



**SMU** SIKKIM  
MANIPAL  
UNIVERSITY  
Established under Govt. of Sikkim, Act 9 of 1985, recognized under 2B of the UGC Act, 1956



## **5<sup>th</sup> International Conference on Advanced Computational and Communication Paradigms - 2025**

### **SCHEDULE OF INAUGURATION PROGRAM**

<b>Sl. No</b>	<b>Program</b>	<b>Time</b>
1.	Welcome speech by Convener	9.30-9.35am
2.	Diya Lighting	9.35-9.40am
3.	National Anthem	9.40-9.45am
4.	Welcoming of Guests	9.45-10.00am
5.	Director's Address	10.00-10.10am
6.	Inaugural Speech by Vice Chancellor	10.10-10.20am
7.	Keynote Lecture - Prof. Biplab Sikdar	10.20-11.00am
8.	High Tea	11.00-11.30am
9.	Keynote Lecture - Prof. Debashis De	11.30-12.15pm



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## 5<sup>th</sup> International Conference on Advanced Computational and Communication Paradigms - 2025

### SCHEDULE

**Day 1: 06/06/25**

<b>Inauguration &amp; Keynote Lectures</b>	<b>Lunch</b>	<b>Invited Talks &amp; Sessions</b>
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**GALA DINNER, Venue: MARENA, SMIT, 7:00pm**

**Day 2: 07/06/25**

<b>Invited Talks &amp; Sessions</b>	<b>Lunch</b>	<b>Invited Talks &amp; Sessions</b>
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**Day 3: 08/06/25**

<b>Valedictory</b>	<b>Lunch</b>
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**ICACCP 2025****Day 01****Date****06<sup>th</sup> June 2025 [02:30 pm – 05:30 pm]****Track 1: Artificial Intelligence, Machine Learning & Soft Computing (Session 1)****Session Chairs: Dr. Debashis De & Dr. Om Prakash Singh**

<b>Author</b>	<b>Paper ID</b>	<b>Paper Title</b>
Gagan Ajit Singh	8	Chatbot Technology: A Comprehensive Review
Pavan Kumar Reddy Gaddam	67	AI-Powered Question Generation and Evaluation Framework for Enhanced Educational Assessments
Achintya Raj	81	Architectural Insights: Discover ChatGPT's conversational power based on the GPT Transformer Framework
U Sai Krishna Varma	83	Deep Learning-Based Crowd Counting: A Novel CNN-RNN Fusion Approach
Varun Neville Baxla	94	Optimization Methods in Deep Learning: A Comparative Evaluation
Khiakupar Jyndiang	145	Khasi Dialect Identification Using Spectrogram and Vision Transformers
Khiakupar Jyndiang	146	Performance Analysis of Modified Vision Transformer on Khasi Dialects
A D Mahit Nandan	166	Adversarial Attention Mechanisms with Convolutional and LSTM Networks for Unsupervised Video Summarization

**Track 2: Data Science, Big Data & Smart Analytics (Session 1)****Session Chairs: Dr. Robindro Lairenlakpam & Dr. Swarup Sarkar**

<b>Author</b>	<b>Paper ID</b>	<b>Paper Title</b>
Puran Dangal	113	On Fair Domination in Hypergraphs
Dhanya M U	203	Design and Implementation of a Smart Agricultural Marketplace for Rural Farmers
Saibal Saha	212	Development of an AI-based Framework for Reverse Supply Chain of Pharmaceutical Products
Rinchen Gensapa	213	Classification of online pharmacy consumers into high/low satisfaction using discriminant analysis
Abhay Jasrotia	229	AI-Powered Crowd Surveillance: Integrating CNN Based Density Maps and Optical Flow for Behavior Analysis
Guladab Bawa	239	A Fusion-Based Approach for Intelligent Traffic Congestion Control: Integrating Vehicular Networks and Machine Learning in Smart Cities
Yashraj Sharma	250	A Comprehensive Machine Learning Framework for Gestational Diabetes Prediction and Risk Analysis utilizing Explainable AI
Ayushman	282	Space News Aggregator

**Track 3: Computer Vision, Image & Signal Processing (Session 1)****Invited Speaker: Dr. L. Joyprakash Singh****Session Chairs: Dr. L. Joyprakash Singh & Dr. P. C Pradhan**

