletion. Bioremediation



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Chapter 1

EVALUATION OF ANTIMICROBIAL EFFECT IN THE STEM AND LEAVES OF *SARACA INDICA*

*J.Albino Wins, **M.Murugan

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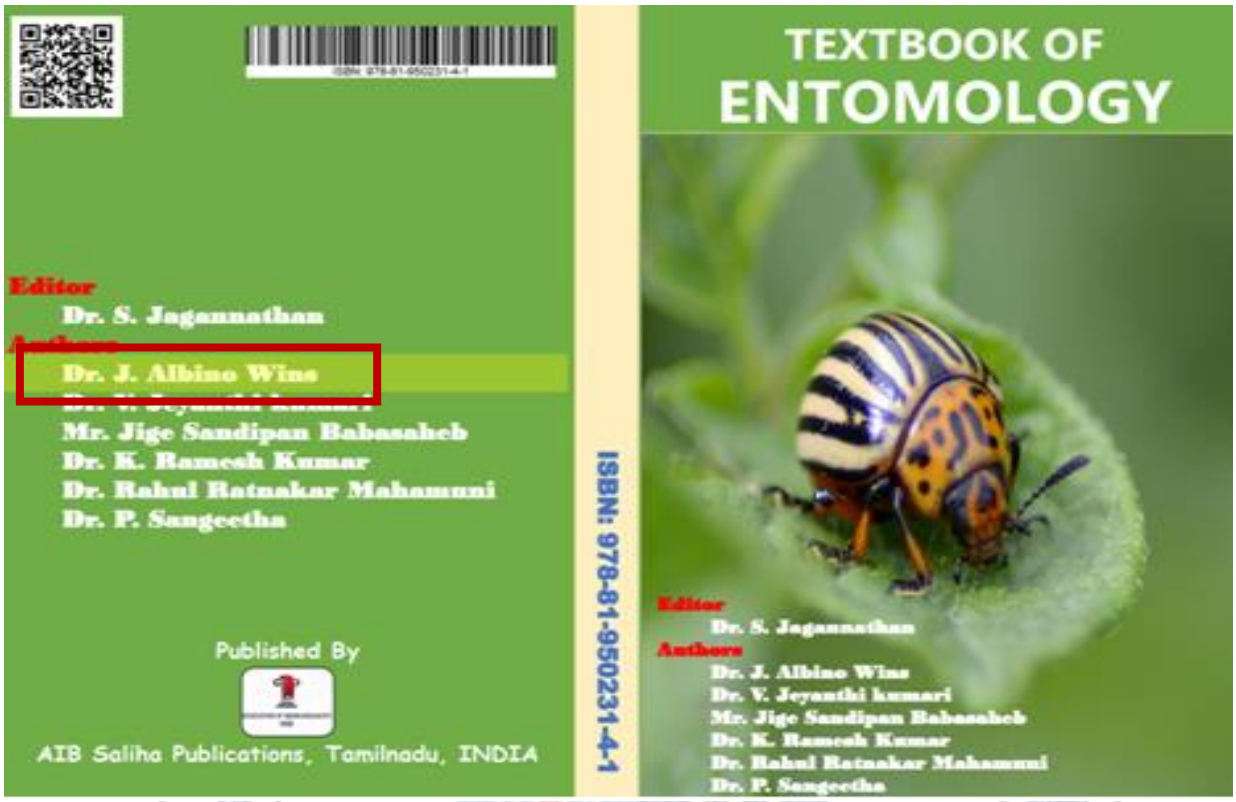
Abstract : *In the present work, an attempt has been made to analyse the antibacterial and antifungal potential of ethanolic, methanolic, acetonic and aqueous extracts of SaracaAsoca against Klebsiellapneumoniae, Staphylococcus aureus, Escherichia coli, Proteus mirabilis and Pseudomonas aeruginosa among bacterial strains. Aspergillusniger and Candida albicans among fungal strains by disc diffusion method and agar well method the antibacterial and antifungal activities were determined by measuring the diameter of the zone of inhibition. The ethanolic, acetonic extracts of Saracaasoca possessed the highest antibacterial with a zone of inhibition of (17 mm) for Proteus mirabilis and highest antifungal activity with a zone of inhibition (20 mm) for Aspergillusniger. Methanolic extracts, exhibited lesser antibacterial activity with respect to Staphylococcus aureus (8 mm) and antifungal activities Candida albicans (7 mm) when compared to ethanolic extracts. Streptomycin (positive control) produced maximum and minimum zones of inhibition against Staphylococcus aureus (21 mm) and Klebsiellapneumoniae (20 mm) respectively. Minimum Inhibitory Concentration (MIC) of the ethanolic stem extract of S. indica plant was determined by broth microdilution method. MIC against gram negative bacteria ranged from 0.01 mg/ml to 0.1 mg/ml respectively. The active antibacterial compounds analysed by Thin Layer Chromatography (TLC).*

Keywords: *Saracaindica, Antibiotic sensitivity test, Kirby-Bauer, Pathogens*

Introduction

According to the World Health Organization medicinal plants serve as the best source for a variety of drugs. Therefore, such plants are being investigated for better understanding of their medicinal properties (Alo*et al.*, 2012). Plants have been used since ancient times to treat common infectious diseases whether locally within the dermis or a blood infection (Ozcan*et al.*, 2009). There are several reports in literature regarding the antimicrobial activity of crude extracts prepared from plants (El-Seedi*et al.*, 2002; Rojas *et al.*, 2003; Duraipandiyan*et al.*, 2006; Parekh and Chanda, 2007b).

Leaves of *AzadirachtaIndica* possess antibacterial, antifungal, antiviral, and even antiparasitic property and therefore exhibit wide range of pharmacological activities of neem leaf which may include immunomodulatory, anti-inflammatory, antihyperglycemic, antiulcer, antimalarial, antifungal, antibacterial, antiviral,



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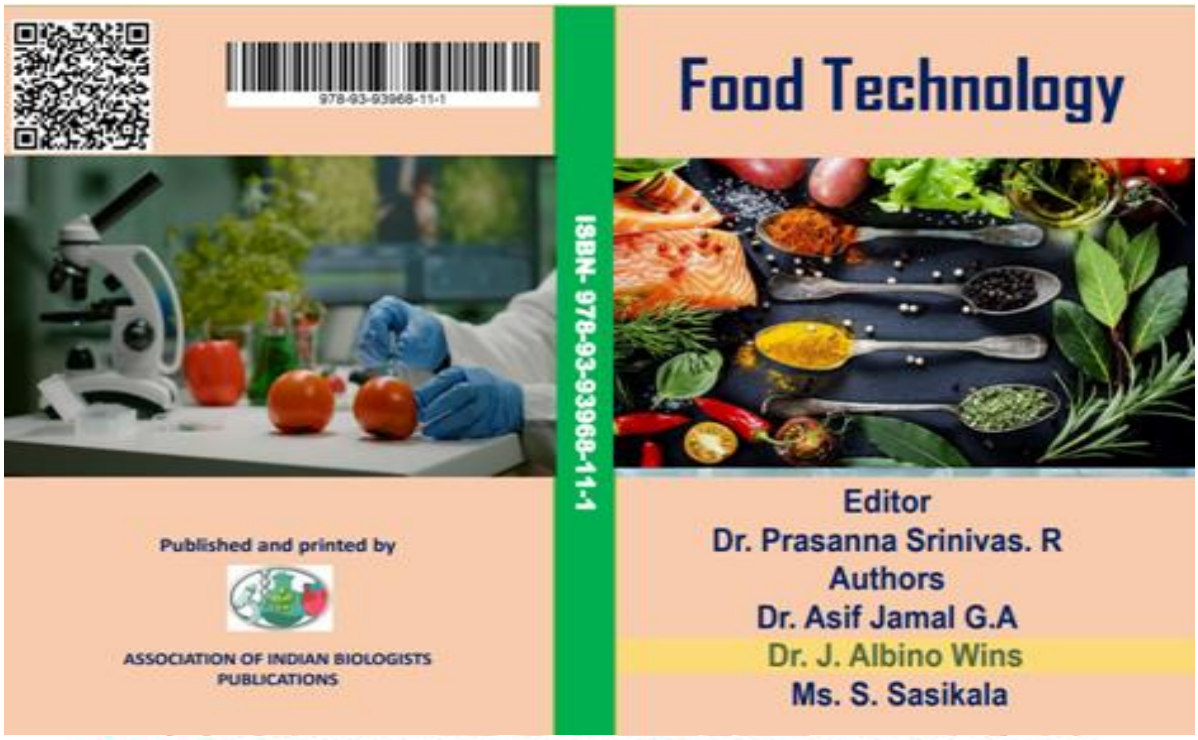

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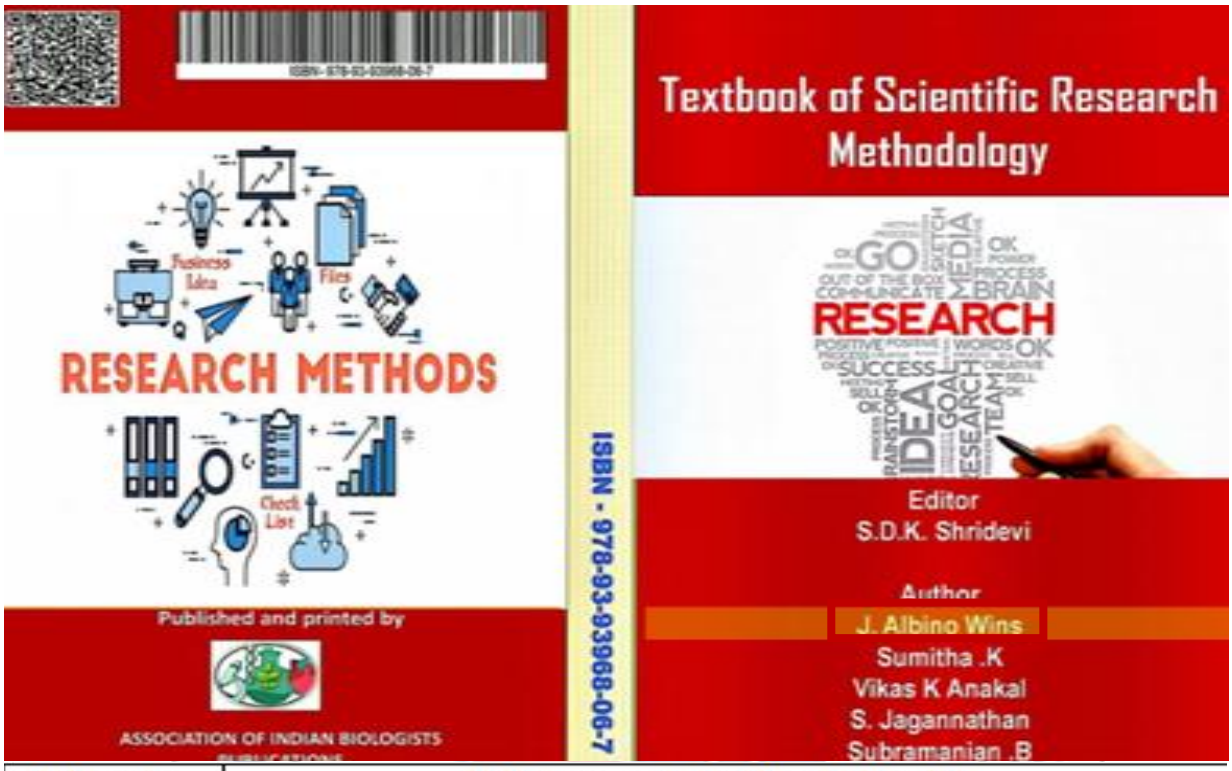

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CHAPTER-III

Introduction and Scope of Bioinformatics, Role of Computers in Biology. Useful search engines–Boolean searching, Search engine algorithms. Finding scientific articles in Google scholar, Science Direct, Scopus, Web of Science and UGC-CARE.

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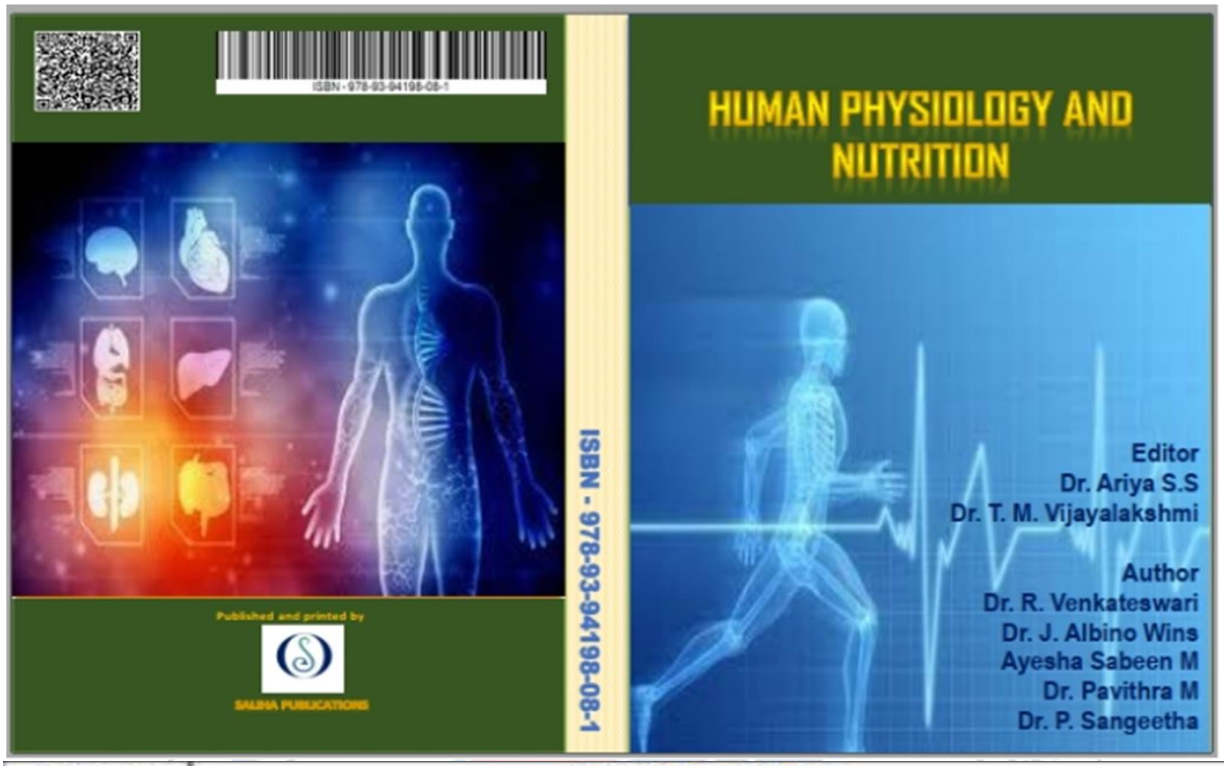

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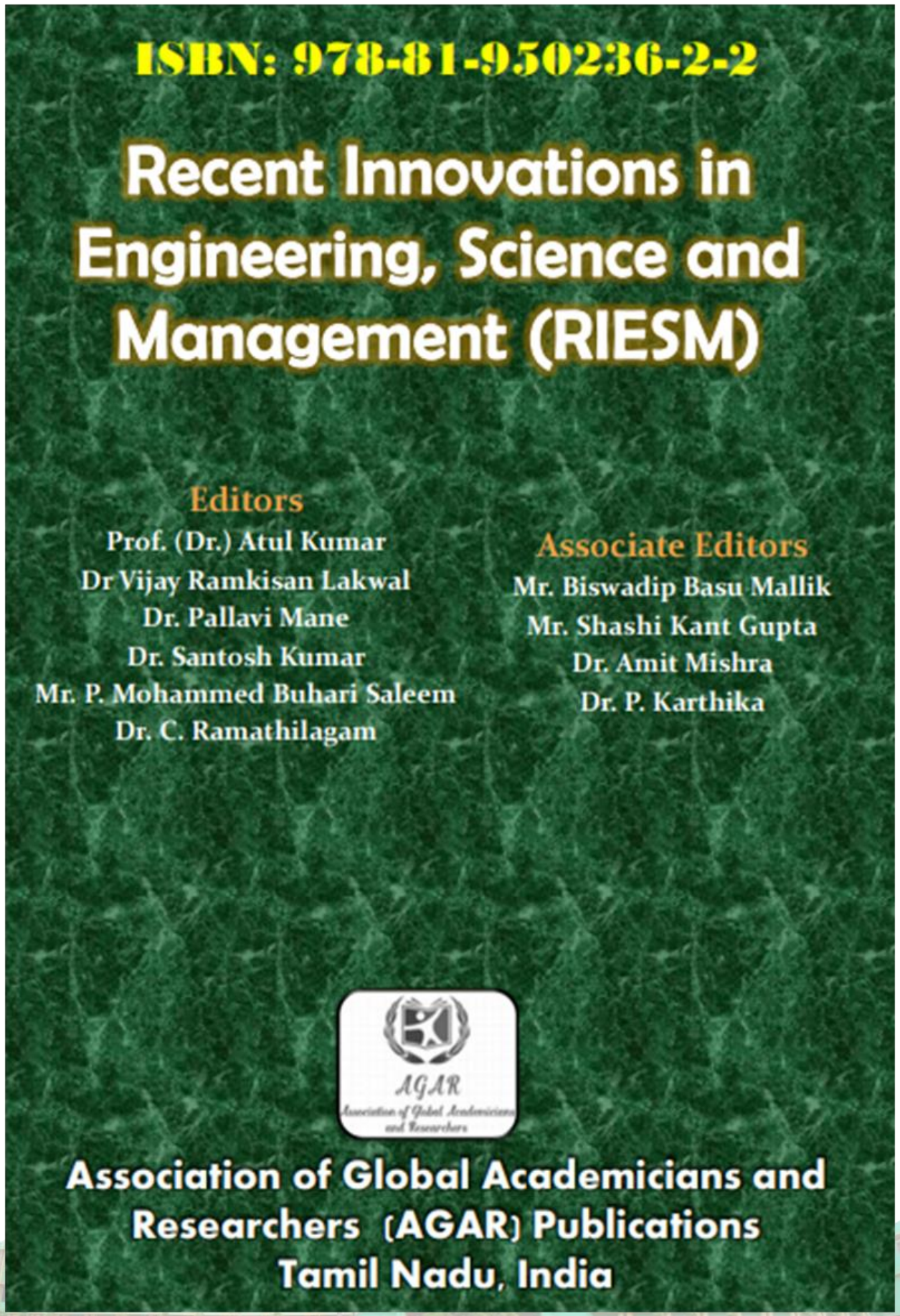
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EVALUATION OF PLASMID CURING IN ANTIBIOTIC RESISTANT ESCHERICHIA COLI ISOLATES WITH REFERENCE TO URINARY TRACT INFECTION

J. Albino Wins and M. Murugan*

Department of Botany, Holy Cross College (Autonomous), Nagercoil -4.[Affiliated to ManonmaniamSundaranar University, Abishekapatti, Tirunelveli District]

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ABSTRACT:

Plasmids are extra-chromosomal double-stranded circular DNA possessing the capability to replicate independently of the host chromosome, but they coexist with it. In the present study, ten clinical isolates of *Escherichia coli* from urine sample of Urinary tract infected patients were collected from the Medical Laboratory of Nagercoil, Kanyakumari District. Antibiotic susceptibility test was performed to know the resistant, sensitive patterns. Plasmid curing was done to know about the nature of resistance pattern, that is plasmid mediated or chromosomal mediated. From the present

