



VIT[®]

Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)
CHENNAI

Contributory Talks: ICNCS 2024 (Offline Mode)

DAY 01 (07 FEB, 2024)

Contributory Talks (16:15 - 17:30)
Panel - 01 - Venue - AB1 - 708

Session Chairs: Dr. Deepa K, Shiv Nadar University Chennai, India
Dr. Pankaj Shukla, Vellore Institute of Technology, Chennai

- ID:12 **B. Jaismitha** , SRM Institute of Science and Technology, Kattankulathur.
Investigation of Hybrid Nanofluid Flow with Thermal Radiation and MHD Effects: Using different ratios of Base Fluid Mixture Water-EG (H₂O-C₂H₆O₂)
- ID:97 **G Mahalakshmi** , Amrita Vishwa Vidyapeetham, Coimbatore
A Study of Null Geodesics and Weak Deflection Angle of Kazakov-Solodukhin-Kiselev Blackhole
- ID:104 **Priyadharsini M** , Vellore Institute of Technology, Chennai
Dynamics Of MHD Blood Flow With Iron Oxide Nanoparticles
- ID:109 **Mohammed Ismail Sulaiman Basha** , Vellore Institute of Technology, Chennai
Analysis of Radiative Hybrid Nanofluid Flow over a Two-Way Stretching Sheet with Variable Viscosity and Inclined Magnetic Field
- ID:188 **Angelin Shena S**, Vellore Institute of Technology, Chennai
Convergence of BDF2-Galerkin Finite Element Scheme for Cancer Invasion Model

Contributory Talks (16:15 - 17:30)
Panel - 02 - Venue - AB1 - 710

Session Chairs: Dr. Pratibhamoy Das, IIT Patna, India
Dr. Harshavarthini S, Vellore Institute of Technology, Chennai

- ID:62 **M. Priyanka** , GRI (Deemed to be University), Gandhigram
Bifurcation Analysis and Chaos Control of a Discrete-Time Coral Reef Model with Growth Rate on Macroalgae
- ID:76 **S. Fathima Nasrin** , Vellore Institute of Technology, Chennai
Analysis of Stochastic Tuberculosis Model with Mixed-strain
- ID:77 **P. Chandrika** , Vellore Institute of Technology, Chennai
Dynamical Analysis of Fractional Order Delayed Hepatitis C Virus Model
- ID:127 **S. Priyanka** , Shiv Nadar University, Chennai
Synchronization for uncertain neural networks with randomly occurring uncertainties and time-delay based on the sliding mode control
- ID:191 **Sasikala S**, Vellore Institute of Technology, Vellore
Adaptive control for switching stochastic neural networks
- ID:219 **Prakash Duraisamy**, Chennai Institute of Technology, Chennai
Exploration of Strange Nonchaotic Attractor in a Shape Memory Alloy three leg parallel manipulator

Contributory Talks (16:15 - 17:30)
Panel - 03 - Venue - AB1 - 712

Session Chairs: Dr. Prakash M, Vellore Institute of Technology, Vellore, India
Dr. Hannah Grace, Vellore Institute of Technology, Chennai

- ID:75 **Sanjay Kumar** , National Institute Technology, Raipur
Hybrid Image Encryption using 2D Henon Chaotic Map and Evolutionary Algorithm
- ID:91 **Jackson J** , SRM Institute of Science and Technology, Kattankulathur
A Public Key Exchange Protocol using Tropical Upper Triangular Matrices for Medical IoT Environment
- ID:132 **Srimathi M**, Rajiv Gandhi National Institute of Youth Development
Revolutionizing Video Encoding: An Innovative Non-linear Approach for Enhanced Security
- ID:142 **Kaustuv Panda** , National Institute Technology, Raipur
Enhancing Image Security: A Two-Stage Encryption Approach using Chaotic Map and RSA Algorithm
- ID:215 **Jayanth Gurajada**, Vellore Institute of Technology, Chennai
AI-Based E-Learning Assessment System using GPT-3.5 Turbo API for Descriptive Examinations