<b>Author</b>	<b>Paper ID</b>	<b>Paper Title</b>
Avijit Ram	36	Cloudburst Detection from Satellite Images using Haralick Features and Random Forest Classifier
Gurvinder Kaur Matharu	68	PROTECT: Proactive Recognition of Offensive Text, Images, Videos and Memes
Jyoti Prasanna Patra	110	A Novel Signal Detection Technique for Uplink Massive MIMO System
Tania Dutta	214	Integrating Temporal and Spatial Features for Parkinson Disease Diagnosis from Handwriting Images
Sayandeep Sharma	216	A novel RGB feature based coral bleaching detection using SLIC Super pixel Segmentation
Kirankumar B Balavalad	230	AI Based Aerial Image Classification
Viswanadhapalli Swetha	231	A Deep Learning Approach for Heart Disease Prediction

**Track 4: Communication Systems, IoT & Networks (Session 1)****Invited Speaker: Dr. Robindro Lairenlakpam****Session Chairs: Dr. Bikash Sharma & Dr. Tanushree Bose**

<b>Author</b>	<b>Paper ID</b>	<b>Paper Title</b>
Adel Oubelaid	21	Multi-layer Torque Distribution Strategy for Dual Traction Electric Vehicle
M.S. Priyadarshini	22	Development of IoT based Energy Management System to Maximize Energy Savings
Paras Singhal	24	Fine Tuning GPT 4 for Interior Design Chatbot
Prashant Wali	29	Joint Sum Rate and Fairness Optimization in NOMA Networks Under Minimum Power Gap Constraint
MR. Bibek Sutradhar	135	Efficient Resource Allocation in IoT: A Matching-Theory-Based Approach to Channel Assignment
Tahamina Yesmin	217	Sixth Generation (6G) Wireless Communications: A perspective View

**Track 5: Cybersecurity, Blockchain & High-Performance Computing (Session 1)****Invited Speaker: Dr. Rajeeb Chatterjee****Session Chairs: Dr. Palash Ghosal & Dr. Krishna Vijay Kumar Singh**

<b>Author</b>	<b>Paper ID</b>	<b>Paper Title</b>
Ngangbam Nilakantha Singh	43	A concept of on-demand Continuous Integration and Continuous Delivery framework
Divya Yadav	57	Next-Gen Cyber security: Deep Learning-Based Intrusion Detection for Advanced Threat Prediction
Vaidant Thakur	165	Enhancing Fiat-Shamir with Automorphisms: A Polynomial Commitment Scheme
Hansika Dixit	182	Network Intrusion Detection System Using Voting Ensemble Machine Learning
Ribhu Ghosh	210	GDP and Unemployment Prediction using Software Transactional Memory
SujayKumar B Adoor	240	Malicious Node Detection Using Machine Learning and Distributed Data Storage Using Blockchain in WSNs
Dr.J.Ganesh	241	Optimized Technique for Intrusion Detection Systems using Machine Learning Models with Metaheuristic Algorithms

**Track 6: Robotics, Control Systems & Embedded Technologies (Session 1)****Session Chairs: Dr. C.T Singh & Dr. Amit Singh**

<b>Author</b>	<b>Paper ID</b>	<b>Paper Title</b>
Sinu K J	40	PSO Tuned Reactive Power Compensation in Unbalanced Grid Network Using Double Boost-Modified Dual Controller
Mirtunjay Mishra	218	Comparative study of performance parameters of Phase-Locked Loops in CNTFET and CMOS technologies at deep sub-micron level
Rajya Lakshmi Gudivaka	222	Collision-Free Object Handling Using Dex-Net and Rapidly Exploring Random Trees for Advanced Robotics Path Optimization
GOPIKA M V	302	Development of Cascaded PI controller for Precise Speed Control of Electric Vehicle
Uday Walke	363	Design And Implementation of Vision Based Guidance System for Arc Welding Robot
Biswajit Halder	380	Thau's Observer for Coulomb Friction Dominated DC Velocity Servomechanism
Hasanur Jaman, Kuntal Dhara	394	ZNN-based Fixed-Time Projective Sliding-Mode Control for Morphing Aircraft under Actuator Faults

**ICACCP 2025 Program at a Glance****Day 02****Date:****07<sup>th</sup> June 2025 [10:00 am – 01:00 pm]****Track 1: Artificial Intelligence, Machine Learning & Soft Computing (Session 2)****Invited Speaker: Dr. Debanjan Konar****Session Chairs: Dr. V. K. Singh, Dr. Samarjeet Borah, & Mr. Aritra Saha**