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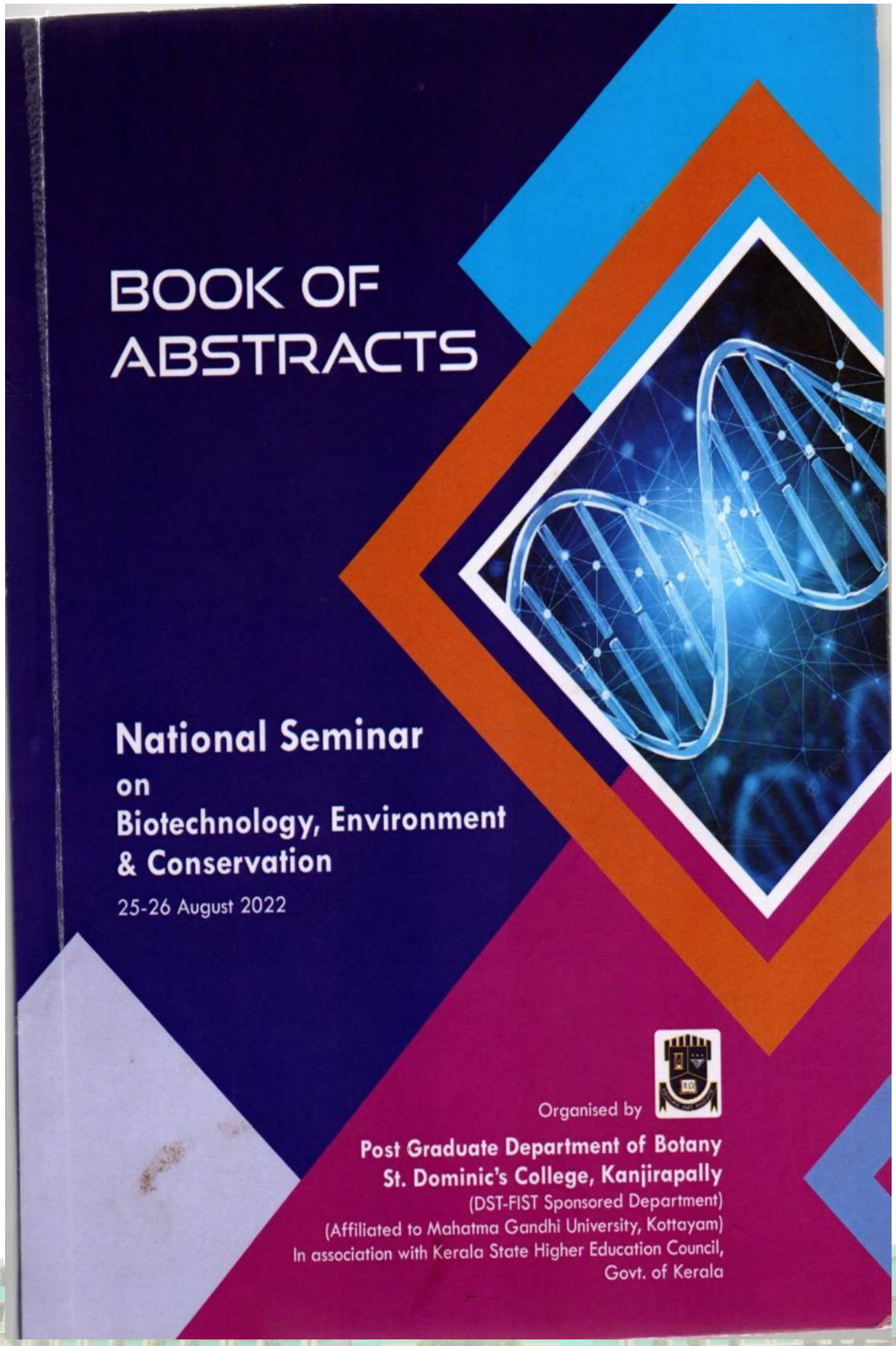
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A REVIEW ON PREVELANCE OF PESTICIDES AND MICROBIAL DEGRADATION IN ENVIRONMENTAL SUSTAINABILITY

[1]J. Albino Wins and M. Murugan*

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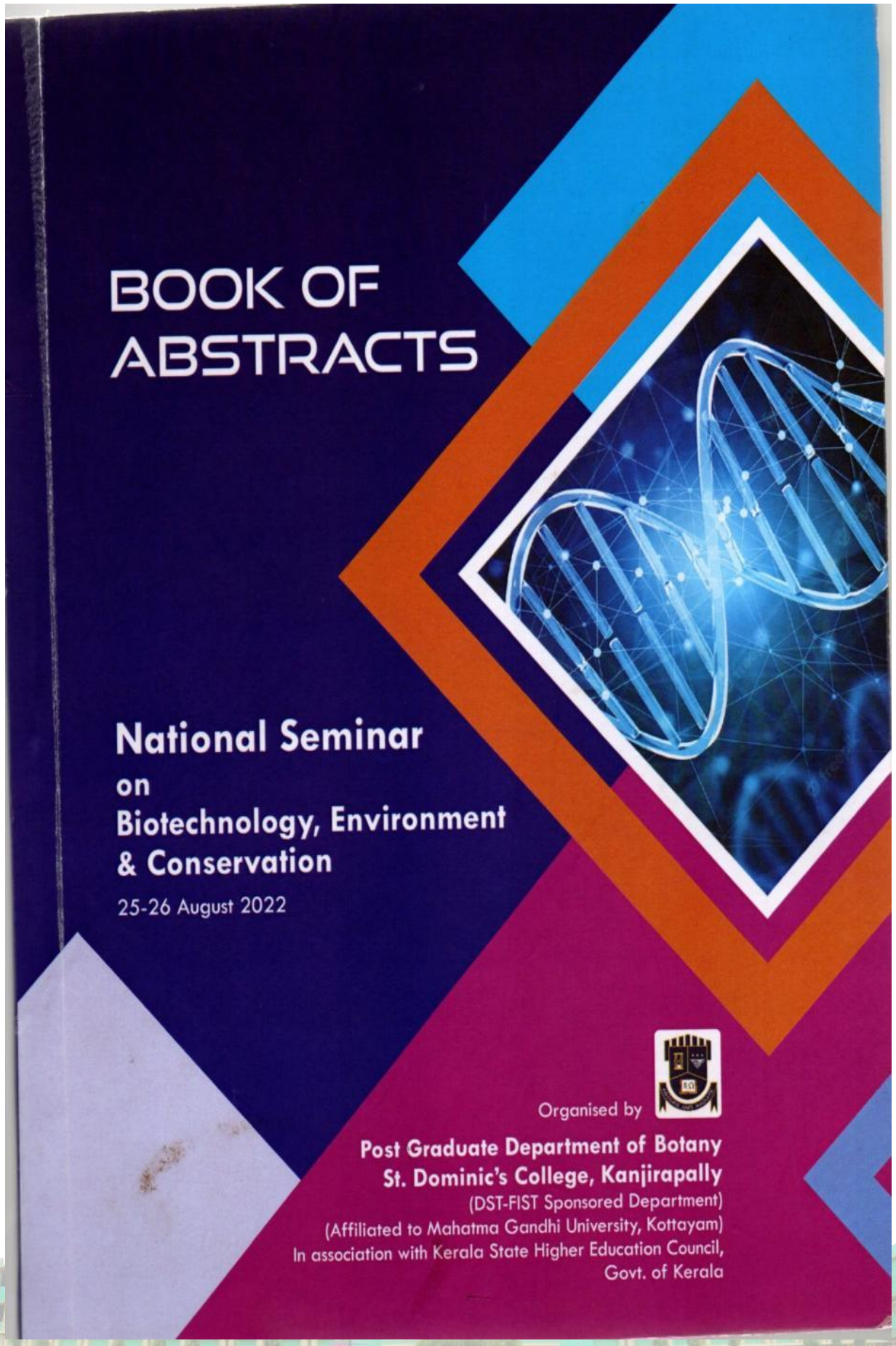
The agricultural advancements that emphasize the population explosion, which paves way for the root cause of environmental deterioration. The sudden growth of industries has become the important cause of environmental pollution. Besides that, deterioration occurs with soil contamination, sediment contamination, water contamination and air contamination with release of hazardous and toxic chemicals. The pesticides possess persistent organic pollutants, which continually disturb the ecosystem, leading to climate changes, disturbing the ground water levels, ice cap melting and ozone depletion. Microbial remediation is the best and effective technology for decontaminating the polluted systems with inexpensive cost. Thus, microorganisms are the effective biological tool for treating the pesticide residues, as it has the capacity to sequesters CO_2 during its adaptive growth.

Keywords: Pesticides, Microorganisms, Bioremediation, Environmental Pollution, Ecosystem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Day 2: 26th August 2022

1. Invited Talk

Dr. P. A. Jose, Principal Scientist, Sustainable Forest Management Division, KSCSTE-Kerala Forest Research Institute, Peechi.

Topic: *Conservation of Rare Endangered and Threatened plants of Western Ghats*

2. Invited Talk

Dr. Leena Abraham, Head, Department of Botany, St. Thomas College, Kozhenchery.

Topic: *Remote Sensing and GIS In Forestry*

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Oral Presentations

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Pollen morphology of Oxalidaceae in Kerala.

BS 02 Merin Ann Ninan, Binoy T Thomas and Thomas V P
In silico PCR analysis of Terrestrial algae

BS 03 Reshma Elizabeth Alex and Siril E A
Comparative evaluation of different fruit rind samples of Garcinia gummi-gutta (L.) Robs.

BS 04 Tiny Antony, Linu Mathew and Jomy Augustine
Molecular phylogeny of Strobilanthes species seen in Paithalmala, Southern Western Ghats, India.

BS 05 Catherine Sheeja V and Anami Augustus Arul A
Wetland diversity studies on Karuppu Kulam, Nalloor village of VilavancodeTaluk in Kanyakumari District, Tamil Nadu, India

BS 06 Celin Pappa Rani J
Tribal knowledge and status of IUCN red listed plants used by the Kani tribes of Kanyakumari Wildlife Sanctuary

BS-06

TRIBAL KNOWLEDGE AND STATUS OF IUCN RED LISTED PLANTS USED BY THE KANI TRIBES OF KANYAKUMARI WILDLIFE SANCTUARY

J. Celin Pappa Rani

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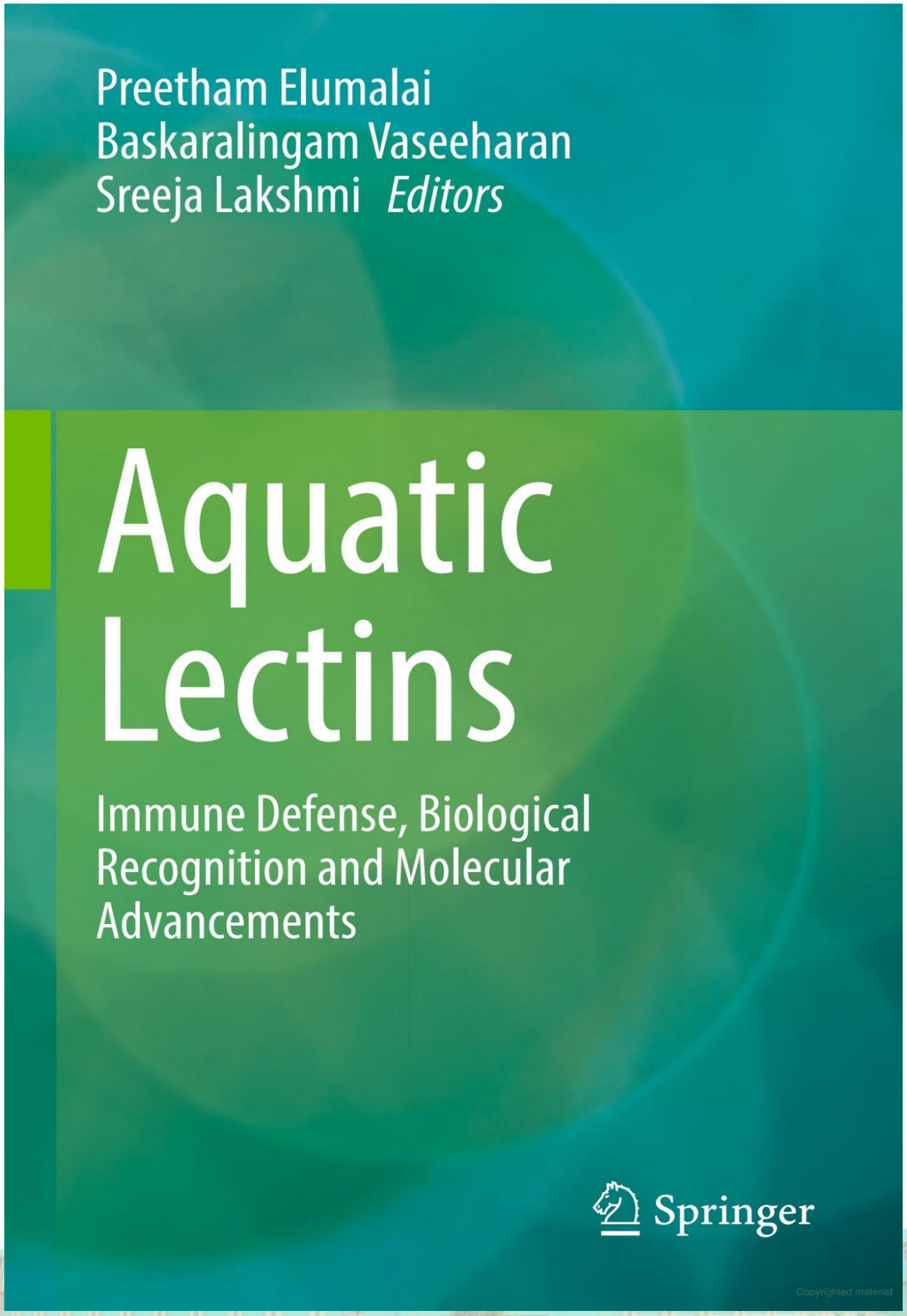
Western Ghats of peninsular India ranks ninth in terms of species richness and endemism. Kanyakumari Wildlife Sanctuary with adjacent areas of Kalakkad Mundanthurai Tiger reserve and Neyyar Wildlife sanctuary of Kerala state constitute the southernmost tip of Western Ghats. The natural vegetation of this region represents biomass ranging from southern thorn forests, dry deciduous and moist deciduous, semi evergreen forest to ever green sholas with grassy downs. The aim of this study was to collect information on the red listed medicinal plants used by the *Kani* tribes of Southern Western Ghats. Rarity of taxa and exotic taxa were determined by field observation and published literature, the criterion for categorization of threatened taxa was based on IUCN red list of threatened species. The field survey was carried out during the years 2014-2016 among the Kanis residing in and around the Kanyakumari Wildlife Sanctuary. Regular field trips were made to the tribal settlements in different seasons of the year. The findings reveal that 44 plants used by the Kani traditionally for treating different ailments have been enlisted in the IUCN Red Data Book. The plants which are in risk of extinction in wild have to be protected for the prosperity of future.

Keywords: Kani, Kanyakumari Wildlife Sanctuary, Red listed, Rare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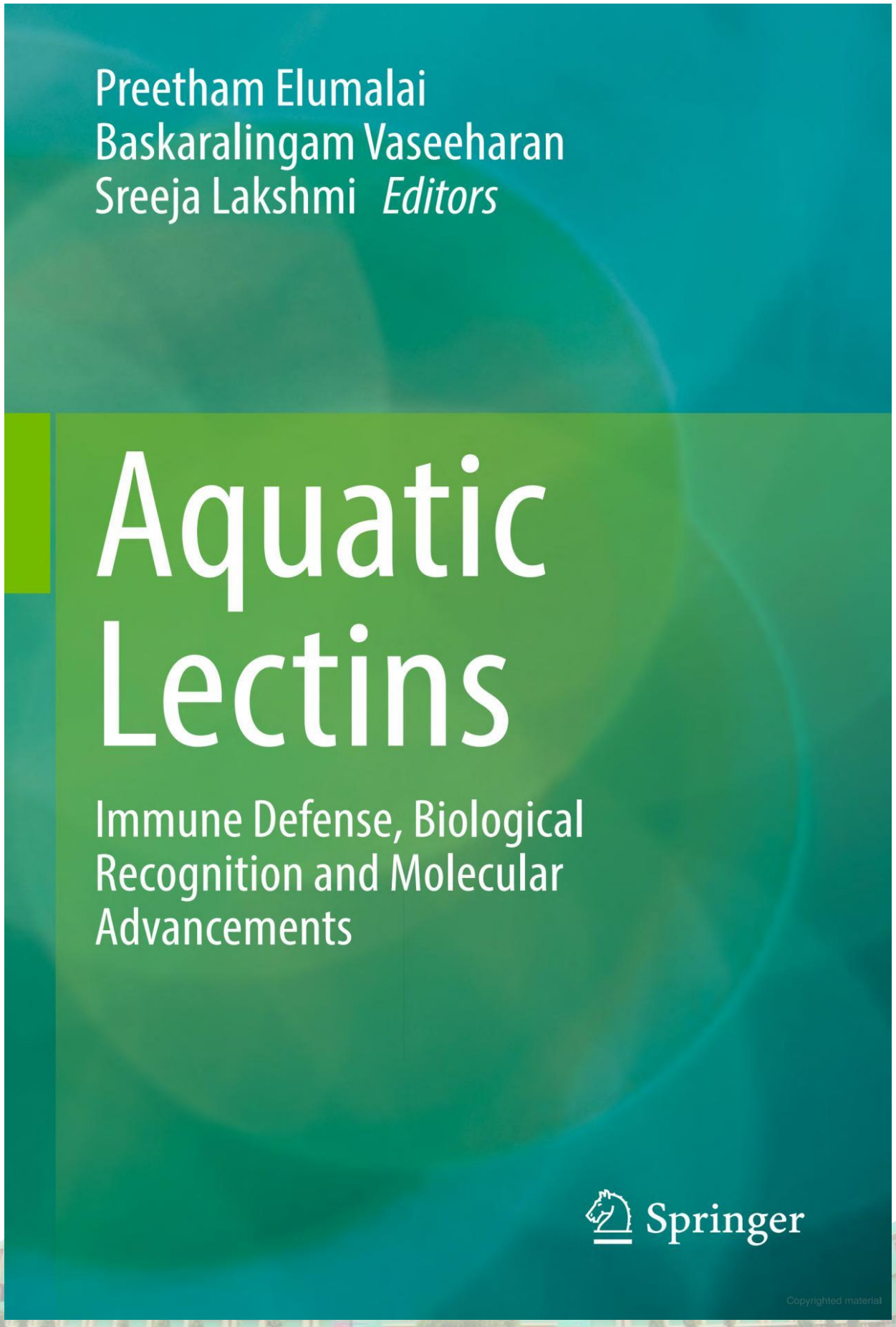
Abstract

Lectins are a class of specific carbohydrate binding proteins that can agglutinate cells or precipitate polysaccharides and glycoproteins and function as recognition molecules. They vary in molecular size, amino acid composition, three-dimensional structure, metal requirement, and function in order to adapt to the challenges of the antigens/ pathogens in the surrounding environment. There are different types of lectins such as C-type (calcium dependent lectin), S-type or Galectins (β-galactoside binding lectins), L-type (lectins containing leguminous lectin domain), MBL (mannose-binding lectin), P-type (mannose 6-phosphate receptor specific lectin), N-type (recognize mannose 6-phosphate N-glycans), R-type (contain structurally similar CRD to ricin), Collectins (collagen-containing C-type lectins), I-type (immunoglobulin type lectin), etc. Siglecs are a group of I-type lectins with sialic acid (Sia)-specificity and an amino-terminal. Such sialic acid specific lectins are of growing interest as reagents in biochemical research and diagnostic analysis and can be extremely useful to study sialic acids in diagnosis of pathogenic disease and tumors. The prevalence of such impressive sialic acid specific lectin with significant biomedical prospective is reported among arthropods and molluscs. Among these, the lectins of crabs were studied elaborately and almost all reported crab lectins, especially brachyuran crabs are of sialic acid specific. This chapter deliberates the lectins identified from anomuran and brachyuran crabs.