Contributory Talks (16:15 - 17:30)
Panel - 04 - Venue - AB1 - 801

Session Chairs: Dr. Saravanakumar, SRM Univeristy, Kattangulathur, Chennai
Dr. Revathi G K, Vellore Institute of Technology, Chennai

- ID:23 **Jayashri P**, Vellore Institute of Technology, Chennai
Meta-Optimization for Sustainable Pharma: An Integrated Approach with Two-Level Trade Credit Strategies in Inventory Management
- ID:24 **Arunadevi E**, Vellore Institute of Technology, Chennai
Greening Inventory Management: Leveraging Rebates and Preservation Technology for Sustainable Amelioration and Deterioration Control.
- ID:25 **Sai Kumar M**, Vellore Institute of Technology, Chennai
Optimizing Dairy Inventory Management: Integrating ramp-type demand and lost sales strategies for operational efficiency
- ID:37 **Chithraponnu R**, Vellore Institute of Technology, Chennai
IIoT-Driven Cross-matching Substitution for the Blood Bank to the End-User-Driven Demand in A1A2BO System
- ID:138 **Kavitha C**, Vellore Institute of Technology, Vellore
Distribution of Fractal and Multifractal Analysis in the Dynamics of Commodities Markets

DAY 02 (08 FEB, 2024)

Contributory Talks (14:00 - 15:30)
Panel - 01 - Venue - DB - 403

Session Chairs: Dr. Kamalapriya S, MOP Vaishnav College, Chennai, India
Dr. David Maxim Gururaj, Vellore Institute of Technology, Chennai

- ID:53 **A Antony Gnana Aravind**, SRM Institute of Science and Technology, Vadapalani
Heat transfer Effects of Thermal Radiation on a Parabolic Nanofluid flow Past a vertical plate with variable Temperature in the presence of rotation
- ID:89 **Gurunandha Elamezhagan S**, Vellore Institute of Technology, Chennai
Exhaustive Study on Chebyshev Pseudo Spectral Method, Runge-Kutta Fourth Order Method, and Ode45 in MATLAB for forced oscillators

- ID:124 **Sudarmozhi K**, Saveetha School of Engineering, SIMATS, Chennai
Numerical Study on Maxwell Fluid on Perpendicular Plate with the impact of Heat Mass Transfer
- ID:130 **John A. B**, Vellore Institute of Technology, Chennai
Optical soliton propagation for nonlinear Schrödinger equation with higher order dispersion and linearity
- ID:194 **Nirmala C**, Vellore Institute of Technology, Chennai
Numerical analysis of magnetised force convective micropolar Casson hybrid nanofluid flow over a vertical stretching surface
- ID:195 **Srija R**, Vellore Institute of Technology, Chennai
Numerical Investigation of Capillary Instability in Walter's B viscoelastic Fluid via Heat and Mass Transfer

Contributory Talks (14:00 - 15:30)
Panel - 02 - Venue - DB - 404

Session Chairs: Dr. Krishnasamy J, PSG College of Institute, Coimbatore, India
Dr. Rajivganthi C, Vellore Institute of Technology, Chennai

- ID:71 **Naveen Chandra Bhagat**, Central University of Jharkhand
Convergence of Newton-Steffensen method under Lipschitz continuous second derivative
- ID:151 **B. Harikaran**, Vellore Institute of Technology, Chennai
Interval type-2 fuzzy control design for nonlinear time-delay systems using convex relaxation technique
- ID:154 **D. Gomathi**, Vellore Institute of Technology, Chennai
Functional-observer-based feedback control design for stabilization of time-delayed systems
- ID:193 **A Kavitha**, Vellore Institute of Technology, Vellore
Fixed time synchronization of neural networks with parameter uncertainties
- ID:196 **A. Thirumalai**, Vellore Institute of Technology, Chennai
Solutions of Differential Equations in Bicomplex Space using Sadik Transforms