<b>Author</b>	<b>Paper ID</b>	<b>Paper Title</b>
Yogeshwaran R	171	Robust Classification of Human written vs LLM Generated Essay using Adversarial Training
Rishika Goswami	190	Evaluating Smoothing Methods for Eigenvalue-Weighted Word Similarity
Kiran Veigas	204	A Comprehensive Review of Methods and Approaches for Clickbait Detection
A.Rakshana Malya	272	A Comparative Study of Machine Learning Algorithms for the Prediction of Proneness to Substance Abuse of Individuals
Swarnali Daw	277	Optimizing Binary Sentiment Analysis for Imbalanced Data: Synergizing Resampling Techniques, Model Tuning, and Explainable AI
Omkar Prabhu	285	Machine Learning in Mental Health: Advances in Depression Detection
Amrita Sarkar	297	A survey on sleep disorders and advanced methods for disorder detection
Mahima Tamang	299	Sentiment Classification on Twitter(X) Through Ensemble Deep Random Vector Functional Links
Ridhima Rajman	315	Robust Classification of Human written vs LLM Generated Essay using Adversarial Training

**Track 2: Data Science, Big Data & Smart Analytics (Session 2)****Invited Speaker: Dr. Dasharathraj K Shetty****Session Chairs: Dr. Samarendra Nath Sur & Dr. Ashis Pradhan**

<b>Author</b>	<b>Paper ID</b>	<b>Paper Title</b>
Suba Sowandariya S	291	Boosting-based prediction and auto-optimization models for irrigation scheduling, soil deficiency analysis
Priyabrata Sain	303	Annual Precipitation Prediction Modelling using ML Classifiers: A Brief Study on West Bengal
Shashwat Shah	304	Ethical Approach towards Singularity by reducing biases in the field of Hiring Employees
Kurmasetty Purna Chandra Rao	312	Intelligent Pedestrian Assistant with Obstacle Detection
Bhaswati Baishya	327	An Improved Approach for Association Rule Mining using Apache Spark
Gourango Ghosh	329	Enhanced Credit Card Fraud Detection with Hyperparameter-Optimized XGBoost Utilizing Custom Loss Function
Anjan Gautam	361	On Graphs with K-regular Open Packing Set
Suvercha Yadav	364	An Intelligent Crop Recommendation System for Informed Decision Making in Smart Agriculture Ecosystem

**Track 3: Computer Vision, Image & Signal Processing (Session 2)****Invited Speaker: Dr. Subhrabrata Choudhury****Session Chairs: Dr. Amrita Biswas & Dr. Bijoyeta Roy**

<b>Author</b>	<b>Paper ID</b>	<b>Paper Title</b>
Md Al Amin	251	Enhancing Melanoma Diagnosis in the USA with AI-Powered Innovations
Md. Shakhauat Hossan Sumon	259	SA-MLP: Accurate and Interpretable Breast Cancer Detection with Feature Selection and Explainable AI
Taran Balani	269	Deep Learning for Handwritten Digit Recognition: A Convolutional Neural Network Approach
Faizan Shafi	270	Design and Performance Evaluation of a Li-Fi System for Indoor Wireless Communication
Vishnu Shankar	290	Deep Learning Based AI-Generated Image Detection
Anish Kishore	294	Prediction of Indian Tropical Cyclones using Machine Learning techniques
Saikat Samanta	317	ViT-GA-AVSS: Optimizing Vision Transformer-Based Audio-Visual Speech Synthesis Approach Using Genetic Algorithm

**Track 4: Communication Systems, IoT & Networks (Session 2)****Invited Speaker: Dr. S Ranbir Singh****Session Chairs: Dr. Bikash Sharma & Dr. Tanushree Bose**

<b>Author</b>	<b>Paper ID</b>	<b>Paper Title</b>
Dhirendra Yadav	226	IoT-based Assistive Device for Bridging Communication between Differently Abled and Abled Individuals
Chiman Saini	235	Communication Protocols in IoT: A Comparative Review of Standards and Applications
Siya Pillai	319	A Review of Proactive Models in RPL Routing Protocol for Low Power and Lossy Networks
Pratibha P. Dapke	340	Evaluating Seasonal Changes in Vegetation and LST Using NDVI in Sillod, Maharashtra
Leo Raju	348	LoRaWAN and STM32 based Lighting System for Smart Campus
Nainsi Soni	368	Multi-Feature Collaborative Traffic Management: An AI and IoT-Integrated Approach