Keywords

Agglutinin | Arthropods | Crabs | Crustacea | Hermit crabs | Lectin | Malacostraca | Sialic acid | Siglecs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Vinoliya Josephine Mary Johnson, Arokya Glory Pushpa Thiraviam, Anitha Chellathangam, Viswambari Devi Ramaswamy & Basil Rose Michael Rajam

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Abstract

Shrimps depend on cellular and humoral immune mechanism to eliminate pathogens present in its vicinity. Cell mediated response includes phagocytosis, melanization, encapsulation, opsonization, and cytotoxicity that will have a direct influence on the pathogens while humoral response includes humoral factors that are produced by the immune cells. In the absence of an adaptive immunity, they depend on the innate immunity to recognize and protect self from the non-self. The pathogens are recognized by the pathogen associated molecular patterns which activate the defense signaling pathway and trigger the expression of immune responsive genes. Among the pathogen recognition receptors, lectins—a humoral defense molecule recognizes and acts as an opsonin in phagocytic response. While the animal lectins are classified based on their structural characteristics as C-, I-, and P-type, Galectin, and Pentraxin, the shrimp lectins have been documented under seven groups as C-, I-, P-, and M-types, galectins, fibrinogen like domain lectins, and calnexin/calreticulin. These lectins have diverse structure, pattern of expression, and function in shrimp immunity. This chapter will lead into the identification, purification, characterization, and biological significance of shrimp and prawn lectins as reported by various researchers.

Keywords

Cellular Humoral Immunity Lectin Shrimp Pathogen recognition receptors

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.....From the Editor's desk

This book *English Teaching: Preparing Students For The Future* is published by English Language Teacher's Association of India (Thoothukudi Chapter) in association with Annammal College of Education in commemoration of the Diamond Jubilee Celebrations of the College. It is a collection of edited papers submitted on the topic.

How we can effectively equip our children for the future is a topic that is frequently discussed in the field of education today. What kind of opportunities ought to be provided to our students? How can we give students real-world, cutting-edge learning experiences that will aid in their development of future-relevant skills? What additional elements may be incorporated into the curriculum to better prepare the students? Utilizing what we already know, participating in the conversation as it unfolds, and learning more about developments and trends in education will offer us the best chances of incorporating fresh concepts or resources that will enable us to better educate our kids.

To attain this goal teachers must continue to modify the approaches and go beyond simply

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Enhancing Speaking Skills through Gaming Activities

G Avila Roshini.M

II M.A English Literature

Holy Cross College (Autonomous), Nagercoil

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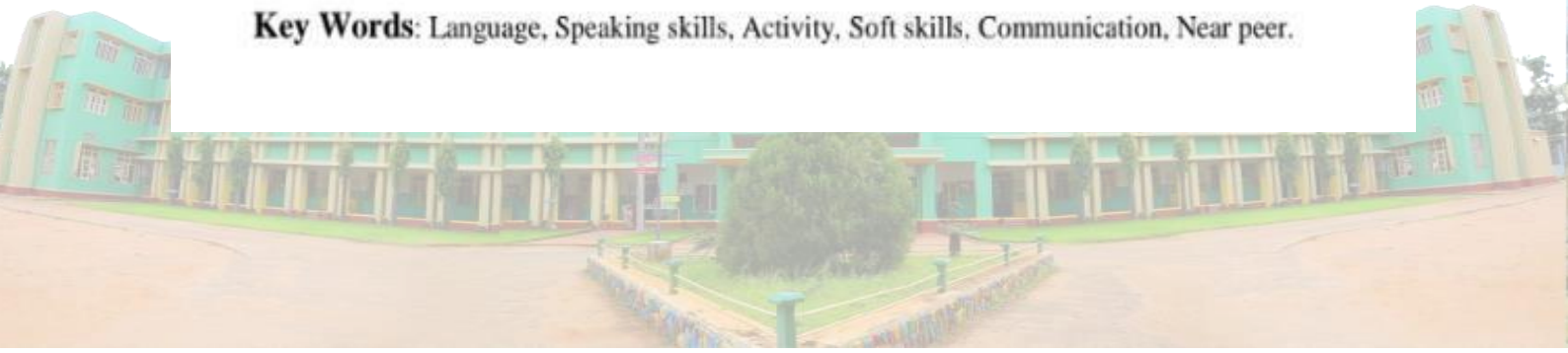
Abstract

Speaking is a productive skill in the oral mode. Speaking is considered as the most important one among the four skills i.e. listening, speaking, reading and writing. Communication plays a key role in daily life. Speaking skills enhance the learners' language fluency and accuracy. Speaking skills also advances the learners' confidence and result in brisk language learning. This paper explores the different ways of how gaming activities help in yielding effective speaking skill. Enhancing speaking skills is necessary, as modern society opt for students with good English-speaking skills. This paper sheds light on the importance of speaking skills and discusses various activities to implant speaking skills to the learners.

Key Words: Language, Speaking skills, Activity, Soft skills, Communication, Near peer.



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Strategies for Effective Reading through Activities

Gandhi Mathi. G

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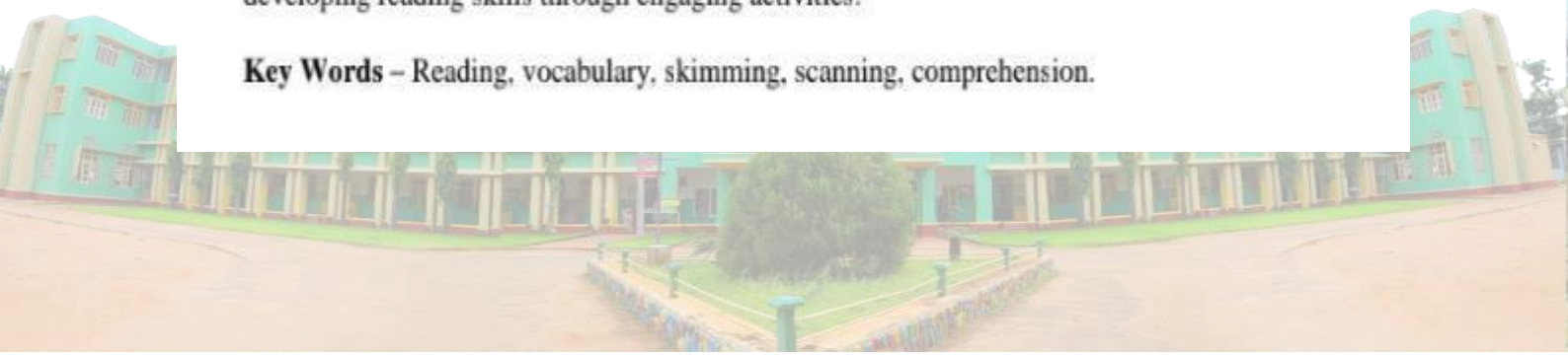
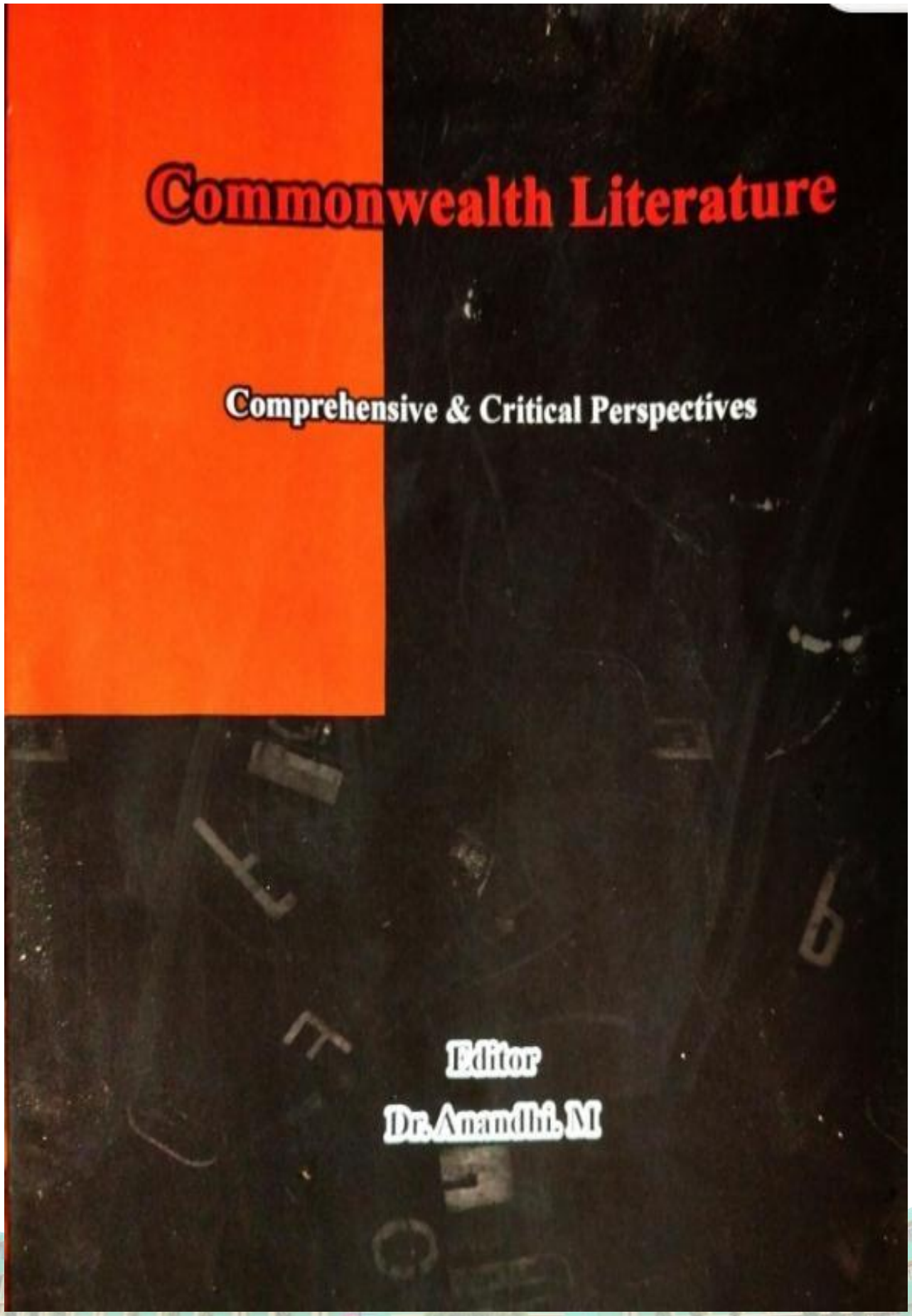
Abstract

Communication plays a major role in all places irrespective of institutions, interviews and work places. Language skills like listening, speaking, reading and writing allow learners to comprehend and produce both oral and written languages. Reading is the third of the four major skills. Reading involves receiving information and so it is called as receptive skill. Reading is a visual process. This paper focuses on the significance of reading and the affective factors. It also aims at developing reading skills through engaging activities.

Key Words – Reading, vocabulary, skimming, scanning, comprehension.

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36. Postcolonial Rule ns Ingress to Counterculture in Easterine Kire's *A Respectable Woman*

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Abstract

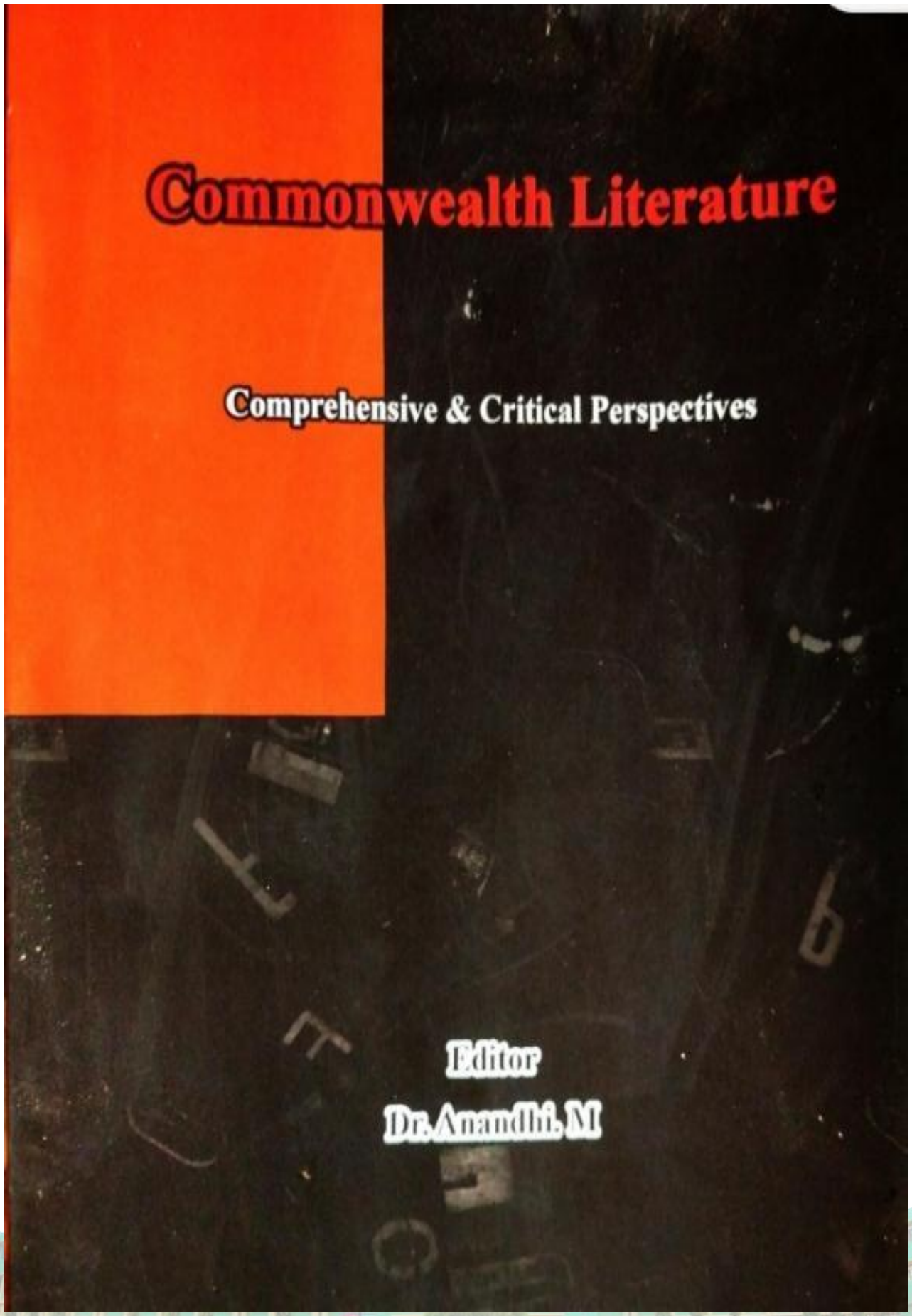
Colonial rule always leaves deep imprint in the memory of people. Nagaland gets doubly colonized by the Japanese and British forces. The battle for land leaves traces of hybridity among the Naga people. The ambivalence brought out by the alien forces creates friction in the native tradition of Naga people. Colonial education intrudes the lifestyle of the mass community which believes in the aesthetics and ethics which is bound in the native tradition. The people mimicry the colonizer and they try to adapt the intruder's native language leaving their native language Tenyidie. Political unrest within the country makes the people to adopt a new culture. The elderly people find it hard to cope with the new culture due to the vibrant memories of the past. The reminiscence of one generation passes on to another, which vindicates the lost traditions within the Naga culture. The paper attempts to analyse how the orient perceives the occident culture under the canopy of war.

Keywords: Counterculture, Hybridity, Ambivalence, Mimicry, Essentialism

Postcolonial rule creates deep ruckus in the minds of the colonized people. The impact created by the colonizers last not only for a lifetime, but also for generations. Easterine Kire through *A Respectable Woman* records the plight of native people of Nagaland at times of war. The Japanese invasion of India in 1944, finds a key role in the novel *A Respectable Woman*. The battle for land creates rift between Japanese and the British people. There is a sudden circulation of power in the Naga community, which creates tension among the native people of Nagaland.

The ordeal faced by colonized pass from one generation to another in the form of memory. Memory plays a vital role in propagating the deep scars of war in the minds of young generation. The memory passes from mother to daughter in the form of invoking the past memories of colonial rule. The reminiscence of colonial past predominates the present day Nagaland. War creates destruction not only to the life of the people, but also adds to the mental agony of people.

