SVCE | Sri Venkateswara College of Engineering

THE AGENDA
NEWSLETTER
2025

VOLUME 3; ISSUES 1 JANUARY 2025

Table of Content

From

Department of Applied Mathematics

Papers Published/Presented at Conference:

- **Dr.D.Meiyyappan, Associate professor**

Published the following research articles:

1. Bandwidth of WKrecursive networks and its sparse matrix computation, Journal of Supercomputing, DOI:https://doi.org/10.1007/s11227-024-06633-5.
2. Analyzing single-valued neutrosophic fuzzy graphs through matroid perspectives, AinShams Engineering Journal, DOI: https://doi.org/10.1016/j.asej.2024.103133.

The Journal of Supercomputing (2025) 81:175
https://doi.org/10.1007/s11227-024-06633-5

Check for updates

Bandwidth of *WK*-recursive networks and its sparse matrix computation

R. Nathiya[1] · D. Meiyappan[2] · Savari Prabhu[1] · Sudeep Stephen[3]

Accepted: 19 October 2024

Abstract

Recursively scalable networks are a concept in computer science and networking where networks are designed in a way that allows them to expand or scale-up seamlessly by repeating a basic structure or pattern. This approach enables the network to grow in size without requiring a complete redesign or reconfiguration. Many innovative recursive architectures in computer science have been suggested in the literature. Among them, *WK*-recursive networks are notable interconnection networks that remain in their stand with the properties of being parallel, Hamilton-connected, and fault tolerance that are mainly demanded in computer science engineering and intelligent systems. The bandwidth $\mathscr{B}(G)$ of a given graph is $\min \max\{|f(x) - f(y)| : xy \in E(G)\}$ of all one-to-one mapping $f : V(G) \to \{1, 2, 3, \ldots, n\}$. This problem is NP-complete for general graphs and

- Dr.J.Vijayarangam, Assistant Professor, has presented a paper titled “Study of training programmes for employees by companies using MS-Excel, Python and R as an Assignment programming problem” along with two SVCE students as co-authors, A.Pooja and J.Pradeep Krishna, both from III-year ADS in the “International Conference on Recent Developments in Pure and Applied Mathematics (IRDPAM-2025)” held on 6th & 7th January 2025, organized by the Department of Mathematics, University College of Engineering, BIT Campus, Anna University, Tiruchirappalli.

INTERNATIONAL CONFERENCE ON RECENT DEVELOPMENTS IN PURE AND APPLIED MATHEMATICS (IRDPAM-2025)
6-7, JANUARY 2025

CERTIFICATE OF PRESENTATION

IRDPAM 091

This is to certify that

Dr.VIJAYARANGAM J

Assistant Professor
Department of Applied Mathematics
Sri Venkateswara College of Engineering, Sriperumbudur, Chennai

actively participated and presented a research paper in the **Two-Day International Conference on Recent Developments in Pure and Applied Mathematics (IRDPAM 2025)** held on January 6-7, 2025. The conference was organized by the **Department of Mathematics, University College of Engineering, BIT Campus, Anna University, Tiruchirappalli – 620 024**.

Title of the paper:
Study of Training Programmes for Employees by Companies Using MS-Excel, Python and R as an Assignment Programming Problem

We extend our heartfelt appreciation for his/her valuable contribution to the success of this academic event.

DR R SUDHESH
Head / Organizing Secretary

DR T SENTHIL KUMAR
Professor & Dean / Organizing Secretary

EDII·ABIRF

FDP/Workshop attended:

- Dr.R.Suresh, Assistant Professor, attended a Faculty Development Program (FDP online) on “Innovations in Machine Learning, AI, Data Science, and Modelling”, organized by the Electronics and ICT Academy, IIT Roorkee, in association with Vignan’s Foundation for Science, Technology & Research (Deemed to be University), Andhra Pradesh. The program was held from 16th December 2024 to 23rd December 2024, and he received the certificate in January 2025.

*ID:EICTIITR-FDP-24-13-02-147

eict IIT Roorkee

ELECTRONICS & ICT ACADEMY
INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

CERTIFICATE

Faculty Development Programme
on
Innovations in Machine Learning, AI, Data Science and Modelling

This is to certify that **Dr.R.Suresh** of **Sri Venkateswara College of Engineering** has successfully completed the Faculty Development Programme on “Innovations in Machine Learning, AI, Data Science and Modelling” organized by Electronics and ICT Academy IIT Roorkee in association with Vignan’s Foundation for Science, Technology & Research (Deemed to be University), Andhra Pradesh from 16th Dec 2024 – 23rd Dec 2024.