Contributory Talks (14:00 - 15:30)
Panel - 03 - Venue - DB - 405

Session Chairs: Dr. Hariharan S, DG Vaishnav College, Chennai, India
Dr. Kaliyappan M, Vellore Institute of Technology, Chennai

- ID:32 **Nathiya N**, Vellore Institute of Technology, Chennai
Skin Cancer Prediction Using Deep Learning Techniques
- ID:128 **Sanjay Kumar Mohanty** , Vellore Institute of Technology, Vellore
An Integrated Framework for Glioma Chemotherapy employing Mathematical Modeling & Deep Learning
- ID:176 **Tharun S B**, Vellore Institute of Technology, Vellore
T2FP UNet: a U-Shaped Convolutional Neural Network with Type-2 Fuzzy Pooling Layer for Biomedical Applications
- ID:208 **Ilakiyaselvan N**, Vellore Institute of Technology, Chennai
Real-Time Twitter Spam Detection: A Comparative Study of Machine Learning Models Utilizing Natural Language Processing Techniques

Contributory Talks (14:00 - 15:30)
Panel - 04 - Venue - DB - 406

Session Chairs: Dr.Karthikeyan T, Ramakrishna Mission Vivekananda College,
Chennai, India
Dr. Jayagopal R, Vellore Institute of Technology, Chennai

- ID:22 **Sakthidevi Kaliyaperumal** , Vellore Institute of Technology, Chennai
On the Spectra of Graphs Resulting from a New Graph Operation
- ID:31 **Vignesh Ravi**, Vellore Institute of Technology, Chennai
Predictive Ability of Degree and Neighbourhood Degree Sum-Based Topological Descriptors of Breast Cancer Drugs
- ID:88 **M. Kalaimathi** , Vellore Institute of Technology, Chennai
Encryption and Decryption through Even-Odd Harmonious Graphs
- ID:90 **C Yogalakshmi** , Vellore Institute of Technology, Chennai
Sigma coloring of graphs obtained through Mycielski transformation
- ID:94 **W. Tamilarasi** , Vellore Institute of Technology, Chennai
QSPR Graph Model for Physicochemical Properties of some Polycyclic Aromatic Hydrocarbons through Reverse Sum Revan Topological Descriptors and Artificial Neural Network
- ID:95 **S Thilsath Parveen** , Vellore Institute of Technology, Chennai
Independent Domination Numbers for Co-Splitting Graphs

Contributory Talks (14:00 - 15:30)
Panel - 05 - Venue - DB - 407

Session Chairs: Dr. Harikumar K, Sanghamam College of Arts and Science,
Gingee, India
Dr. Felix A, Vellore Institute of Technology, Chennai

- ID:93 **Bharathi S** , SRM Institute of Science and Technology, Kattakulathur
A novel TOPSIS method approach for neutrosophic Aczel-Alsina power geometric aggregation operator for green supplier selection problem
- ID:108 **Ordenshiya KM** , Vellore Institute of Technology, Chennai
Comparative Study of Simulink FIS for Air Quality Index Forecasting using Time Series and Standard Time Series Analysis
- ID:168 **Sheela Rani M**, Vellore Institute of Technology, Chennai
Complex probabilistic intuitionistic fuzzy set and their aggregation operators in multi criteria decision making extended to VIKOR
- ID:171 **Ragavendirane M.S** , Vellore Institute of Technology, Chennai
Improving Contrast in Low-Light Color Images through a New Intuitionistic Fuzzy Filter-Histogram Technique
- ID:178 **C Ravindar Raj**, Vellore Institute of Technology, Chennai
A Novel Fuzzy Generator Handling Video in a Dimly Light Space
- ID:179 **Chithra S**, Vellore Institute of Technology, Chennai
A low-light color image enhancement technique using new interval-valued intuitionistic fuzzy generator
- ID:186 **J Jansi Rani**, Vellore Institute of Technology, Chennai
Solving Travelling Salesman Problem using Dynamic Programming under extended fuzzy environment