Elleke Boehmer in *Colonial and Postcolonial Literature* defines colonialism as the "settlement of territory, the exploitation or development of resources, and the attempt to govern the indigenous inhabitants of occupied lands" (2). The Japanese with their entry into the Naga Hills exploited the natural resources of Nagaland. Food becomes an asset for the colonizers to exercise power over the colonized. The Japanese forces have constant raids in the village and they plunder their belongings and other natural resources of the people. DC Pawsey provides food and essential requirements for the people to build their own homes. The English people create an impression of saviour in the minds of the Naga people. Though the entire village of Kohima gets destructed in war due to the British and Japanese allies, the British government provides food and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28. Life of the Naga Man as a Warrior: An Analysis of Easterine Kire's Sky *is My Father: A Naga Village Remembered*

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Dr. V Virgin Nithya Veena, Assistant Professor, Holy Cross College, Nagercoil, Affiliated to Manonmanium Sundranar University, Tirunelveli, India

Abstract

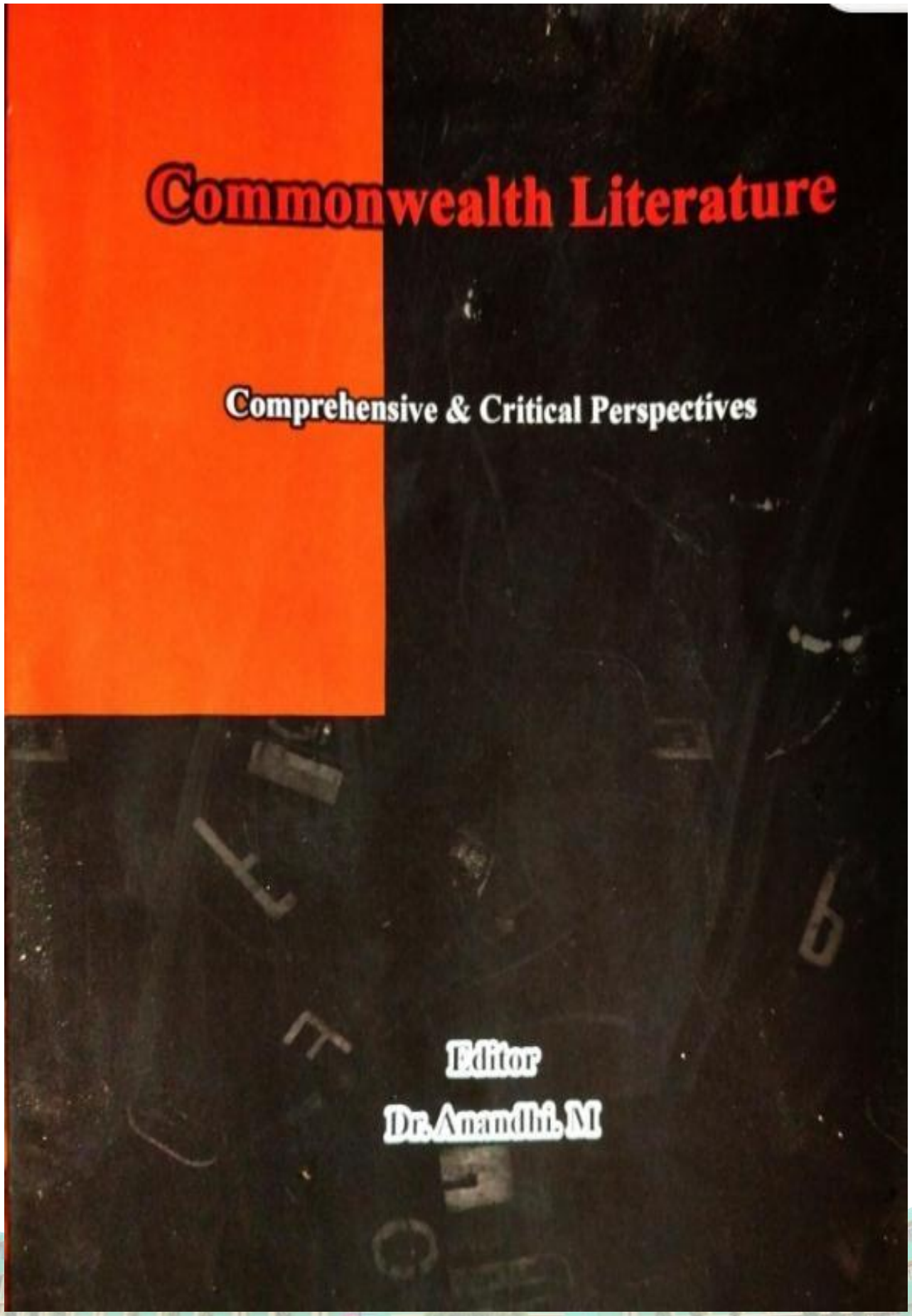
Easterine Kire, a Nagaland writer, acts as a poignant literary voice of her land. Her writings open up the unique Indigenous tradition and culture of Nagaland to the entire world. Shehas been awarded the Governor's Medal of Excellence in Naga literature in the year 2011. Her novel *Sky is My Father: A Naga Village Remembered* is a historical fiction that offers different perspectives on the customs of Khonoma. This paper titled "Life of the Naga Man as a Warrior: An Analysis on Easterine Kire's Novel *Sky is My Father: A Naga Village Remembered"* deals with the life of a man from the Khonoma village of Nagaland named Levi. It also deals with the dreams, sufferings and sacrifices of Levi to become a warrior. Kire clearly explains it in her novel.
Keywords: Warrior, Taboos, Life, Rituals, Nagaland.

Easterine Kire's novel *Sky is My Father: A Naga Village Remembered* is the first Naga novel published in English. It is a historical novel and it has won the Hindu Prize. This novel brings out the life in Khonoma during the nineteenth century and the hard work of both men and women in the fields. This novel also portrays how the warriors are praised by the people, their culture, tradition and taboos. Kire's works have been translated into German, Croatian, Uzbek, Norwegian and Nepali. Her writings act as herald to the unique indigenous tradition and culture of the Nagaland people to the whole world and she has been awarded the Governor's Medal of Excellence in the year 2011.

It is engraved in the subconscious minds of every man and woman in the village that it is more proud to be a warrior than anything else. Being a warrior and living as a warrior is not an easy task. On certain occasions, it may cost their lives. But the people in Nagaland readily accept to become a warrior. Every father acts as a role model to their children. They teach them to be brave, follow their traditions and the importance of their culture. "Young men grew up on stories of valiant battles with rival villages, tigers, spirits and the British" (ilando).

Levi is the protagonist of the novel who lost his father at a young age. But he has been inspired by the stories heard from his mother and everyone about his brave father. "Levi had asked, 'Can I have Apfu's new shield now?' But in later months, she came to understand that it was not really callousness, but the fortunate blessing of childhood and innocence" (Kire, 49).

Levi has been detained by the British soldiers during his first march with the elders of his village.And he has suffered in jail for six years.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6. The Cultural Cityscapes of Chaudhuri

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Abstract

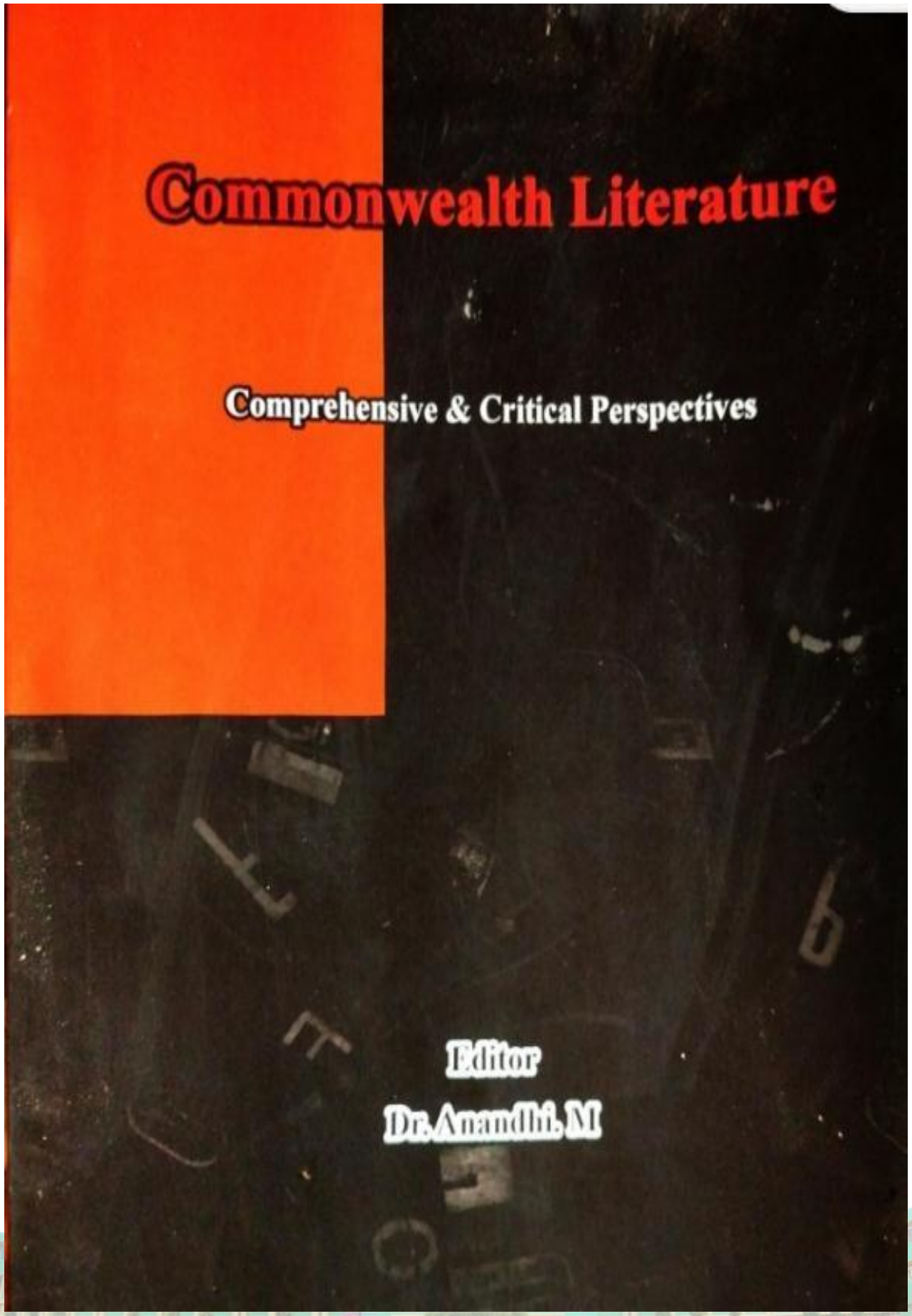
Amit Chaudhuri (15th May 1962), a preeminent contemporary writer who writes in respect to the cityscapes and the culture within. His cityscapes in the novels are not just only meant to be the part of Landscape or settings; it is known for its vibrant nature, daily life, rapid evolution and culture. Till date, his textualization centres on the minute details of different cities rather than a great part or even a nation. By prevailing over the cityscapes and its inhabitants, he tends to idealize its culture. Though today's view of city is uncertain in the vital movement of time, it acts as an effective element for cultural studies. This research paper targets the cityscapes to promote its regional culture.

Keywords: Cityscapes, Urban Space, Region, Space, Culture.

In general, the term 'cityscapes' seems to invoke a scenic and visual image of a city space; meanwhile, it prompts to explore its spatiality. The interpretation of cityscapes is further taken to the wider analytical framework of spatiality and its contemporary culture in the late twentieth century. Before that the primary focus is given to the societies' historical unfolding and human's social life. The 'urban space' on the other hand is reduced to a fixed place with its neutral background and social-environment. After late 1990s, the interpretative innovation, critical thinking and creativity towards urban space leads to the transdisciplinary approaches. Going back to the earlier studies of urban space, the spatial imagination of Michel Foucault (1928-1984, a French Philosopher and literary critic) brilliantly enhanced the ideas of space-knowledge-power and heterotopias and heterotopologies. Henri Lefebvre (1901-1984) a French Marxist Philosopher and Sociologist, further takes the idea of urban space to a triple logical argument as conceived, perceived and lived cityscapes.

On the other hand, 'cityscapes' have become the buzz-term in cultural studies. The literary work which aims at a cityscape, inevitably records the cultural and social pattern of a place in respect to its space and time. Michel Foucault claims; "The space in which we live, which draws us out of ourselves, in which the erosion of our lives, our time and our history occurs" (23). As Foucault claims, treating the city space as the core of the novel, Chaudhuri reflects his time, place and history along with its social and cultural pattern. The pages of his novels glorify and idealize Kolkata with the description of ordinary places, everyday happenings and local characters in it. As Wessex for Thomas Hardy and Malgudi for R. K. Narayan, it is Kolkata for Amit Chaudhuri.

When most of Chaudhuri's contemporary writers kept their consideration of magic realism, post colonialism and national narrative as a dignified form of literature, he stood apart from them. His writings are not bridged into the idea of 'nation' though most of his novels disclose the various cities of India. His second novel *Afternoon Raag* justifies the point as the major priority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20. Lending Hands in Saving the Slipping World off the Steep: An Ecopsychological Criticism on *Flight Behaviour* and *Strange as this Weather Has Been*

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Eco-criticism is the in-depth understanding of the connection between literature and the earth's environment. Though it is an interdisciplinary perspective of criticising the works of art in the framework of environmental issues and natural discrepancies, Ecocriticism has always been a complicated and tough theory to be put into practice and a doctrine to be adapted by all people. For a long time, the concepts of ecology had been an unsuccessful phenomenon where solutions proposed by ecocritics, to the current environmental issues are many and far from the scope. The theories do not reach to the understanding of every people of the world, as its nations are composed of a wide range of people, from wealthy people to moderate ones. The concepts should be therefore in a way applicable to all means of people, with completely no loss to them. The theories are understood by the elite group of people but the concept of environmentalism is not put into practice in the first hand. On the other hand, people who have the urge to save the depleting nature around them, fail to reach out, due to barriers like education, corruption, discrimination, injustice and poverty. One main cause of environmental instability is that, human beings do not try to connect themselves with nature. This research article takes into study the relation between humans and the environment and the interesting concept on how protecting nature can be cultivated in the minds of people through Ecopsychology.

Keywords: Ecopsychology, Criticism on environmentalism, Elite theories, psychological Connect, Modern Thoughts.

The concept of Ecocriticism has been a very recent ideology, that has grown up with the increase in harshness towards nature and its belongings. New notions regarding Ecology and nature are blooming in the current scenario to remind the people on the losses that are happening in nature. This paper brings into notice a new movement of Ecopsychology that connects man's psyche with nature, so that the harm would be less when nature is seen from a compassionate point of view. This research analyses the important characters in both the novels, especially the protagonists Dellarobia in *Flight Behaviour* and Lace in *Strange as This Weather Has Been*, who are attached towards nature in different aspects. Their way of feeling for nature may be different but the impact is the same. It arouses guilt in the readers which is equal to saving the environment, as confirmed by the ecopsychologists.

Ecopsychology, by the way, is a recent term- the derivated and updated version of Ecocriticism which deals with the subject of connecting the environment with man, thereby building a bond with him. Also, it is a transdisciplinary perspective which involves the critical thought and human conscience. Theodore Roszak proposed and formulated the term "Ecopsychology" in his book *The Voice of the Earth* published in the year 1992. The

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Neuro-Linguistic Programming (NLP): An Innovative Approach to Language Learning

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ABSTRACT

Neuro - Linguistic Programming (NLP) is a branch of knowledge and practice that has the capability to help professionals accomplish desired outcomes in the multifaceted communication process. NLP targets the mind, which functions as a processing system, communication, a vehicle for sending and receiving information, and repeated behavioral patterns, which are primarily in charge of perception, at the very heart of the communication process. In order to meet the demands of the learner, NLP is seen as an essential and inescapable component of the learning process. Students who use NLP may confidently strengthen their communication abilities. NLP is seen as a technique that helps to shape human behavior and communication. NLP improves workers' motivation, success, and communication abilities. In terms of internal as well as external communication with coworkers, NLP has also demonstrated promising results. The practice of "neuro-linguistic programming" is seen as a novel strategy for communication, personal growth, and learning. By enhancing the abilities of communication, the NLP benefits language learners as well as their learning conditions. This paper aims to delineate how NLP could be adopted as an effective tool to promote communication and individual perception.

Key Words: *Neuro Linguistic Programming, Motivation, Communication, Learning, Components.*

INTRODUCTION

The word Neurolinguistic Programme (NLP) is derived from the trio of fundamental sciences—programming, neurology, and linguistics—that function as its supporting pillars. Programming is the method of arranging tasks to fulfil aims. Neuro Linguistic Programming (NLP) is originally developed with the intention of being employed. In the 1970s, Grinder, J.T., and Bandler, R.W., founded NLP. The word, that comes from computer science, describes the particular way in which our central nervous system systems operate effectively.

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Student Centred Learning as an Instructional Strategy

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ABSTRACT

Learning is a democratic and not an autocratic activity. In the teacher cantered approach, the teacher is the sage on the stage. In a learner centered approach, the learning climate is free and not controlled. This kind of approach includes a lot of activities. Learning by doing is an excellent example of this approach. The teacher plans and transacts contents systematically, and organizes transferring of knowledge. Students' performance is given due recognition and nurturing the creativity of the students is of utmost importance. Scope of enhancing the level of achievement of the students is the centre of teaching learning process. The current demonstrates that this strategy does in fact encourage higher-quality learning. For instance, research comparing instruction-centered approach to learning-centered instruction indicated that students in the learning-centered instruction group had more positive views and better understanding of their subjects than in the other way. This approach had better attributes towards their educational environment. The students had more chances to apply their knowledge and had a greater sense of ownership. The most significant value of teaching in higher education continues to be the transmission of knowledge, especially in a learner-centric environment.

Key Words: Teacher- Centric, Student-Centric, Knowledge, Activity, Transmission

INTRODUCTION

Learning-Centered Approach is an approach which is directed towards the learner. Activity-based learning (ABL) is an essential aspect of learner-centred approach. The student is responsible for learning, and the tutor is in charge with assisting the student, according to the learner-centered instructional approach. The curriculum is created with the learner's presence in mind, encompassing their mental, physical, social, emotional, and religious dimensions. In a learning activity the learner willingly and spontaneously participates with delight and acquires the desired learning outcomes. In this approach the process of learning and learning outcomes are taken into consideration. So, this learner centered approach completely revolves around the learner and it's focus point is learning activity. The teacher motivates the learner before the teaching- learning process begin. Teacher acts as a

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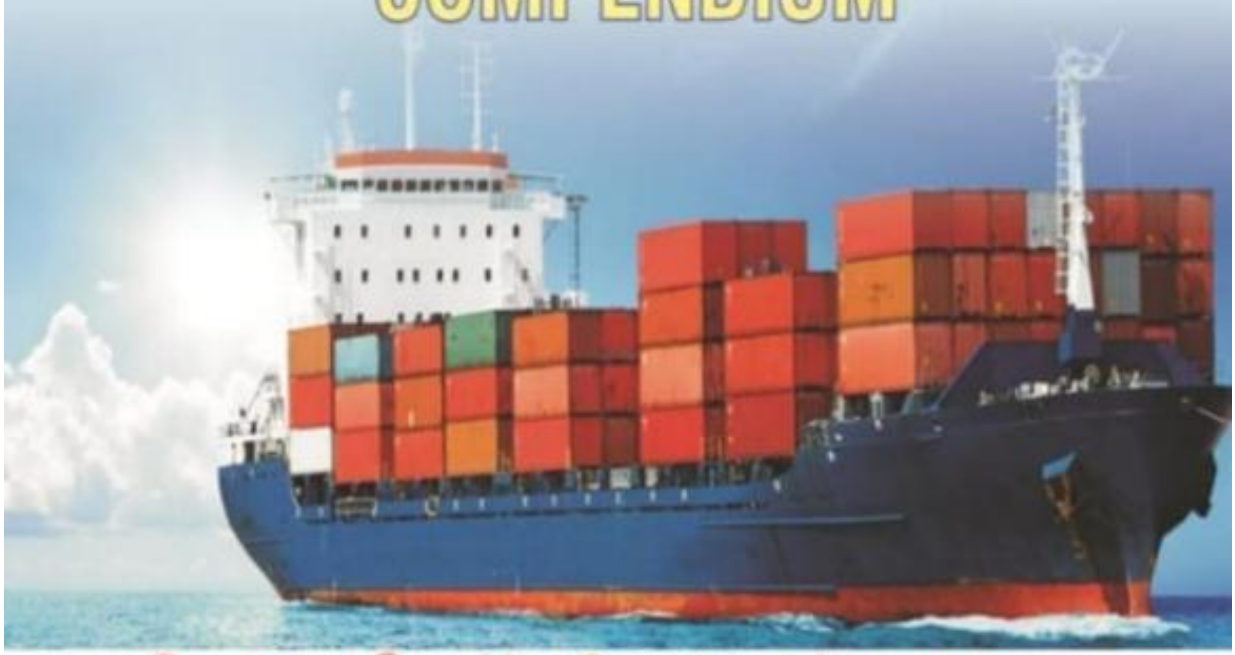

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APOCALYPSE NOW: FORECASTING THE IMMINENT EPOCH IN ERNEST CLINE'S READY PLAYER ONE

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ABSTRACT:

Human knowledge generates ideas to feature uniquely in a gadget. The technological invention of gadget altered nature for the survival of humans by increasing the control over the environment. The paper entitled "Apocalypse Now: Forecasting the Imminent Epoch in Ernest Cline's *Ready Player One*" discusses the challenges and tribulations that the world will face in the near future. It also portrays how the world is traversing the path of science and technology. Ernest Cline's novel *Ready Player One* showcases the upcoming world of online games and its impact.