Dr. Sanjeev Manhas
Principal Investigator
E&ICT Academy, IIT Roorkee

Dr. Goli Srinivasa Rao
Local Coordinator
Dept. of M&S, SASH
VFSTR, Andhra Pradesh

*This certificate has a unique ID and can be verified from E&ICT Academy IIT Roorkee

- Dr.A.R.Vijayalakshmi, Associate Professor, participated in the Faculty Development Programme (online) on “Applications of Mathematics in Science and Technology (AMST 2025)”, organized by Department of Applied Science and Humanities, Vidya Academy of Science and Technology, Thalakkottukara, Thrissur, from 6.01.2025 to 13.01.2025.

FACULTY DEVELOPMENT PROGRAMME
ON
APPLICATIONS OF MATHEMATICS IN SCIENCE AND TECHNOLOGY
Case Studies and Hands-on Sessions
(AMST-2025)
Organised by
The Department of Applied Sciences and Humanities, Vidya Academy of Science and Technology, Thrissur, Kerala, India, in association with Indian Society for Technical Education, Centre for Studies in Discrete Mathematics and Kerala Mathematical Association

Certificate

This certificate is presented Dr./Mr/Mrs/Ms Vijayalakshmi AR, Associate Professor SRI VENKATESWARA COLLEGE OF ENGINEERING for participating in the 6-Day FACULTY DEVELOPMENT PROGRAMME ON APPLICATIONS OF MATHEMATICS IN SCIENCE AND TECHNOLOGY(AMST-2025), held at VIDYA ACADEMY OF SCIENCE AND TECHNOLOGY, Thrissur, Kerala, India during January 06-13,2025

Dr. Sunitha C
Principal, VAST

Dr. Siju K. C
Program Convenor

- Dr.A.Subbu alias Suba, Assistant Professor, attended one-week FDP (online) on “Generative AI: A Comprehensive Approach to Research Writing, Proposal Development and Funding”, organized by School of Management, Sri Krishna College of Engineering and Technology, Coimbatore and RSP Science Hub, Coimbatore, from 27.01.2025 to 01.02.2025.

Sri Krishna College of Engineering and Technology
An Autonomous Institution
Accredited by NAAC With A++ Grade
Kuniamuthur, Coimbatore, Tamil Nadu, India

Certificate of Participation
Event Partner RSP Science hub

The certificate is presented to

Dr Subbu alias Suba

Assistant Professor, Department of Applied Mathematics, Sri Venkateswara College of Engineering, Sriperumbudur, Tamilnadu, India

For Participating in the One-Week Faculty Development Program (FDP) on

"Generative AI: A Comprehensive Approach to Research Writing, Proposal Development, and Funding"- Organized by School of Management Sri Krishna College of Engineering and Technology, Coimbatore, Tamil Nadu, India & Event Organiser: RSP Science Hub, Coimbatore, Tamil Nadu, India during 27th January to 1st February 2025.

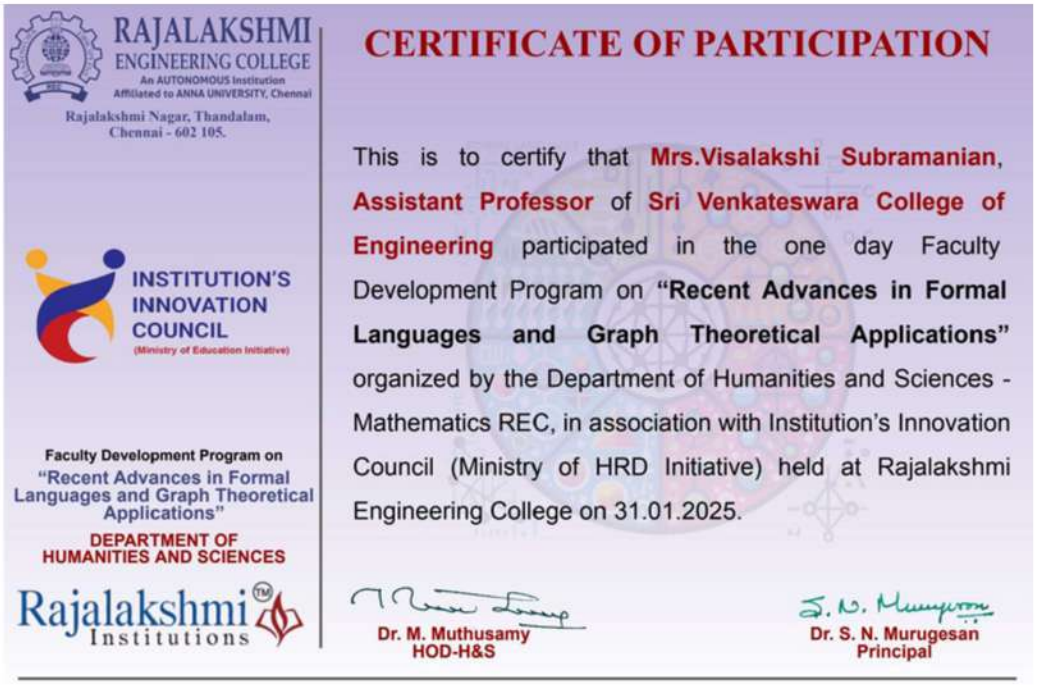
Dr. V. Ramadevi
Program Coordinator
Associate Professor
School of Management
Sri Krishna College of Engineering and Technology, Coimbatore, India.