Contributory Talks (14:00 - 15:30)
Panel - 06 - Venue - DB - 408

Session Chairs: Dr. Kumaravel R, SRM Institute of Technology, Chennai, India
Dr. Sethu Kumara Swamy, Vellore Institute of Technology,
Chennai

- ID:161 **S Naveen** , Vellore Institute of Technology, Chennai
Qualitative analysis of inverter fed induction motor modelled by Caputo fractional derivative

- ID:170 **Nageshwari S** , Vellore Institute of Technology, Chennai
Controllability of Stochastic Non-Instantaneous Impulsive Hilfer Fractional Switched Dynamic Systems with Deviated Arguments and fBm
- ID:185 **R Kiruthika**, Vellore Institute of Technology, Chennai
Finite-Time Sampled-Data-based Synchronization Criteria for Variable-Order Fractional Neural Networks
- ID:189 **M. Rajkumar**, Vellore Institute of Technology, Chennai
Convergence of L1-Galerkin Finite Element Scheme for Time-Fractional Cancer Invasion Model
- ID:218 **Jose S** , Vellore Institute of Technology, Chennai
Finite-Time Synchronization of Fractional Order Neural Networks via Sampled Data Control with Time Delay

Contributory Talks (15:30 - 17:00)
Panel - 01 - Venue - DB - 306

Session Chairs: Dr. Hariharan S, DG Vaishnav College, Chennai, India
Dr. David Raj Micheal, Vellore Institute of Technology, Chennai

- ID:60 **Nathiya N** , Vellore Institute of Technology, Chennai
Deepfake Detection: Examining Algorithmic Synergies for Image Similarity
- ID:106 **Umamaheswari E** , Vellore Institute of Technology, Chennai
SafeCare: Smart IoT Device for Gas and Dust Detection in Medical Environments
- ID:107 **Umamaheswari E** , Vellore Institute of Technology, Chennai
SHEild: A Smart Hat for Women Safety Integrating IOT Technology
- ID:122 **M. Kaliyappan**, Vellore Institute of Technology, Chennai
Solving Fuzzy Critical Path problems through R Software

Contributory Talks (15:30 - 17:00)
Panel - 02 - Venue - DB - 307

Session Chairs: Dr. Ramakrishnan M, RKM Vivekananda College, Chennai, India
Dr. Kalyani Desikan, Vellore Institute of Technology, Chennai

- ID:18 **E.K.Nithiyanandham**, Vellore Institute of Technology, Chennai
Problems on the radius of convexity for the class of analytic functions correlated with Legendre polynomials of odd degree

ID:21 **Nandhini B** , Vellore Institute of Technology, Chennai
Enhancing the image quality by varying the coefficients of analytical functions using quality assessment analysis

ID:30 **K.Sivagami Sundari** , Vellore Institute of Technology, Chennai
Enhancing the quality of low light images via the coefficient bounds derived for a subclass of Sakaguchi type function

DAY 03 (09 FEB, 2024)

Contributory Talks (11:50 - 13:00)

Panel - 01 - Venue - AB2 - 301

Session Chairs: Raju. K. George, IIST, Thiruvananthapuram, India
Dr. Abhishek Kumar Singh, Vellore Institute of Technology, Chennai

ID:140 **Rajesh Ranjan Dora** , Vellore Institute of Technology, Vellore
Bragg resonance in the presence of elastic bottom

ID:180 **Neja Prinsa N**, Vellore Institute of Technology, Chennai
Soliton solutions in (2+1)-dimensional ferromagnetic spin chain using new extended auxiliary method

ID:202 **Muniyappan M**, Vellore Institute of Technology, Vellore
Oblique wave scattering of water waves by a moored finite elastic plate in the presence of current

Contributory Talks (11:50 - 13:00)

Panel - 02 - Venue - AB2 - 302

Session Chairs: Dr. Vembarasan V, Shiv Nadar University Chennai, India
Dr. Harshavarthini S, Vellore Institute of Technology, Chennai