Keywords: Role-playing game, Cyberspace, Technology, Artificial Intelligence

"The trials and tribulations in your life make stronger." – Taylor Swift

Technology plays a vital role in today's world, where the role of cyberspace is indispensable. It is a double-edged sword, which has benefits and detriments. Newton Lee comments on the technological inventions as, "Every major technological innovation propels humanity forward to the point of no return" (Lee). In

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கோப்பெருஞ்சோழனின் பாடுபொருள்

முனைவர் மா. தே. அருண் மொழி நங்கை,
உதவிப் பேராசிரியை,
தமிழ்த்துறை,
திருச்சிலுவை கல்லூரி, நாகர்கோவில்.

முன்னுரை:

கோப்பெருஞ்சோழன் சோழர் குலத்தில் தோன்றியவர். உறையூரைத் தலைநகராகக் கொண்டவர். பிசிராந்தையாருக்கும் பொத்தியாருக்கும் நண்பனாகக் கருதப்பட்டவர். இவரால் பாடப்பட்டவர் பிசிராந்தையார் என்ற புலவர் ஆவார். ஏழு பாடல்களை இயற்றியுள்ளார். இவருடைய பாடல்கள் குறுந்தொகை, புறநானூறு ஆகிய சங்க இலக்கியத் தொகுப்புகளுள் காணப்படுகின்றன. இவரைப் பாடிய புலவர்கள் பிசிராந்தையார், புல்லாற்றூரெயிற்றியனார், பொத்தியார், கருவூர்ப் பெருஞ்சதுக்கத்துப் பூதநாதனார் ஆகியோர் ஆவர். இவ்வரசனும் இப்புலவர்களும் பாடிய பாடல்கள் மிக அற்புதமானவை. அரசரும் கவிஞராய் விளங்கினர் என்பதற்குச் சான்றாக விளங்கியவர் கோப்பெருஞ்சோழன். அத்தகைய கோப்பெருஞ்சோழனின் பாடல்களைத் தற்காலத் தமிழியல் ஆய்வு நோக்கில் இக்கட்டுரையில் காண்போம்.

புறப்பாடல்கள்

புறநானூற்றில் இவர் பாடியதாக மூன்று பாடல்கள் காணப் படுகின்றன (புறநானூறு: பாடல் 214-216). அந்த பாடல்கள் இவருடைய உயரிய மனப்பான்மையை எடுத்துரைக்கும் வகையில் அமைந்துள்ளன. இப்பாடல்களில் கூறும் நீதிகள் அனைவராலும் பின்பற்றக்கூடிய வகையில் அமைந்துள்ளன. நட்பிற்கு இலக்கணம் என்றால் கோப்பெருஞ்சோழன் தான்.

இவரது பாடல் வழி நின்று இவருடைய உயரிய மனப்பான்மையையும் நட்பின் தன்மையையும் பார்ப்போம். தமிழ்நாட்டு மன்னர்களும், புலவர்களும் நண்பர்களாகத் திகழ்ந்தவர்கள். தமிழகத்தின் சிறப்புகளில் ஒன்று

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Neuro-Linguistic Programming (NLP): An Innovative Approach to Language Learning

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ABSTRACT

Neuro - Linguistic Programming (NLP) is a branch of knowledge and practice that has the capability to help professionals accomplish desired outcomes in the multifaceted communication process. NLP targets the mind, which functions as a processing system, communication, a vehicle for sending and receiving information, and repeated behavioral patterns, which are primarily in charge of perception, at the very heart of the communication process. In order to meet the demands of the learner, NLP is seen as an essential and inescapable component of the learning process. Students who use NLP may confidently strengthen their communication abilities. NLP is seen as a technique that helps to shape human behavior and communication. NLP improves workers' motivation, success, and communication abilities. In terms of internal as well as external communication with coworkers, NLP has also demonstrated promising results. The practice of "neuro-linguistic programming" is seen as a novel strategy for communication, personal growth, and learning. By enhancing the abilities of communication, the NLP benefits language learners as well as their learning conditions. This paper aims to delineate how NLP could be adopted as an effective tool to promote communication and individual perception.

Key Words: *Neuro Linguistic Programming, Motivation, Communication, Learning, Components.*

INTRODUCTION

The word Neurolinguistic Programme (NLP) is derived from the trio of fundamental sciences—programming, neurology, and linguistics—that function as its supporting pillars. Programming is the method of arranging tasks to fulfil aims. Neuro Linguistic Programming (NLP) is originally developed with the intention of being employed. In the 1970s, Grinder, J.T., and Bandler, R.W., founded NLP. The word, that comes from computer science, describes the particular way in which our central nervous system systems operate effectively.

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Student Centred Learning as an Instructional Strategy

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ABSTRACT

Learning is a democratic and not an autocratic activity. In the teacher cantered approach, the teacher is the sage on the stage. In a learner centered approach, the learning climate is free and not controlled. This kind of approach includes a lot of activities. Learning by doing is an excellent example of this approach. The teacher plans and transacts contents systematically, and organizes transferring of knowledge. Students' performance is given due recognition and nurturing the creativity of the students is of utmost importance. Scope of enhancing the level of achievement of the students is the centre of teaching learning process. The current demonstrates that this strategy does in fact encourage higher-quality learning. For instance, research comparing instruction-centered approach to learning-centered instruction indicated that students in the learning-centered instruction group had more positive views and better understanding of their subjects than in the other way. This approach had better attributes towards their educational environment. The students had more chances to apply their knowledge and had a greater sense of ownership. The most significant value of teaching in higher education continues to be the transmission of knowledge, especially in a learner-centric environment.

Key Words: Teacher- Centric, Student-Centric, Knowledge, Activity, Transmission

INTRODUCTION

Learning-Centered Approach is an approach which is directed towards the learner. Activity-based learning (ABL) is an essential aspect of learner-centred approach. The student is responsible for learning, and the tutor is in charge with assisting the student, according to the learner-centered instructional approach. The curriculum is created with the learner's presence in mind, encompassing their mental, physical, social, emotional, and religious dimensions. In a learning activity the learner willingly and spontaneously participates with delight and acquires the desired learning outcomes. In this approach the process of learning and learning outcomes are taken into consideration. So, this learner centered approach completely revolves around the learner and it's focus point is learning activity. The teacher motivates the learner before the teaching- learning process begin. Teacher acts as a

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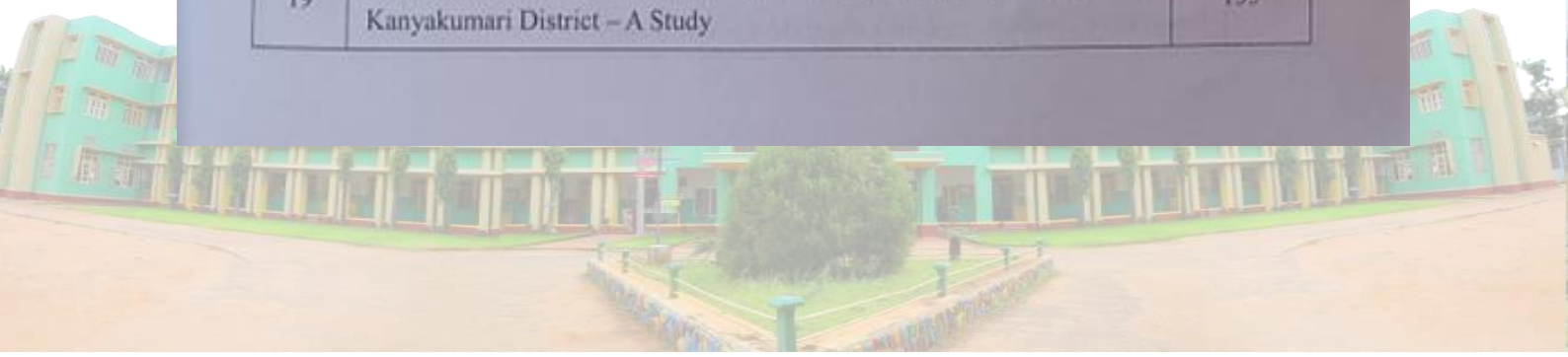

SWOC ANALYSIS FOR INDIAN HIGHER EDUCATION

Anbu Hannah Dora
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Abstract

The role of teachers is vital in shaping a human being by offering a wholesome education. Do our teachers evaluate themselves periodically making use of SWOC Analysis? SWOC stands for Strength, Weakness, Opportunity and Challenges. It was used by industries for self assessment of staff, products, marketing etc. and nowadays it is adapted to education sector. SWOC analysis is a powerful tool to help an institution develop its effectiveness and performance. It goes a long way in quality enhancement. Strengths and weaknesses are internal and opportunities and threats are external. This analysis helps in the development of self, the institution and above all higher education. This motivates teachers for self realization and leads to changes and developments from within and helps to prepare a road map. One objection that may be raised is, like industries, educational institutions do not have an end product and students cannot be termed as commodities to be assessed. Introducing this may be engulfed by possible initial apprehensions about borrowing an industrial practice. It is here that the role of Internal Quality Assurance Cell of institutions becomes significant. When introduced as a self evaluation exercise of teachers it can probe into aspects like scholarship and updating, methodology, teacher-student relationship, career satisfaction, contribution to the growth of the institution, a better understanding of the higher education scenario and its components like curriculum, teaching-learning, and testing. This will lead to changes, modifications and developments in the structure of higher education.

Key words:

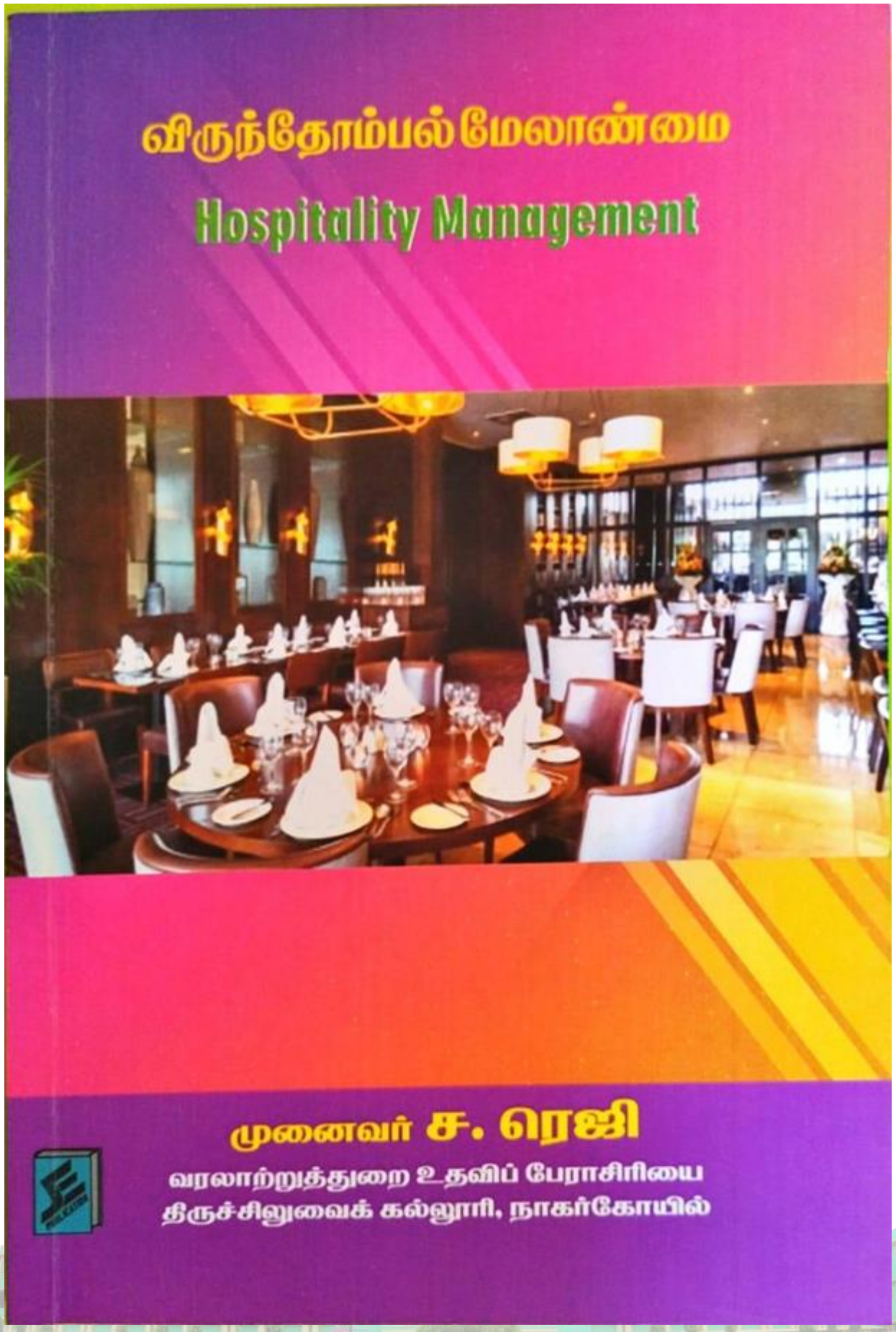
Self-analysis, assessment, effectiveness

INTRODUCTION

Teachers and institutions should evaluate themselves periodically making use of SWOC Analysis. The role of teachers is vital in shaping a human being by offering a wholesome education. Do our teachers evaluate themselves periodically making use of SWOC Analysis? SWOC stands for Strength, Weakness, Opportunity and Challenges. It was used by industries for self assessment of staff, products, marketing etc. and nowadays it is adapted to education sector.

SWOC analysis in Higher Education institutions

SWOC analysis is a powerful tool to help an institution develop its effectiveness and performance. It goes a long way in quality enhancement. Strengths and weaknesses are internal and opportunities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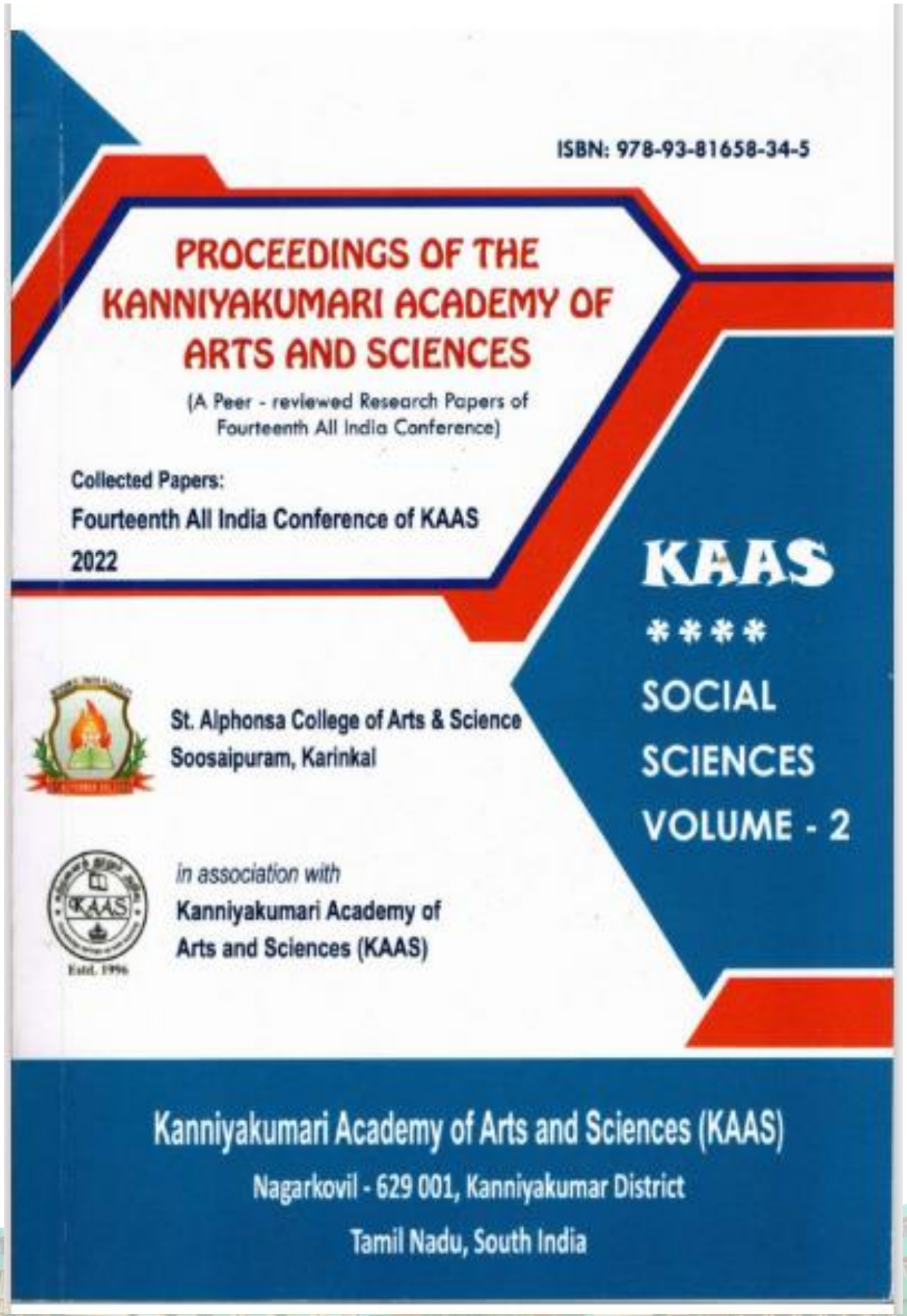
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THE PROBLEMS AND SECTORAL PARTICIPATION OF FISHER WOMEN IN KANYAKUMARI DISTRICT

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Introduction:

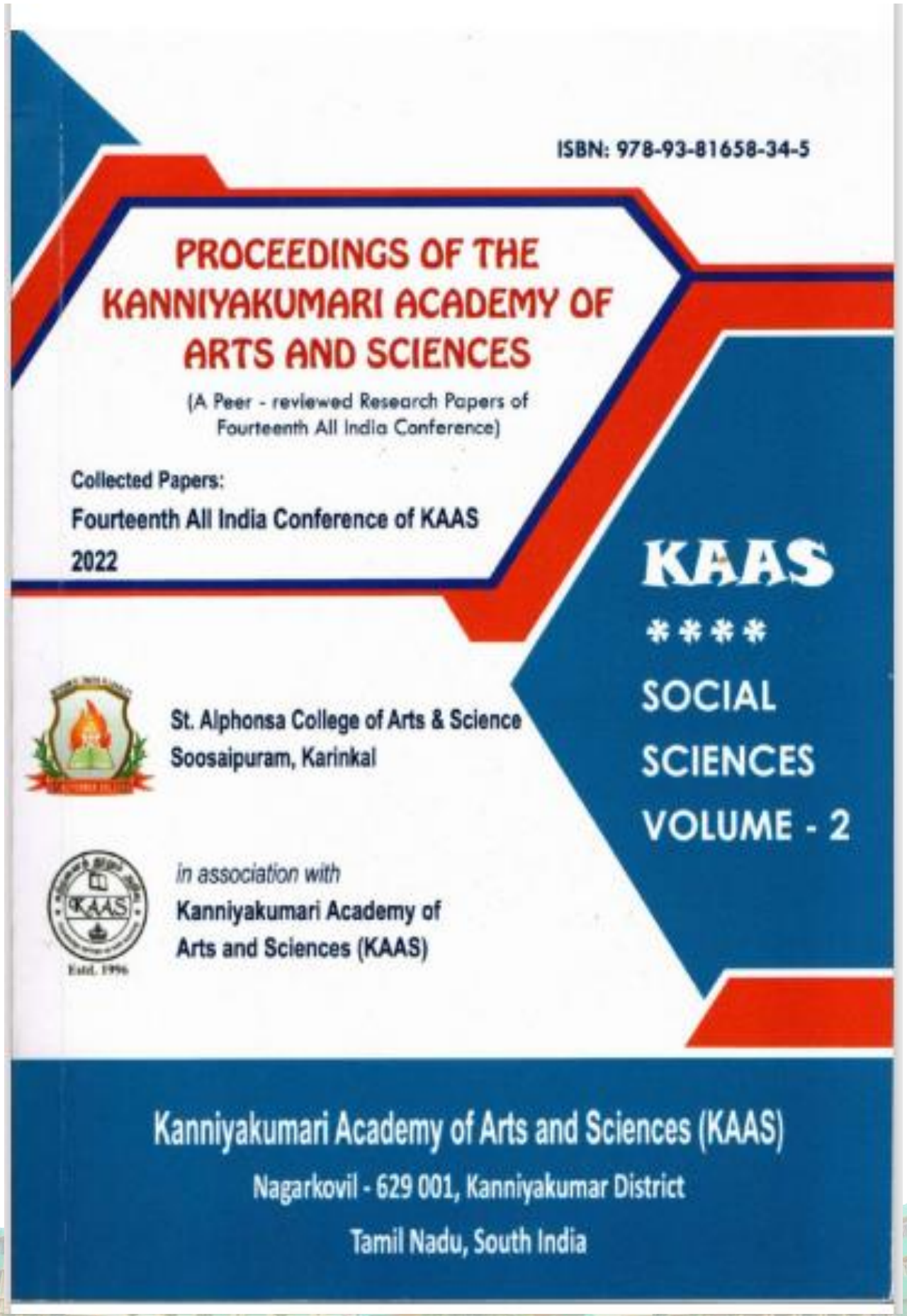
The roles of men and women in fish production, processing and marking vey but women usually play a pivotal role in Kanyakumari district. Responsibilities but face increasing workloads as men migrate to cities in search of labour, leading to a feminization of fisheries. When the catches are landed or harvested, women generally do most of the fish processing, preserving and storage as well as selling the fish at the markets.