Dr. S. Jaisankar
Program Convener
Professor & Head
School of Management
Sri Krishna College of Engineering and Technology, Coimbatore, India.

Dr. C. N. Narayana
Program Chair
Director-School of Management
Group Director, Sri Krishna Institutions, Coimbatore, India.

RSPSKCET & FDP01006

Ms.Visalakshi Subramanian, Assistant Professor, attended one day FDP on “Recent Advances in Formal Languages and Graph Theoretical Applications”, organized by theDepartment of Humanities and Sciences –Mathematics,REC, in association with Institution’s Innovation Council on 31.01.2025.



RAJALAKSHMI ENGINEERING COLLEGE
An AUTONOMOUS Institution
Affiliated to ANNA UNIVERSITY, Chennai
Rajalakshmi Nagar, Thandalam, Chennai - 602 105.

INSTITUTION'S INNOVATION COUNCIL
(Ministry of Education Initiative)

Faculty Development Program on
“Recent Advances in Formal Languages and Graph Theoretical Applications”
DEPARTMENT OF HUMANITIES AND SCIENCES

Rajalakshmi Institutions

CERTIFICATE OF PARTICIPATION

This is to certify that **Mrs.Visalakshi Subramanian**, **Assistant Professor** of **Sri Venkateswara College of Engineering** participated in the one day Faculty Development Program on **“Recent Advances in Formal Languages and Graph Theoretical Applications”** organized by the Department of Humanities and Sciences - Mathematics REC, in association with Institution’s Innovation Council (Ministry of HRD Initiative) held at Rajalakshmi Engineering College on 31.01.2025.

Dr. M. Muthusamy
HOD-H&S

Dr. S. N. Murugesan
Principal

Patents published:

1. Dr.R.Umadevi & Dr.K.Vijayalakshmi , Assistant Professors, published the following patent: Title of Invention: VARIOUS PHYSICAL PHENOMENA OF A HYBRID FERROFLUID: AN EMPIRICAL STUDY OF ESTERIFICATION. Name of Applicants: Dr.R.Umadevi, Ms.M. Gomathi (FT Research scholar), Dr.S.Sundaramoorthy, Dr.K.Vijayalakshmi, Ms.S.Aruna, Ms.R.Sumathy (FT Research scholar). Date of filing: 30/12/2024. Publication Date :10/01/2025.

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(12) PATENT APPLICATION PUBLICATION (21) Application No.202441104429 A

(19) INDIA

(22) Date of filing of Application :30/12/2024 (43) Publication Date : 10/01/2025

(54) Title of the invention : VARIOUS PHYSICAL PHENOMENA OF A HYBRID FERROFLUID: AN EMPIRICAL STUDY ON ESTERIFICATION

(51) International classification	:G06F0017130000, G01N0013000000, G16C0020100000, G16C0010000000, C25D0021120000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

(71)**Name of Applicant :**
1)R.Umadevi
Address of Applicant :SRI VENKATESWARA COLLEGE OF ENGINEERING, PENNALUR, SRIPERUMBUDUR, CHENNAI-602117, TAMILNADU, INDIA ---------- ----------
2)M. Gomathi
3)S. Sundramoorthy
4)K. Vijayalaksmi
5)S. Aruna
6)R. Sumathy
Name of Applicant : NA
Address of Applicant : NA
(72)**Name of Inventor :**
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Address of Applicant :Assistant Professor. Department of Physics,Agni College of Technology, Old Mahabalipuram Road, Thalambur, Chennai - 600 130. ---------- ----------
4)K. Vijayalaksmi
Address of Applicant :Assistant Professor, Department of Applied Mathematics,Sri Venkateswara College of Engineering, Pennalur, Sriperumbudur taluk, Chennai-602117 ---------- ----------
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(57) Abstract :