ID:63 **V. M. Janani** , GRI (Deemed to be University), Gandhigram
Reachable Set Estimation of Multi-agent Systems under Packet Losses and Deception Attacks

ID:177 **Muthu Logesh S**, Vellore Institute of Technology, Vellore
Optimal Tracking Control for Chaotic Grid-connected PMSM model

ID:197 **PRADEESH M**, Vellore Institute of Technology, Vellore
Dynamical and computational analysis of HIV infection model with intracellular time-delay

- ID:201 **Sangeetha R** , Vellore Institute of Technology, Vellore
Fixed-time Synchronization of Hyperchaotic Fuzzy PMSM Model with Stochastic Disturbances

Contributory Talks (11:50 - 13:00)
Panel - 03 - Venue - AB2 - 303

Session Chairs: Dr. Sudeshna Sinha, IISER Mohali, India
Dr. Nathiya N, Vellore Institute of Technology, Chennai

- ID:20 **Aarthy B**, Vellore Institute of Technology, Chennai
Detection of Corn leaf gray spots using coefficient bounds obtained for a subclass of Analytic Functions
- ID:115 **Krishnamoorthy S** , Vellore Institute of Technology, Chennai
Forecasting stock price index using multiple linear regression model
- ID:182 **Mubasil P**, Vellore Institute of Technology, Vellore
Dynamic Feature Weight Selection and Residue Aware Correlation Filter Learning for Object Tracking
- ID:209 **Ilakiyaselvan N**, Vellore Institute of Technology, Chennai
LSTM-CNN Ensemble for Efficient Toxic Comment Detection

Contributory Talks (11:50 - 13:00)
Panel - 04 - Venue - AB2 - 305

Session Chairs: Dr. Muthukumar P, Gandhigram Rural Institute, Gandhigram, Dindigul, India
Dr. Padmaja, Vellore Institute of Technology, Chennai

- ID:26 **T. Gunasekar**, SRM Arts and Science College, Kattankulathur
Application of Mohand Transform in Solving Fractional Difference Equations
- ID:129 **Jose S** , Vellore Institute of Technology, Chennai
Synchronization of Fractional Order Time Delayed Neural Networks using Matrix Measure Approach
- ID:150 **Suganya Subramanian** , Vellore Institute of Technology, Chennai
Transmission dynamics and stability of fractional order derivative model for Covid-19 epidemic with optimal control analysis
- ID:153 **Srilekha R** , Vellore Institute of Technology, Chennai
Finite time stability criteria for a type of fuzzy fractional-order neural network system with delay using granular derivative

ID:158 **Agilan K** , Vellore Institute of Technology, Chennai
On Numerical Approximation of initial and boundary value problem of Caputo fuzzy fractional Volterra integro differential equations

Contributory Talks (11:50 - 13:00)
Panel - 05 - Venue - AB2 - 306

Session Chairs: Dr. Parimala M, Bannari Amman Institute of Technology Sathy,
Erode, India

Dr. Vanchinathan P, Vellore Institute of Technology, Chennai

ID:126 **Abin Sam Tharakan** , SRM Institute of Science and Technology,
Kattankulathur
Free Ternary Semigroup

ID:134 **Melvin Varghese** , SRM Institute of Science and Technology,
Kattankulathur
An analogue of Schur's theorem on integer colouring to algebraic groups.

ID:210 **M. Madhesan**, Vels Institute of Science Technology and Advanced Studies,
Chennai
A study on $\alpha\beta$ Generalized closed sets in Topological space

ID:213 **R. Sudha** , Vels Institute of Science Technology and Advanced Studies,
Chennai
 *s^*p^* connected spaces and s^*p^* compact spaces in topological spaces*

ID:214 **S. Saranya** , Vels Institute of Science Technology and Advanced Studies,
Chennai
Compactness and connectedness in Beta weakly semi - closed sets in Topological spaces