Despite their involvement in the fishing sector, women's operations are low as compared to those of their male counterparts. They face various constraints, including credit and finance problems, a lack of training, inadequate markets and transport problems. Compared to their male counterparts, women have less access to distant markets. The simple reason here is that most women are reluctant to fisher's community women either like taking the roles of a housewife or go for some income generating occupation. The various social issues concerned by the fisherwomen. In a traditional fisher's society, women's social status is often referred with respect to that of her husband. When a fisherwomen goes for some jobs, it will be mostly counted as the inability of her husband to support the family. Because of the same reason the women usually do not enjoy the freedom to go for some work or interact with change agents, especially when the agents are males. Nevertheless, few exceptions are there who overcome the barriers of society in the struggle for existence and them, in due course develop behavioral modification, characteristics of androgyny.

Participation of Fisherwomen:

Post – capture activities, such as fish marketing and processing which women have assumed can be enhanced beyond being day-to-day enterprises that depend only on the husband's catch. However, this will require capitalization that poor fishing households cannot afford. While credit programmes for artisanal fishers exist, these are generally intended for the fisher's production activities, such as for gear improvement, construction of artificial reefs, fry gathering, crab-fattening etc. moreover, such loans are made available primarily through the male- dominated fishermen's cooperatives. Thus, there is no credit facility primarily intended to respond to the needs of the women who sell fish or process the catch. Such credit may be used to buy the catch of other fishers for bigger processing operations.

Technical assistance, training, and extension have been designated to target only the male fisher, not mindful of the real situation in the sector where women are just as active in many spheres if fish production. Women do not learn new technology nor are they consulted on technical problems they may encounter in their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GENESIS OF THE CONGREGATION OF THE SISTERS OF THE SACRED HEART OF JESUS

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Abstract

Christianity, the religion which is called in the name of Jesus Christ, is followed by majority of the people all over the world. The religious congregations established in many parts of the world during the various phases of time is the major causes for the wide spread of Christianity. Though Christianity came to India even in the first century AD, the formation of religious congregations of Christianity in India is of a very recent in nature. These religious congregations were started separately for men and women. One among them is the religious congregation of the Sisters of the Sacred Heart of Jesus. It was founded in the extreme south of India during the post independent era. This article is going to elaborate the genesis of the congregation of the Sisters of the Sacred Heart of Jesus in a historical perspective.

Keywords: *Christianity – Jesus Christ – congregation – Little Sisters of Jesus – Fr. Aloysius Navamani – Sr. Scholastica.*

Introduction

The history of Christianity is the history of the followers of Jesus Christ of Nazareth. It is a story of how they tried to live according to the teachings of Jesus Christ, how they organized themselves into the church, how they attempted to formulate what they believed in a system of doctrines, how they attempted to combat false teachings, how they witnessed to the gospel of Jesus Christ, how they suffered for the sake of the gospel and how they responded to persecution.[1] Jesus summoned his twelve disciples and gave them authority to form communities. There came the apostolic community who gathered in his name and bore the first witness to him. There is no doubt that Jesus based the continuation of this mission and the formation of an apostolic community freely chosen, around him. The missionary service therefore is a common experience and a response of total surrender besides it is a shared experience of life with Christ.[2]

St. Thomas, one of the Apostles of Jesus Christ, came to India in 72 A.D to preach the word of God abiding by the advice of Jesus Christ to go forth to all the parts at the world and spread the message of love. St. Thomas came to Tamil Nadu and died as a martyr at St. Thomas mount. His tomb is still being venerated in Mylapore at the Santhome Cathedral.[3] Obviously after the formation of many religious congregations many foreign missionaries came to India and to Tamil Nadu during the 16th, 17th and 18th centuries. They concentrated on the villages and started building big churches with foreign architecture.

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ESTABLISHMENT OF THE CONGREGATION OF THE SISTERS OF THE SACRED HEART OF JESUS

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ABSTRACT

There are so many religions in the world. One among them is Christianity. Christianity is the religion founded by Jesus Christ and is followed by majority of the people all over the world. Major causes for the wide spread of Christianity are the establishment of religious congregations and their philanthropic services. These religious congregations were established in many parts of the world during the various phases of time. Though Christianity came to India even in the first century AD, the formation of religious congregations of Christianity in India is of a very recent in nature. These religious congregations were started separately for men and women. One among them is the religious congregation of the Sisters of the Sacred Heart of Jesus. It was founded in the extreme south of India during the post independent era. This article is going to elaborate the establishment of the congregation of the Sisters of the Sacred Heart of Jesus in a historical perspective.

Key Words: Christianity – Jesus Christ – congregation – Little Sisters of Jesus – Fr. Aloysius Navamani – Sr. Scholastica.

Introduction:

The history of Christianity is the history of the life and preaching of Jesus Christ of Nazareth and the life of his followers throughout the world. It is a story of how they tried to live according to the teachings of Jesus Christ, how they organized themselves into the church, how they attempted to formulate what they believed in a system of doctrines, how they attempted to combat false teachings, how they witnessed to the gospel of Jesus Christ, how they suffered for the sake of the gospel and how they responded to persecution.[1] Jesus summoned his twelve disciples and gave them authority to form communities. There came the apostolic community who gathered in his name and bore the first witness to him. There is no doubt that Jesus based the continuation of this mission and the formation of an apostolic community freely chosen, around him. The missionary service therefore is a common

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THE CULTURAL HERITAGE OF TAMIL NADU THROUGH MONUMENTS

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Abstract

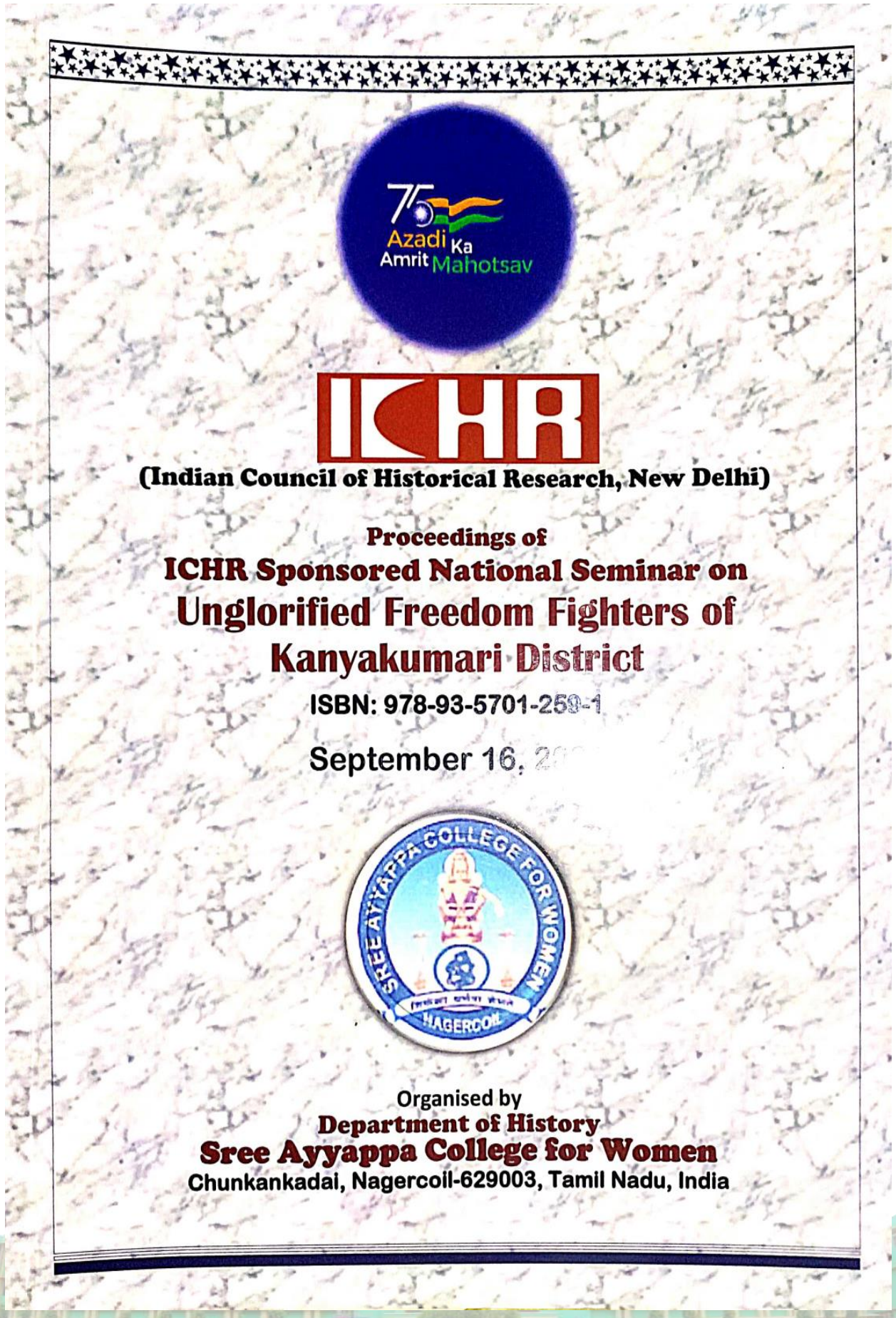
Tamil Nadu has a great tradition of history and culture. In ancient, early medieval and medieval period, a number of dynasties ruled over the Tamil land. Many of those rulers were very fond of art and architecture and gave generous patronage to men of letters, sculptors, architects and artists. This saw the Tamil land becoming a hub of many beautiful and amazing monuments, which attract tourists from all over the world to this day. These monuments speak volumes about the artistic skills and excellence of the sculptors and architects of that period. The temples with their towering gopurams and the rock cut temples leave the connoisseurs speechless. As a result of such great cultural achievements, the state of Tamil Nadu is referred to as the cradle of Dravidian culture, an ancient culture distinguished by unique languages and customs. Many towns and cities of Tamilnadu are associated with beautiful monuments. Mahabalipuram is one of those places, which boast of numerous architectural wond

ers. The famous Arjuna's Penance is one such monument at Mahabalipuram. Chennai, the capital city, is home to many monuments such as the Kamaraj Memorial House, Bharathiyar Illam, Madras War Cemetery, Rippon Building, Vivekananda Illam and the Valluvar Kottam while Madurai boasts of Thirumalai Nayak Mahal, a classic example of Indo-Saracenic style. The Rock Fort temple is a prominent landmark in Tiruchirappalli.

Keywords: Monuments,Architecture,Cultural,Temples,Fort,Temple

Introduction:

Tamil Nadu is one of the largest states and has a population of more than seven crores with a great past and a great tradition. It's hoary past can be dated back to the times of Palaeolithic culture which could be dated back to about Fifty Thousand years ago. Tamil civilization is considered one of the oldest and greatest among the world civilizations. It is also a living civilization whose tradition arise from its past. The monuments to be considered important in the first criteria are the one's which are archaeologically and architecturally important and second criteria monuments may be classified in terms of its attractiveness and easy accessibility. As the monuments of the first criteria are mostly under the control of state and central government agencies, these are very well preserved due to which the concentrating efforts should be on the second priority monuments though their attractiveness and accessibility are with ease, there needs to be the improvement in the basic amenities in the basic infrastructural facility to the visitors. The monuments of Tamil Nadu could be classified categorically and invariably on the basis of their size, style of construction, periodization and characters ranging from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A Brief Introduction to Women's Participation in the Freedom Movement in Tamil Nadu

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Abstract

India was once considered as the world's Eastern and glorious destination. Therefore, greatest rulers like Alexander wanted to capture India. This was the condition which prevailed till the 16th century. But afterwards when the Britishers saw the political turmoil in India, they wanted to become the masters of India and drained the wealth of India for their benefit and betterment. When the Indians realized that their wealth was being drained, they started agitating against the British. In these agitations not only men but also women participated in large numbers. This article gives a brief list of women freedom fighters who vehemently fought for the cause of the nation.

Introduction

Women played a big part and key role in our struggle for independence. As it is said 'there will be a woman behind the success of every man'. So also we can say there were women behind the success of India's independence. While some went out in the streets to protest openly, others secretly acted as messengers to convey important information to the underground movements. There were women those who contributed the freedom struggle with small steps like switching from silk sarees to khadi sarees to promote Swadeshi Movement. Women had contributed for freedom struggle through politics, music, dance, education, medicine etc.

Various Contributions of Women

Asalambikai Ammaiyar of Thindivanam was a great reformer.She followed Gandhiji's Ahimsa and followed him by singing Gandhi Puranam songs. Moovaloor Ramamirtham of Thiruvarur fought against Devadasis system and promoted women in active role in freedom struggle. Thillaiyadi Valliyammal had struggled for women's freedom and human rights which made many liberated women to fight openly for the liberation of India. Ambujammal of Chennai is another great freedom fighter. She opposed the British government directly and boldly. She blocked the shops which were selling foreign goods. The contribution of Vai.Mu. Kothai Nayaki Ammal was very effective. She was an eminent patriot. She gave out world news and news about freedom struggle to the house wives through her magazine 'Jeganmohini'.

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Famous Women Freedom Fighters in Tamil Nadu

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Abstract

Tamil Nadu has great tradition of heritage and culture that has developed over 2000 years still continues to flourish. The women have also actively participated in the various movements in Tamil Nadu. The freedom fighters are Tamil Nadu took part in the Non- Co-operation Movement, Civil Disobedience Movement, Vedaranyam Salt Sathyagraha, Individual Sathyagraha, Quit India Movement, etc. In the British period women Education was encouraged and this resulted change in the position of women. The educated women raise the voice against British domination and entered into the freedom struggle. Women occupy a significant role in the freedom struggle. This paper Famous Women Freedom Fighters in Tamil Nadu deals about Women Freedom Fighter of Tamil Nadu and various contributions for freedom struggle.

Keywords: Women freedom fighters, Freedom struggle, National freedom movement, British rule

Introduction

Many women freedom fighters were participated in the freedom movement in Tamil Nadu. The sacrifice made by the women of India will occupy the foremost place. They fought with true spirit and undaunted courage and hardship to earn Indian freedom. When most of the women freedom fighters were in jail the women came forward and took charge of the struggle. The list of great women whose names have gone down in history for their dedication and undying devotion to the service of India may be a long one. The entire history of the freedom movement is replete with the sag of bravery, sacrifice and political sagacity of great men and women of the country.

Tamil Nadu played a vital role in the Indian freedom movement many leaders have shed their life for the cause of freedom in the country. Because of their sacrifice Indian got liberation

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ECONOMIC CHALLENGES

OF COVID-19 ON HEALTH CARE AND EMPLOYMENT SECTOR

Dr. J.M. Vinitha Charles
Dr. S. Anne Perpet Sophy
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OPPORTUNITIES AND CHALLENGES OF HEALTH CARE SECTOR

S. Vimal Dolli

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Abstract

India's healthcare industry is one of the fastest-growing sectors. This growth will be fuelled by rising incomes, increased demand for better healthcare, diseases induced by lifestyle changes, wider insurance cover and rising health awareness among consumers. The country has also become one of the leading destinations for high-end diagnostic services.It is one of the countries with the lowest per capita expenditure on healthcare cost as percentage of GDP and cost of healthcare services in the world. However, health inequity arises out of inadequate access to healthcare services as well as lack of affordability for large sections of the population that are socially and economically backward making barely enough money for survival.

Introduction

The Indian healthcare sector was adversely impacted in financial year 2020-21 with the sudden outbreak of the pandemic. An uncertainty engulfed the sector, adding distress to the already existing economic slump. The virus outbreak resulted in a 70-80% drop in footfall, test volumes. Despite the initial blow, the healthcare system in India managed to withstand the pandemic. The robustness of the Indian healthcare system helped it to quickly innovate and adapt to the rapid transformation. With steep fall in hospital footfalls, the healthcare sector shifted to virtual care, remote medicine, tele consultations and remote monitoring. India's healthcare industry has been recording a Compound Annual Growth Rate (CAGR) of around 22% since 2016, as per NitiAyog. At this rate, it is expected to reach USD 372 Billion in 2022. Healthcare has become one of the largest sectors of the Indian economy in terms of revenue and employment. In 2017, the Indian healthcare sector was the fourth largest

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CHALLENGES FACED BY THE HEALTH CARE INDUSTRY

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Abstract

Medical and technology innovations have together produced radical service delivery advancements. Despite monumental improvements, society is only experiencing the beginning phase of this process. While today is a time of growth, it is also a time of growing pains. Duly, the medical field currently faces four prominent challenges: service integration, service quality, Internet connected medical device security and publicly sustainable pharmaceutical pricing. While innovations promise to change healthcare service delivery forever, it will take some time before the advancements reach their full potential. This paper highlights the problems and challenges faced by the health care industry.

Introduction

Health economics is a branch of economics concerned with issues related to efficiency, effectiveness, value and behavior in the production and consumption of health and healthcare. Health economics is important in determining how to improve health outcomes and lifestyle patterns through interactions between individuals, healthcare providers and clinical settings. In broad terms, health economists study the functioning of healthcare systems and health-affecting behaviors such as smoking, diabetes, and obesity. The healthcare industry faces critical issues including co-payments that exceed the cost of ethical drugs, general cost inflation in ethical drugs, establishing potential cost efficiencies in operations that might help stabilize costs, rising rates for physicians' malpractice insurance, and fear by seniors that they will be dropped by their Health Maintenance Organization (HMO). Costs for both medical procedures and hospital stays have also escalated over the decade and are forecast to rise in 2003 and thereafter. It is imperative for individuals,

ECONOMIC CHALLENGES

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ECONOMIC IMPACT OF COVID-19 ON EMPLOYMENT SECTOR IN INDIA

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Abstract

Employment is a serious problem which is being experienced by most of the countries throughout the globe. Employment is like a giraffe which is easier to make out than to describe. The crisis of employment has been in existence for a long time. Nevertheless, in the developed nations it was experienced in its severe form at the time of the great depression while in the developing nations it was after the Second World War. The past few years, there has been a slowdown in the growth of employment in India despite the boost in the economic sector. At the same time due to this COVID-19 pandemic lockdown, there had been a devastating effect on the employment rate in India as most of the private companies have fired their employees. The main sufferers of this lockdown are the informal sector employees as the majority of them started losing jobs since construction works were closed. With no capital, thousands of people deserted cities, marching to their homelands for several hundreds of miles away in the absence of government transportation, which showed their intensity of anguish. This paper aims to delineate the impact of COVID-19 on unemployment in our study area. For analyzing this research we mostly relied on secondary data collected through books, journals, newspapers, authentic internet sources, etc. The outcome of this research will be helpful for academicians, researchers, and policymakers in related studies.