The dimensions of the hybrid ferrofluid play a crucial role in optimizing heat and mass transfer, hence capturing .Jhe attention of various researchers who have subsequently conducted tlJrther investigations into the characteristics of this . working fluid. This study is essential for comprehending the thermal and massive behavior of Fe30, -CoFe20./H20 hybrid ferrofluid during mixed convection stagnation point flow towards a permeable vertical flat plate embedded in a darcy porous ·medium. Research ~n esterification using hybrid nanojJarticles was an emerging topic in materials science and nanotechnology. Hybrid nanoparticles, which combine properties of different materials, offer unique opportunities in catalysis, including esterification reactions. The partial differential equation for heat flow. and mass transfer is made less complex by transforming it into a system of ordinary differential equations through similarity transformation. This system uf equations is then numerically solved for different values of the governing parameters using MATLAB's built-in soll>er, bvp4c. We study and describe the aspects of the mass transfer characteristics for various values of the controlling parameters. It is discovered that for a variety of parameters like the double-diffusive parameter (N2), an increase in irreversible chemical reaction and a decrease in concentration boundary layer thickness of reversible chemical reaction result in a greater mass flux that improves mass transfer performance.

No. of Pages : 10 No. of Claims : 5

Dr.K.Vijayalakshmi & Dr.R.Umadevi, Assistant Professors, published the following patent: Title of Invention: IRREVERSIBLE AND REVERSIBLE CHEMICAL REACTION IMPACTS ON CONVECTIVE MAXWELL FLUID FLOW OVER A POROUS MEDIA WITH ACTIVATION ENERGY Name of Applicants: Dr.K.Vijayalakshmi , Dr. R.Umadevi, Ms.R.Sumathy (FT Research scholar), Ms.D.Arivukodi (PT Research scholar), M. Gomathi (FT Research scholar), Dr.S.Sundaramoorthy. Date of filing: 30/12/2024. Publication Date: 17/01/2025.

(19) INDIA

(22) Date of filing of Application :30/12/2024 (43) Publication Date : 17/01/2025

(54) Title of the invention : "IRREVERSIBLE AND REVERSIBLE CHEMICAL REACTION IMPACTS ON CONVECTIVE MAXWELL FLUID FLOW OVER A POROUS MEDIA WITH ACTIVATION ENERGY"

(51) International classification	:G06F0017130000, C01B0003040000, B01D0050200000, B01J0019000000, G06F0111100000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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4)D. Arivukkodi
5)M. Gomathi
6)Dr. S. Sundramoorthy
Name of Applicant : NA
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(57) Abstract :
ABSTRACT: The Maxwell model of fluid flow in a rotating ti·ame over a porous media is investigated in this paper. Binary chemical reactions and fluid movement under activation energy are both covered in this study. The impact of mass and heat transmission along the boundary layer is investigated in an equilibrium process. Using the method of similarity transformation, the controlling partial differential equations are changed into ordinary ditTerential equations. The results are confirmed using the bvp4c I'vlatlab built-in programme, and the altered equations are resolved utilizing a 4th order Runge Kulla based shooting method. Reversible and irreversible processes, activation energy, chemical reactions, Deborah numbers, and rotation parameters are some of the parameters for which the results are offered in tables and graphs. The prior objective of this study is to examine the impact of activation energy and chemical reactions on -Maxwell fl~ :,d flow in an equilibrium setting. The concentration boundary layer for reversible flows is significantly finer than that of irreversible flows with the intluence of activation energy, chemical reaction, and rotation factors.

No. of Pages : 10 No. of Claims : 5

From
Department of Applied Chemistry

Chaired a Session:

- Dr. S. Anandhavelu, Assistant Professor chaired a session on "Sustainable Materials for Energy Efficiency" at the International Conference on Advanced Nanomaterials for Energy Storage Applications (ICANEA-2024), held from 19th to 21st December 2024. The conference was organized by the Department of Physics, Koneru Lakshmaiah Education Foundation (Deemed to be University), Guntur, Andhra Pradesh, India, and sponsored by the Anusandhan National Research Foundation (SERB) & DST-PURSE, India.