**Track 5: Cybersecurity, Blockchain & High-Performance Computing (Session 2)****Session Chairs: Dr. Biswajit Deb & Dr. Barnali Dey**

<b>Author</b>	<b>Paper ID</b>	<b>Paper Title</b>
Aniruddha S	261	Taylor Series Optimization in Encryption and Decryption using Parallel Computing in Cryptography
Rishab Srinivas Ramesh	292	HealthGuard: A Blockchain- Powered Structure for Safe Electronic Health Record Administration
Puneeth Yogeasha	307	Design and Implementation of CodeSourcerer: A Proxy- Based Test Generation System for GitHub CI/CD Pipelines
Subhendu Singh	318	A Requirement of Decentralized Labor Management System (DLMS)
Sumit Hazowary, Sahil Silhotra, W. Ricky Singha	331	A Blockchain-Based Framework for Secure Pharmaceutical Supply Chain and Prescription Management
Mehedi Hassan Marouf	347	Review of Digital Signature Schemes for Ensuring Non-Repudiation in Blockchain Systems
Samsudeen Sabraz Nawaz	391	Cloud Computing Adoption in SMEs: A Systematic Review of Adoption Models and Future Research Agenda
Inadyuti Dutt	392	A Comparative Study of Standard Datasets in Intrusion Detection System using various Artificial Neural Networks Techniques

**ICACCP 2025 Program at a Glance****Day 02****Date:****07th June 2025 [02:30 pm – 05:30 pm]****Track 1: Artificial Intelligence, Machine Learning & Soft Computing (Session 3)****Invited Speaker: Dr. Laia Subirats****Session Chairs: Dr. Samarjeet Borah & Dr. Ranjit Panigrahi**

<b>Author</b>	<b>Paper ID</b>	<b>Paper Title</b>
Ayan Dasgupta	323	Missing Word Prediction using Stochastic Steady State and Bi-graph Transitions
Archi Choudhary	333	Alignment of Blended Learning Adaptation with Learners Requirement.
R. S. Lysa Packiam	341	A Hybrid Lightweight AI approach for Tamil English Code Mixed Toxic and Abusive Comment Classification
Md. Aowsaf Anzum	346	Advanced Fake News Detection: A Benchmark Study Using Machine Learning, Deep learning and Ensemble Methods
Kiran Kamatham	376	A Comparative Analysis of Deep Learning Models to Enhance Question Answering in Depression Management
Anushree Krishna Suryavanshi	377	Intelligent Audit Log Query Chatbot for Database Forensics Using Large Language Model (LLM)
Susreeti Sur	379	Lung Disease Severity Assessment: A Data-Driven approach to Performance Evaluation of an Optimized Random Forest Regressor and Other Regression Models
Mayurkumar H. Marolia	381	Enhancing COVID-19 Literature Retrieval: A Comparative Evaluation of Full Text, Vector, and Hybrid Search Methodologies with Reranking for Domain-Specific Question Answering Systems

**Track 3: Computer Vision, Image & Signal Processing (Session 3)****Session Chairs: Dr. Biswaraj Sen & Dr. Archit Yajnik**

<b>Author</b>	<b>Paper ID</b>	<b>Paper Title</b>
Adnan Arif	324	Cooperative Game Theory-Based Resource Allocation in Text-Based Semantic Communication
M K Vishnu Priya, Jaswanth Korrapolu	338	Attention-Based Caption Generation for Optical Remote Sensing Images Using Deep Learning Techniques
Ishwari Datir	362	Addressing the challenges of domain shift in the application of AI by exploring domain generalization techniques
Dr. Nitin Shivsharan	365	A Deep Learning with Transfer Learning-Powered Mobile Application for Object and Currency Detection with Enhanced Accessibility for Visually Impaired Individuals.
Shivang Piyadarshy	367	Automated Detection and Classification of Multi-Species Malaria Parasites using YOLO v 11
Sayan Kumar Gorai	372	A Numerical comparison between Gradient method and Bi-Conjugate Gradient method for Early-Stage Breast Cancer Detection
Rohit Agarwal	373	Anatomically Plausible Generative Data Augmentation for Liver Tumor Segmentation
Mr. Sagar Chingali	386	Iron Oxide-Tungsten Trioxide (Fe <sub>3</sub> O <sub>4</sub> -WO <sub>3</sub> ) Nanocomposites Image Analysis using Digital Image Processing Techniques