Introduction

Undoubtedly the COVID 19 pandemic in India has very severely impacted, rather negatively, the employment figures of India since early 2020.

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IMPACT OF COVID-19 ON THE CONSTRUCTION SECTOR

Ms. J. Josephine Shiny

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Abstract

The COVID-19 pandemic has devastated the world of work. Its impact, which varies across sectors, has been significant in the construction sector. As construction is sensitive to economic cycles, construction enterprises and workers are particularly vulnerable to the drastic decline in economic activity resulting from the pandemic. Increased health risks associated with COVID-19 have exacerbated decent work deficits in the sector. On the upside, however, construction has great potential to stimulate recovery, thanks to its ability to create jobs. In turn, recovery measures can support the sector's transformation to sustainability and digitalization. Tripartite cooperation and social dialogue, together with the application of international labour standards, are key to promoting a human-centred recovery from the crisis. Governments, employers' and workers' organizations, and other sectored stakeholders, are therefore responding to the COVID-19 pandemic swiftly, with an array of measures intended to support the construction sector. Construction sector activities include the construction, renovation, maintenance and demolition of buildings as well as work conducted in civil engineering projects such as roads and utility systems.

Introduction

Construction sector activities include the construction, renovation; maintenance and demolition of buildings as well as work conducted in civil engineering projects such as roads and utility systems. A variety of market segments are involved, including architecture and design, equipment and material manufacture, transportation, and energy and waste management. Value

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ECONOMIC IMPACT OF COVID 19 ON EMPLOYMENT IN DIFFERENT INDUSTRIES

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Abstract

The impact of corona virus pandemic on India has been largely disruptive in terms of economic activity as well as a loss of human lives. Almost all the sectors have been adversely affected as domestic demand and exports sharply plummeted with some notable exceptions where high growth was observed. An attempt is made to analyse the impact and possible solutions for some key sectors. This research examines the impact of the lockdown announcement imposed by the Indian government on the different leading industries of the economy such as pharmaceuticals, power, contraction, auto mobiles, aviation, hotels and tourism industry, insurance industry, entertainment industry, energy, etc.

Introduction

In addition to significant health concerns, the spread of the corona virus will impact the Indian and global economy. The International Monetary Fund has announced it will provide additional support to poorer countries by way of grants and debt relief. So, the impact of Covid-19 is severe on the economic structure of the world because businesses are shutting up shops. Specifically, experts expect that technology companies, apparel makers and industrial-equipment manufacturers, as well as shipping companies, hospitality chains, airlines and the luxury goods industries will be among those hardest hit by the corona virus.

Key Words: health concerns, corona virus, businesses, shutting up, Indian and global economy.

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ECONOMIC IMPACT OF COVID-19 ON HEALTH CARE AND EMPLOYMENT SECTOR

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Abstract

The Indian health care sector was adversely impacted in financial year 2020-21 with the sudden outbreak of the pandemic .An uncertainly engulfed the sector, adding distress to the already existing economic slump. prior to COVID-19 unsettling the world, the Indian economy was already facing turbulent times .while economy was anticipated revive after drop in 2019.the worldwide lockdowns ,travel bands ,trade restrictions ,logistic and supply chain disruption ,caused a contraction of 3.3%in 2020.The COVID-19 induced pandemic forced the world economy to witness a major shakeup and exposed various flaws in business operations .This led to a global recession, the magnitude of which was surpassed only by the two world wars .causing severe loss of life and jobs, the pandemic pushed millions into extreme poverty.

Introduction

India has vast economic landscape and socio-economic livelihood it has been most resilient in the past to external hazards of environment. However, the unexpected COVID-19 outbreak brought in ambiguity. It directly impacted he Gross Domestic Product of the nation sustaining one of the worst economic contraction in 2020.Indias economy is however ,showing decisive signs of a V-shaped recovery in 2021.India is now better prepared for a healthy recovery with positive sentiments across the nations with rapid changes in Government policies to revive the economy stimulus package vaccination drives and eased lockdowns ,the nation is slowly recuperating. This has brought back consumer confidents robust financial market Indian health carts, an uptick in manufacturing and exports.

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THE IMPACT ON COVID – 19 IN HOUSEHOLD SECTOR IN INDIA

Dr. A. Babila Kingsly

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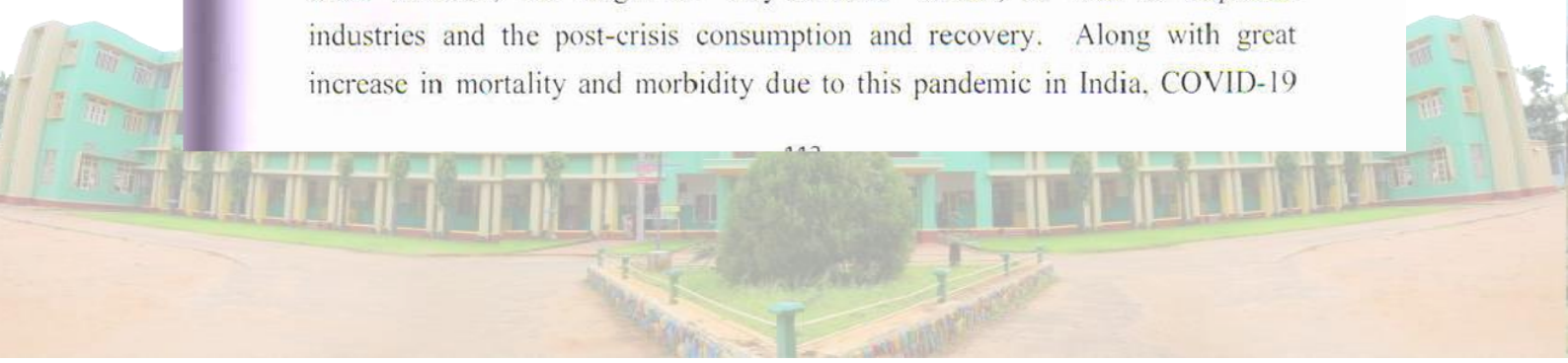
Abstract

The COVID-19 pandemic has severely disrupted construction, made it difficult for many households to pay for shelter, and seriously hurt the housing sector. Governments have responded with a wide array of measures to protect tenants and mortgage-holders, as well as support builders and lenders. This note mobilises web-search data to shed new light on the impact of the crisis on the construction sector. It then takes stock of measures taken by governments and argues that some of the relief could, if not duly phased out as planned, create unintended inefficiencies and notably make housing supply less responsive to changes in demand and the evolving needs of society. The COVID-19 pandemic has caused a massive economic shock across the world due to business interruptions and shutdowns from social-distancing measures. To evaluate the socio-economic impact of COVID-19 on individuals, a micro-economic model is developed to estimate the direct impact of distancing on household income, savings, consumption, and poverty.

Keywords: *Household Sector, COVID-19, Challenges*

Introduction

COVID-19 has led to severe and acute losses in many economies around the world due to illness and government-mandated social distancing orders. The impact and duration of the economic crisis on individual households, resulting from the pandemic, is difficult to predict as many uncertainties surround the crisis duration, i.e. length of "stay-at-home" orders, as well as impacted industries and the post-crisis consumption and recovery. Along with great increase in mortality and morbidity due to this pandemic in India, COVID-19



ECONOMIC CHALLENGES

OF COVID-19 ON HEALTH CARE AND EMPLOYMENT SECTOR

Dr. J.M. Vinitha Charles
Dr. S. Anne Perpet Sophy
Ms. J. Josephine Shiny

POST GRADUATE & RESEARCH CENTRE
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This book is a collection of research articles submitted by Professors, Research Scholars and Students for presentation in the National Seminar organized by the PG and Research Department of Economics.

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CHALLENGES FACED BY HEALTH CARE AND EMPLOYMENT SECTOR

S. Chithralekha[1] & Dr. S Jeni Sanjana[2]

[1]Ph.D Research Scholar Holy Cross College {Autonomous}, Nagercoil
[2]Assistant Professor, Department of Economics, Holy Cross College (Autonomous) Nagercoil

Abstract

After declaring the outbreak of COVID-19 as pandemic by world Health Organisation on 11nth march 2020,the total numbers of confirmed cases are exponentially increasing and crippling almost every nation in respect to its health status and economic status. Indi spending only 1.28% of its GDP the health care sector had been stretched to its fullest capacity.

Introduction

India's healthcare sector faced a stern test as they struggled with shortage of beds and oxygen during the two waves of the COVID-19 pandemic. The intensity of the pandemic was such that it exacerbated the existing scarcity of hospital beds in India 21 Nov 2021.Since world Health Organisation declared the pandemic of COVID-19 on 11nth march 2020, the total number of cases is increasing at an alarming rate which on 9 June 2020 stands at 7,039,918 globally. This pandemic is not only affecting the health status of the nation but also has a tremendous effect on the economy of the healthcare sector.

Challenges Faced By Different Sectors

Health Care Sector: The countries spending upwards of 8-10% of GDP towards, the health sector are crumbing in the current epidemiologic situation. India in comparison to that country is only spending 1.28% of the GDP which is enough to give shivers to the government.

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IMPACT OF COVID-19 ON EMPLOYMENT SECTOR WITH SPECIAL REFERENCE TO AUTO DRIVERS IN NAGERCOIL TOWN

Dr. S. Jeni Sanjana[1] & Dr. Sr. Sophy[2]

[1 & 2]Associate Professors, Department of Economics, Holy Cross College (Autonomous) Nagercoil

Abstract

The catastrophic intervention of the pandemic has left every sector in ruins and changed every walks of life. One such ordeal faced by someone around us is the auto-drivers. Their life took a major toll cause the lockdowns crushed their mode of income. The approaches used to curb the spread of pandemic such as social distancing and other mandates made their life hectic forcing them to look for new jobs. Auto-rickshaws or three-wheelers have become a crucial part of the mobility ecosystem in urban India. One of the most economical modes to travel, autos are popular within town particularly for the middle class for short and medium-distance trips within a town. Autos primarily provide first and last-mile connectivity to public transport systems, like suburban railways, metro railways, and regional bus services as being an affordable and time-saving mobility option. Their utilization pattern, however, varies from city to city. The COVID-19 pandemic unleashed an unprecedented world crisis. The restrictions introduced to mitigate the spread of the virus affected millions of workers and businesses across the world. This paper shows the impact of COVID-19 on auto drivers.

Introduction

The catastrophic intervention of the pandemic has left every sector in ruins and changed every walks of life. One such ordeal faced by someone around us is the auto-drivers. Their life took a major toll cause the lockdowns crushed their mode of income. The approaches used to curb the spread of pandemic such as social distancing and other mandates made their life hectic forcing them to

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A STUDY ON THE SOCIO ECONOMIC FACTORS IN THE EMERGENCE OF WOMEN ENTREPRENEURS IN KANNIYAKUMARI DISTRICT

Dr J.M. VINITHA CHARLES,
Assistant Professor, Dept. of Economics,
Holy Cross College,(Autonomous), Nagercoil

ABSTRACT

Women constitute around half of the world's population. So it is in India too. There are therefore, regarded as the better half of the society. In traditional societies they were confined in to the four walls of the house performing household activities. In modern societies they have come out of the four walls to participate in all sorts of activities. Women have been performing exceedingly well in different spears of activities like academic, politics, administration, social work and so on. They have started plunging into industry also and running their enterprises successfully. Now women have emerged as an important part of industrial growth. To achieve equal status with men women have to come out of their traditional roles and responsibilities and have to create an identity for themselves assuming a variety of functions. To make this dream a reality women have to consider their labour not as drudgerybut as a delight. The participation of women in the economic development process can be mainly categorized into four segments namely employment in unorganized sector, employment in an organized sector, self employment and entrepreneurs. This paper highlights the socio economic factors in the emergence of women entrepreneurs in Kanniyakumari district.

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WOMEN ENTREPRENEURSHIP IN INDIA

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Abstract

In the era of globalisation, a nation's ability to expand economically is heavily dependent on the involvement of women in its progress. In a male-dominated country like India, it is extremely difficult for a woman to consider starting her own business. This paper emphasises the significance of female entrepreneurship and focuses on the role of female entrepreneurs in the Indian economy. Because customs are highly ingrained in Indian society, educated Indian women must go a long way to gain equal rights and positions. These female leaders are confident, persuasive, and prepared to take chances. They have survived and succeeded in this cutthroat competition due to their hard work, devotion, and tenacity.

Introduction

Women entrepreneurs and their increasing presence in India have had a significant influence on the country's social and economic demographics. Women's labor-force participation has lifted millions of families out of poverty and resulted in employment growth. Women are highly renowned for their leadership abilities and hence dominate in new-age businesses such as electronic manufacturing, where more than half of the personnel are women.

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An Economic study of Health Expenditure for Working Women in South Thamaraikulam Village

Dr S. VIMAL DOLLI,
Assistant Professor, Department of Economics,
Holy Cross College (Autonomous), Nagercoil.

Abstract

Health means a complete state of physical, mental, and social well-being including the absence of illnesses is one of the goals most valued by human beings. Good health plays a substantial role in economic development. Good health increases productivity, income and standard of living. India spends about 5.1 per cent of its GDP on health. Private sector in India accounts for more than 80 percent of all health spending, one of the highest proportions of private spending found anywhere in the world. Most of private spending is on curative care; consultations, diagnostics and in-patient care. This out of pocket expenditure puts enormous financial burden on individuals. The study deals with an economic study of health expenditure for working women in South Thamaraikulam village.

Introduction

Health is a basic need along with food, shelter and education and is a precondition for productivity and growth. Health services have a major influence on the well-being of individuals and societies. Health interventions can lead to economic growth and reduce inequality in developing countries (WHO, 2001).Health is an essential input for the development of human resources and the quality of life and in turn the social and economic development of the nation

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AN ECONOMIC STUDY ON AARI EMBROIDERY BUSINESS IN NAGERCOIL TOWN

SANTHIYA.T1 & SAUNTHARYA. T2

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AN ECONOMIC STUDY ONAARI EMBROIDERY BUSINESS IN NAGERCOIL TOWN

ABSTRACT

Aari work traces out its emergence way back in the 12th century, which marked the rule of the Mughal emperors. Aari work is a delicate and intricate form of hand embroidery which requires great efficiency and skills for the stitches of aari work the embroiderer needs the usage of both his hands; hence instead of using the normal embroidery hoop, adda (frame) are used. The frame is a wooden adjustable adda with four wooden bars, used to stitch the fabric for embroidery. The fabric is attached to the frame mainly for doing aari work. Aari is a type of needle with a hook at its tip to do the embroidery while working on adda. A pen like needle which resembles the shapes of a crochet needle, gives rise to an intrinsic form of artwork called the 'Aari Work'.

Key words: Aari workembroidery, frame, wooden bars, needle, and fabric.

1. INTRODUCTION

Aari work has always been considered one of the most tedious forms of needle work. Today with the help of advanced stitching procedures, and the role of more artisans, it takes lesser time to complete the embroidery work on an outfit. It may also include decorating materials other than threads, like pearls, beads, stones and sequins. Fundamental stitches of embroidery are running stitch, cross stitch and satin stitch, surface embroidery technique are more economical. Originated in the Mughal era, Aari work embroidery uses beads and stones to create a sparkling effect on the garments. Aari work is considered as the most time consuming needle and thread work. Today, with the help of advance technologies, Aari embroidery work can be completed in lesser time.

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Socio Economic Conditions Of Jobless People Due To Covid-19 With Special Reference to Nagercoil Town In Kanyakumari District

J. Josephine Shiny
Assistant professor
Department of Economics
Holy cross college (Autonomous), Nagercoil.

Abstract

The economic problems need special attention in the context of jobless people due to corona. Available research studies point out that difficulties of jobless people due to corona. The most devastating impact of the virus and the lockdown had been on the economically backward classes, with limited access to proper healthcare and other resources. After the lockdown means that crores of people, and their families, are barely able to survive. The rise in unemployment due to COVID-19 relates not only to the unemployed, but also to other family members.

Introduction

A significant change in inequality in income and wealth is possible only in a longer term perspective. Employment structure of an economy is the normal instrument that can cause a change in inequality either way, i.e. an increase or a decrease in the inequality. Other economic instruments such as target group policies and programmes have a short term impact, but the redistribution through employment is sustainable. Since the

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Digital Payments System in India
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Dr. S. Sahayaselvi is a renowned professor working in the Department of Commerce, Holy Cross College(Autonomous), Nagercoil for the past 17 years. She has published 50+ papers in the referred journals with high impact factor, UGC care list: group I and She has attended several national and seminars and published 13 papers in proceedings. She goes as a resource person to various schools and colleges in Tamilnadu which 3 talks in the radio station in Konam, Kumari District. She was the Head of the ment for the past 10 years in the self-financed stream and at present she as an assistant professor in the aided stream. She has cleared NET in 2011. She is also a professional counsellor. To her credit she has 2 minor projects and published two books. She is the research from 2017 onward. She is a proud recipient of many prestigious like Dr.A.P.J. Abdul Kalam Rastriya Puraskar-2019 by Glacier Journal foundation, Global Management Council, Ahmadabad. Best Award 2020 by ESN IND-SL International Award, Kandy, Sri and Distinguished Women- 2020 by Venus International Foundation, to name a few Dr. S. Sahayaselvi is a religious nun belonging to the egation of the Sisters of the Cross of Chavanod, France. At present the founder of CrossCom A to Z Tailoring Unit for Women under rt-up scheme of MHRD.

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A Study on Various Saving Schemes Provided By Post Office

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Abstract

Post office savings are one of the mode for customers to save their valuable earnings. Post office savings schemes are secure, risk free and attractive investment option for the small investors. There are number of attractive schemes, well designed to meet the individual requirements of different small savers. It provides numerous benefits to the investors. The major instruments of post office saving schemes enjoy tax benefits such as exemption of investment contribution or interest income from tax or both up to certain limits. The main aim is to study the various savings schemes offered by post office to its depositors.

Keywords: Post Office, Savings, Schemes, Depositors

INTRODUCTION

India Post is a government operated postal system in India, which is under the jurisdiction of Department of Post, Ministry of

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ECONOMIC CHALLENGES

OF COVID-19 ON HEALTH CARE AND EMPLOYMENT SECTOR

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Dr. S. Anne Perpet Sophy
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POST GRADUATE & RESEARCH CENTRE
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This book is a collection of research articles submitted by Professors, Research Scholars and Students for presentation in the National Seminar organized by the PG and Research Department of Economics.