CERTIFICATE

OF APPRECIATION

This certificate is presented to

Dr. Anandhavelu Sanmugam

Sri Venkateswara College of Engineering (SVCE), Pennalur Village, Chennai

This is to acknowledge that he has effectively fulfilled the role of Session chair for the Sustainable materials for energy efficiency at "International Conference on Advanced Nanomaterials for Energy Storage Applications" (ICANEA-2024) from 19th – 21st December 2024 organized by the Department of Physics, Koneru Lakshmaiah Education Foundation (Deemed to be University), Guntur, Andhra Pradesh, India, Sponsored by ANUSANDHAN NATIONAL RESEARCH FOUNDATION (SERB) & DST-PURSE, India

Dr. S. Shanmugan, Convenor, KLEF

Dr. Swapna, HoD & Conference Chair, KLEF

Dr. V. Krishna Reddy, Principal - FED, KLEF

Prof. K. Subramanyam, Principal - Sciences, KLEF

Prof. A. Jagadeesh, Director - FED, KLEF

From
Department of Applied Physics

Career Guideness programme:

- Dr.N.R.Sheela, Associate Professor and Head, Department of Applied Physics organized a Career Guideness programme வெற்றிப்படிகள் with Puthiya Thalaimurai TV for the students to ace their Board examination. This event is conducted in SVCE on 23.01.2025:

Webinars Participated:

- **Dr.T.Senthilnathan, Assistant Professor, Department of Applied physics has participated following webinar :**

1. Principles of "Outcome Based Education & organised by vmedulife software on 04.01.2025
2. Patents and Innovation in Engineering: "Protecting and Leveraging Your Ideas" & organized by the Department of Civil Engineering, SVCE on 25.01.2025.

vmedulife
Software

CERTIFICATE
OF PARTICIPATION

PROUDLY PRESENTED TO
Dr.T. Senthilnathan

FROM
Sri Venkateswara College of Engineering, Pennalur, Sriperumbudur

has attended webinar for Faculty Development Program on
"Principles of Outcome Based Education"

Director

4-1-2025
Date

Outcome Based
Education Software

Indian Concrete Institute
Chennai Centre

ASSOCIATION OF CONSULTING CIVIL ENGINEERS (INDIA)

SVCE | Sri Venkateswara College of Engineering

INSTITUTION'S INNOVATION COUNCIL

(Autonomous - Affiliated to Anna University)
Pennalur, Sriperumbudur - 602117, Tamil Nadu

Department of Civil Engineering

CERTIFICATE OF PARTICIPATION

This is to certify that

Dr.Dr.T.Senthilnathan

has participated in the Webinar on "Patents and Innovation in Engineering: Protecting and Leveraging Your Ideas" organized by the Department of Civil Engineering, Sri Venkateswara College of Engineering on 25.01.2025.

Mr. A. Vijay Vignesh
AP/Civil Engineering
Faculty Coordinator, ICI

Dr. R. Kumutha
Professor & Head/Civil Engineering
Convenor & Organizing Secretary

From

Department of Humanities and Social Sciences

Conference and Workshop Details

- Dr.Murugavel, Professor and Head participated a ten-day NEP Orientation and Sensitization Programme under Malaviya Mission TeacherTraining Programme organised by the Malaviya Mission Teacher Training Institution from 3/1/2025 to 12/1/2025.

- Dr.Amutha Charu Sheela, Associate Professor and Ms.Raghavi Priya , Assistant Professor are presented an International Conference on "Navigating Time and Tide: A Cultural documentation of Maritime Ethnography and Social transformation in Joe D' Cruz's Korkai" organised by the Department of English, Kristu Jayanti College, Autonomous And in Bengaluru collaboration with University of Auckland, New Zealand on 24/2/2025.

Meet Our EDITORIAL TEAM

Dr.R.Muthucumaraswamy
PROFESSOR,
HEAD & DEAN RESEARCH
DEPARTMENT OF APPLIED MATHEMATICS

DR.K.VIJAYALAKSHMI
ASSISTANT PROFESSOR,
DEPARTMENT OF APPLIED MATHEMATICS

DR. A. SUBBU ALIAS SUBA
ASSISTANT PROFESSOR,
DEPARTMENT OF APPLIED MATHEMATICS

DR.S.ANANDA BABU
ASSISTANT PROFESSOR,
DEPARTMENT OF APPLIED CHEMISTRY

DR.T.SENTHILNATHAN
ASSISTANT PROFESSOR,
DEPARTMENT OF APPLIED PHYSICS

MR.S.BHARATHI KUMAR
ASSISTANT PROFESSOR,
DEPARTMENT OF HUMANITIES AND SCIENCE

Meet Our STUDENT EDITORIAL TEAM

MR.KAVIN THANGABALAN
I YEAR
ADS-A

MR.HARIHARA K G
I YEAR
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