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A STUDY ON IMPACT OF COVID-19 PANDEMIC ON UNEMPLOYMENT WITH SPECIAL REFERENCE TO POZHIKARAI VILLAGE IN KANYAKUMARI DISTRICT

Dr. M. Charles Dayana

Assistant Professor of Commerce, Holy Cross College(Autonomous), Nagercoil

Abstract

Unemployment is a serious problem which is being experienced by most of the countries throughout the globe. Unemployment is like a giraffe which is easier to make out than to describe. The crisis of unemployment has been in existence for a long time. Nevertheless, in the developed nations it was experienced in its severe form at the time of the great depression (1930's) while in the developing nations it was after the Second World War (1945). The past few years, there has been a slowdown in the growth of employment in India despite the boost in the economic sector. At the same time due to this COVID-19 pandemic lockdown, there had been a devastating effect on the unemployment rate in India as most of the private companies have fired their employees. The main sufferers of this lockdown are the primary sector employees as the majority of them started losing job.. This paper aims to delineate the impact of COVID-19 on unemployment in our study area. For analyzing this research we mostly relied on primary and secondary s data. Primary data were collected using questionnaire under survey method. Data have been collected from 100 respondents of Fishermen in Pozhikarai Costal village. Secondary data were collected through books, journals, newspapers, authentic internet sources, etc. The outcome of this research will be helpful for academicians, researchers, and policymakers in related studies.

Keywords: Unemployment, COV

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A STUDY ON VARIOUS SERVICES PROVIDED BY POST OFFICE

A.L. Jaheera Thasleema
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Holy Cross College (Autonomous)
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Post office is the public department or corporation responsible for postal services and in some countries it acts as a telecommunication. Indian postal service mainly concerned with collection, sorting and distribution of letters, parcels, packages etc. A post office is a public facility and a retailer provide mail services, such as accepting letters and parcels, providing post office boxes, selling postage stamps, packaging, and stationery. Post offices may offer additional services, which vary by country. A number of other services are also provided to general public as well as business enterprises. The main aim is to study the various services provided by post office to its customers.

Keywords: Customers,Post Office, Service

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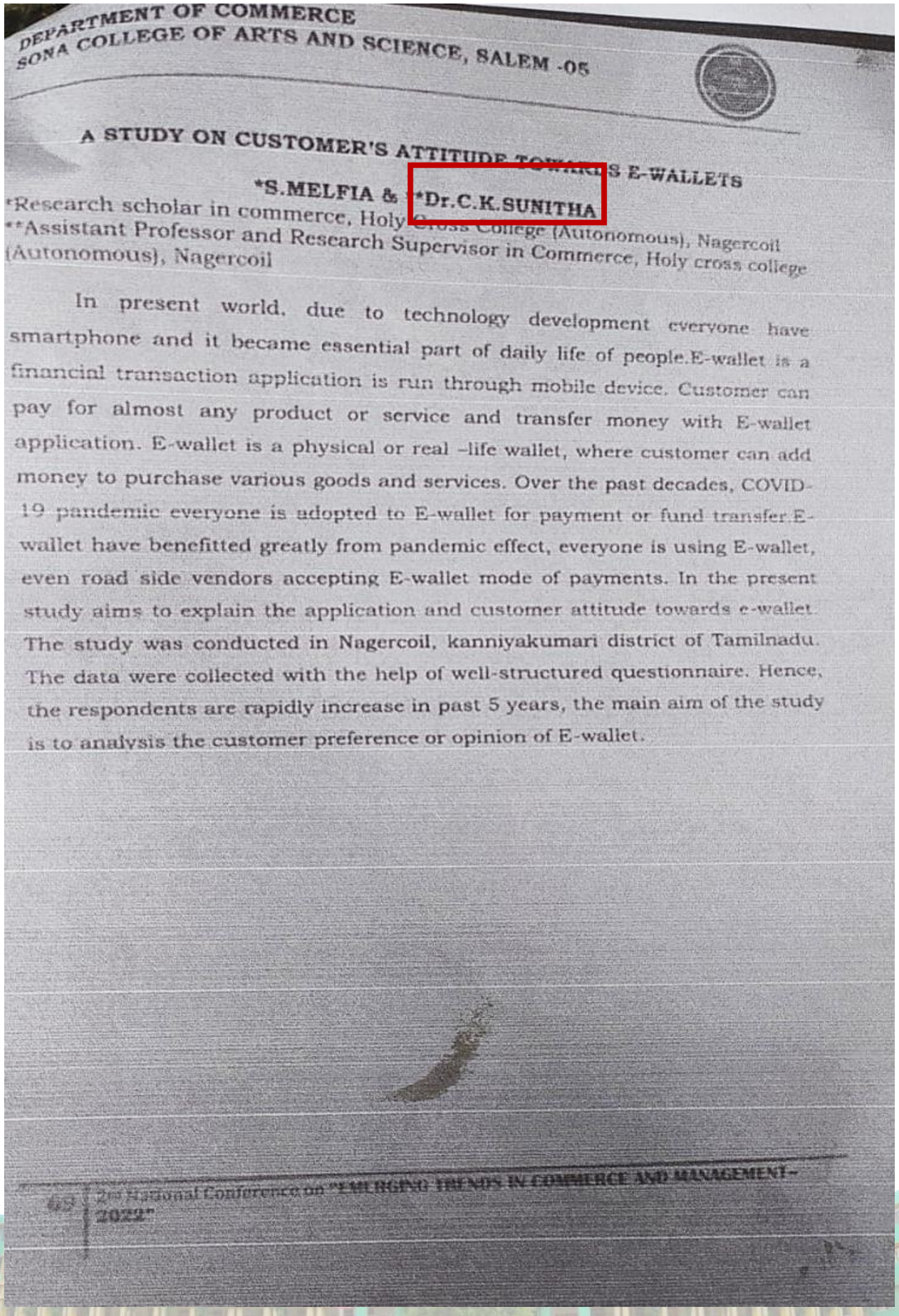

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A STUDY ON CUSTOMER'S ATTITUDE TOWARDS E-WALLETS

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**Assistant Professor and Research Supervisor in Commerce, Holy cross college (Autonomous), Nagercoil

In present world, due to technology development everyone have smartphone and it became essential part of daily life of people.E-wallet is a financial transaction application is run through mobile device. Customer can pay for almost any product or service and transfer money with E-wallet application. E-wallet is a physical or real –life wallet, where customer can add money to purchase various goods and services. Over the past decades, COVID-19 pandemic everyone is adopted to E-wallet for payment or fund transfer.E-wallet have benefitted greatly from pandemic effect, everyone is using E-wallet, even road side vendors accepting E-wallet mode of payments. In the present study aims to explain the application and customer attitude towards e-wallet. The study was conducted in Nagercoil, kanniyakumari district of Tamilnadu. The data were collected with the help of well-structured questionnaire. Hence, the respondents are rapidly increase in past 5 years, the main aim of the study is to analysis the customer preference or opinion of E-wallet.

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A STUDY ON EMOTIONAL INTELLIGENCE ON INVOLVEMENT IN EMPLOYEE PERFORMANCE IN NBFCs

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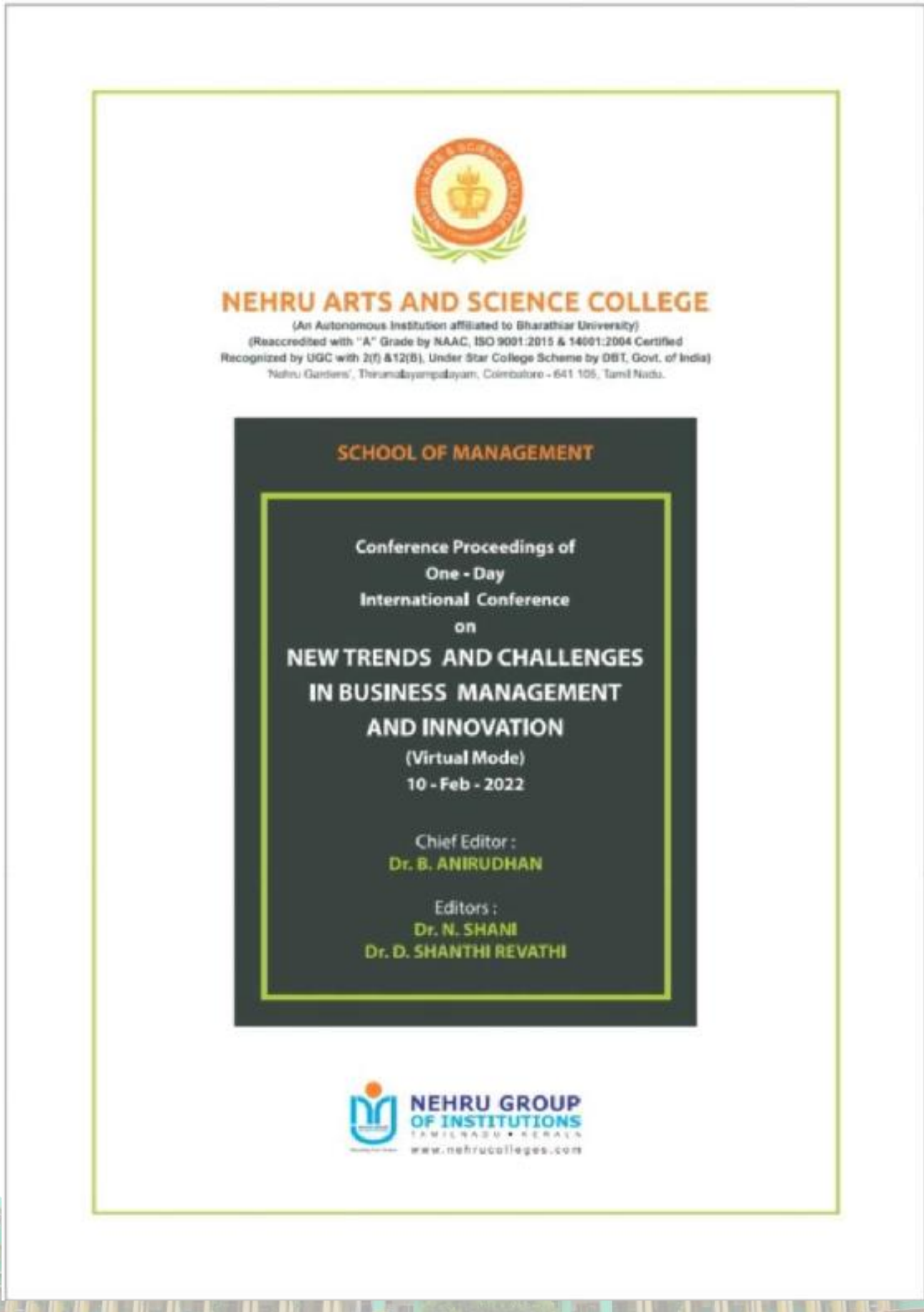
Abstract:
It is all around acknowledged snippet of data that intelligence is difficult to characterize. Be that as it may, we come to comprehend it through different methods for estimations. Notwithstanding, positive to this point, emotional intelligence has come to mean an estimation of feelings. The idea of emotional intelligence (EI) has pulled in considerable enthusiasm of authoritative idea. The legitimacy of EI is basically relies upon the circumstance and focal point of intrigue. In various exact examinations, it has been seen that emotional intelligence and its related abilities are related with greatness in close to home, relational, performance and hierarchical objectives. It is an undeniably critical thought in human asset arranging, work profiling, enlistment and so forth. Contends about the positive impact of emotional intelligence (EI) on performance front are exceptionally various, both in business and Scientific writing. In this investigation, utilizing a trademark initiation system, we set forward the dimension and the connection between emotional intelligence and employee performance. To verify the exploration by utilizing fitting measurable instruments, an example of 120 employees were dissected who are working in various kinds of associations in NonBanking sector The rousing result of the exploration demonstrates that employees having higher emotional intelligence demonstrate a superior nature of work performance when contrasted with their partners. To be increasingly obvious, emotional intelligence positively affects employee performance. Furthermore, emotional recognition capacity hints at higher occupation performance and affirmed that EI is a critical indicator of employee performance.

Key Words: Employee performance, Emotional intelligence

INTRODUCTION

Presentation Emotional Intelligence is a standout amongst the most imperative ideas acquainted with brain research and the executives in the most recent decade. Emotional intelligence may characterized as a capacity, limit, expertise, or self-saw capacity to recognize, survey, and deal with the feelings of one's self, of others, and of gatherings.



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A STUDY ON THE COSEQUENCES OF PERFORMANCE APPRAISAL OF EMPLOYEES WORKING IN INDIAN OVERSEAS BANK, NAGERCOIL

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ABSTRACT

Performance appraisal is the systematic evaluation of an individual performance on the job and the potentiality for the development. It also plays an important role in the administrative decisions relating to promotions, fringes, payoffs and merit pay. In general, most of the employees are not satisfied with the performance appraisal systems followed in their organisation. Indian Overseas Bank handles more responsibility and identifies its key performers for promoting and nurturing the employees' effectiveness as well as for its survival and growth in the present scenario. This paper is an attempt to study the consequences of performance appraisal by applying some strands of critical thinking to performance appraisal practices and discourses in Indian Overseas Bank, Nagercoil. The study is conducted using both primary and secondary data. A well-structured questionnaire was presented to the respondents. The result shows that salary increase, promotion, improvement, sharing the burden, criticism and motivation are the most transpired consequences of the employees working in Indian Overseas Bank, Nagercoil.

Keywords: Indian overseas bank, employees, performance appraisal, salary…

INTRODUCTION

In almost every organisation, performance appraisal is highly important to the employees to evaluate his/her performance regularly. The objectives of the human resource development programme will be realized by conducting performance appraisal which brings the rationality in management. If an organisation wants to maximize its effectiveness, then it must have tools to measure the performance of the employees and discriminate them between effective and not so effective employee. The appraisal systems are structured, formal and become an integral part of daily activities in other instances.

Performance appraisal is the systematic evaluation of employees' performance and to understand their abilities for further growth and development. Appraising the performance is a method of evaluating the behaviour of employees in the work spot, normally including both the quantitative and qualitative aspects of job performance. Performance appraisal may be defined as a structured formal interaction between a subordinate and a supervisor. It usually takes the form of a periodic interview in which the work performance of the subordinate is examined and discussed with a view to identifying weaknesses and strengths as well as opportunities for improvement and skills development.

HISTORY OF PERFORMANCE APPRAISAL

The history of performance appraisal roots in the early 20th century which can be traced to Frederick

Social Media Advertisements:
An Influence on Buying Behaviour
Dr.J.Jani Mercybai
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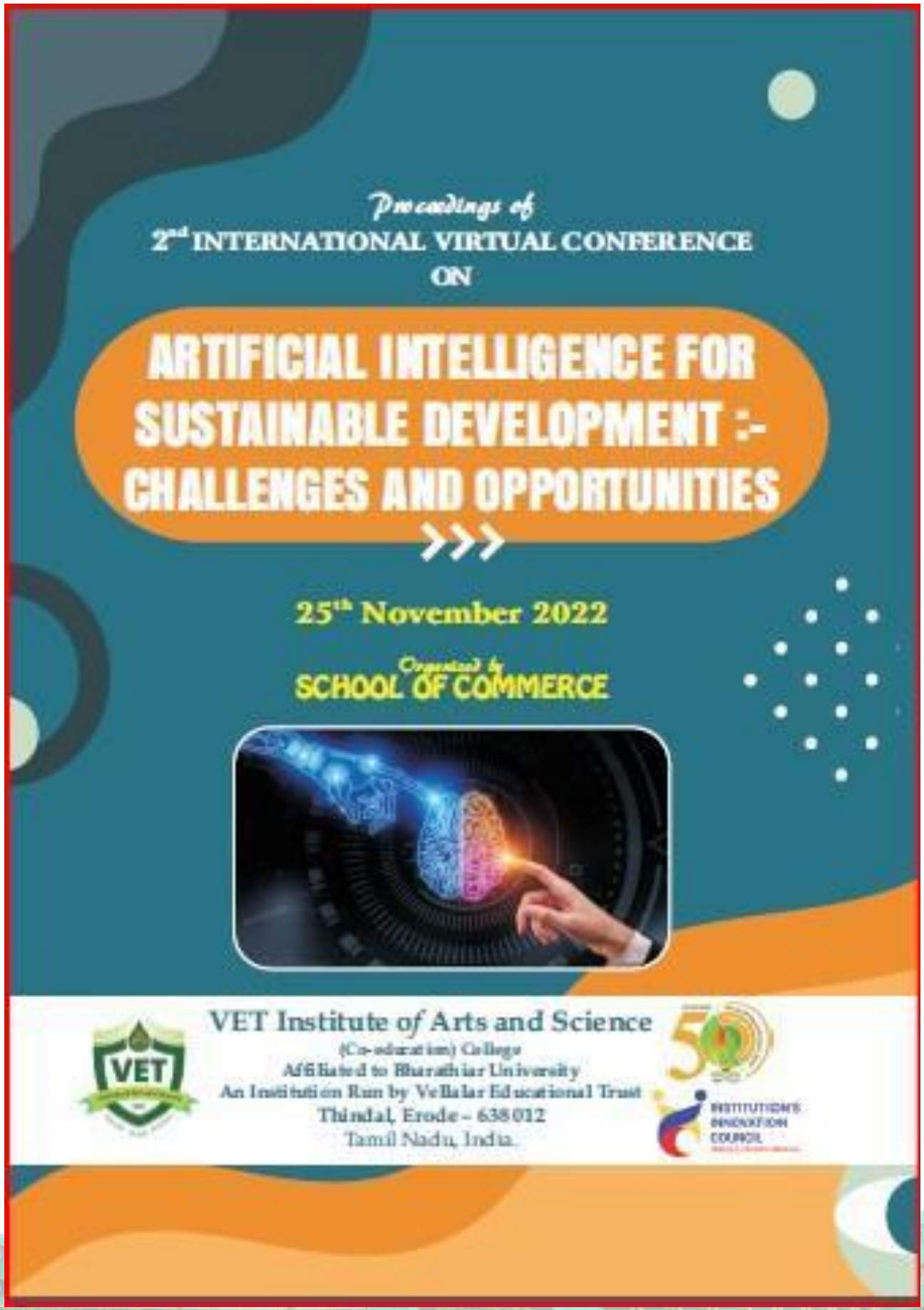
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CONSUMER AWARENESS OF E-BANKING SYSTEM WITH SPECIAL REFERENCE TO THIRUVANAN THAPURAM DISTRICT

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The topic of this essay is consumer awareness of the e-banking system, with particular emphasis on Thiruvanthapuram district. The information was gathered from both primary and secondary sources. Secondary data gathered from books, journals, newspapers, and websites are included in addition to the main data acquired using basic percentages and averages, F-tests, and chi-square tests. The primary goal of the advanced upgrading is to take into account customer expectations for the future and the fact that all banking transactions are now completed via online apps. Lack of understanding of how banking facilities operate is the biggest barrier to adopting e-banking services. The researcher comes to the conclusion that most bank clients in Kerala's Thiruvanthapuram area are aware of all banking services. Researchers advise taking the appropriate actions to inform clients about new technologies and other banking services.
Keywords : Electronic banking, Customer awareness and satisfaction level

Meaning of E-Banking

Financial institutions compete for clients by offering a wide range of products and services, including as loans, credit and debit card issuance, electronic money services, and even more radically personal services or administrations. Nonetheless, many commercial banks provide some essential 21st-century services. Electronic banking goes by many names, including web-based banking, e-banking, virtual banking, and online banking.It is only the use of electronic and telecommunications networks to transmit various financial services and goods. A customer may access their account information and handle multiple transactions using their computer or mobile device thanks to e-banking.

Electronic banking is the practise of doing financial transactions via the phone or computer without interacting with a human being. Automatic salary and bill payments, in addition to electronic transfers for retail transactions, are all part of this system. Home banking is a service offered by certain financial institutions that enables consumers to do banking activities from the comfort of their own homes by utilising a personal computer and an internet connection. Thanks to electronic banking, there is much less need to physically carry money around from one place to