



**MUKESH PATEL SCHOOL OF
TECHNOLOGY MANAGEMENT
& ENGINEERING**

IBSSC 2022

IEEE BOMBAY SECTION SIGNATURE CONFERENCE



December 8-10, 2022

ABOUT THE CONFERENCE

The 4th IEEE Bombay Section Signature Conference (IBSSC-2022), is an international conference organized by IEEE Bombay Section and SVKM's NMIMS MPSTME, Mumbai, India. This flagship event will serve as a forum for disseminating the most recent advances in AI, Data Science, ML, and Robotics & Automation, as well as potential research prospects. The Magical City, Mumbai will be the host for the IBSSC-2022. Experts, scholars, and industry professionals from all over the world will present and discuss their work, shedding light on emerging technology developments in a comprehensive manner. Themed, "Frontiers of Technologies: Fuelling Prosperity of the Planet and People" this flagship conference of the IEEE Bombay Section will feature a comprehensive high-quality technical program including a variety of paper presentation, poster sessions, industry exhibits, experts talks, tutorials by eminent speakers and exhibition corners.

Since its inauguration in 2019, IBSSC has established a highly reputed and flagship conference of IEEE Bombay Section, covering diverse areas of cutting-edge research. These include industry 4.0, Block-chain, Electronics Surveillance, Education Technology, Internet of Things, Data Science and Analytics, Robotics Process Automation and Artificial Intelligence, Machine Learning, Healthcare Technologies, Intelligent Transportation, Internet of Vehicles, Agriculture Technologies, Green Electronics and Digital Transformation. Last year, the 2nd IBSSC was conducted on a virtual platform due to the pandemic. More than 138 attendees attended from worldwide, with 38 video presentations across the four technical sessions. Additionally, technology talks from industry and academic experts have been introduced. IBSSC-2021 edition was held with the Covid – 19 pandemics in the background affecting the conference format. As many other events, the IBSSC-2021 conference was held in a mixed mode: online and on-site at ABV-IIITM Gwalior.

ORGANIZING COMMITTEE

Conference Patrons

- **Shri Amrish Patel**
Chancellor, SVKM's NMIMS University, Mumbai
- **Dr. J. P. Gandhi**
Jt. Secretary, SVKM'S NMIMS University, Mumbai
- **Dr. Ramesh Bhat**
Vice Chancellor, SVKM'S NMIMS University, Mumbai
- **Dr. Sharad Y. Mhaikar**
Pro-Vice Chancellor, SVKM'S NMIMS University, Mumbai
- **Dr. Meena Chintamaneni**
Pro-Vice Chancellor, SVKM'S NMIMS University, Mumbai

Conference Advisors

- **Prof. Suryanarayana Doolla**
IIT Bombay
- **Abhay Phansikar**
Technology Consultant, Mumbai

General Chair

- **Dr. B. Satyanarayana**
TIFR, Mumbai

General Co-Chair

- **Anand Suhas Gharpure**
Sonic Multitech Pvt. Ltd., Nashik

Conference Chair

- **Dr. Alka Mahajan**
MPSTME, NMIMS University, Mumbai

Budget and Finance Chairs

- **Prof. Kiran Talele**, Sardar Patel Institute of Technology, Mumbai
- **Prof. Dattatray Sawant**, MPSTME, NMIMS University, Mumbai

Technical Programme Chairs

- **Dr. Saurabh Mehta**, Vidyalankar Institute of Technology, Mumbai
- **Dr. Vijay Raisinghani**, MPSTME, NMIMS University, Mumbai

Technical Track Chairs

- **Dr. Vaishali Kulkarni**, MPSTME, NMIMS University, Mumbai
- **Dr. Rajni Aron**, MPSTME, NMIMS University, Mumbai
- **Dr. Archana Bhise**, MPSTME, NMIMS University, Mumbai
- **Dr. Venkatesh Deshmukh**, MPSTME, NMIMS University, Mumbai
- **Mr. Bhanwar Bishnoi**, Schneider Electric India Pvt. Ltd., Mumbai
- **Dr. Sangita Santosh Chaudhari**, Ramrao Adik Institute of Technology, Navi Mumbai
- **Dr. Lochan Jolly**, Thakur College of Engineering and Technology, Mumbai
- **Dr. Amiya Tripathy**, Don Bosco Institute of Technology, Mumbai
- **Dr. Santosh Chapneri**, St. Francis Institute of Technology, Mumbai

Publication Chairs

- **Dr. Anjali Deshpande**, Ex-Vidyalankar Institute of Technology, Mumbai
- **Dr. Ketan Shah**, MPSTME, NMIMS University, Mumbai

Publicity and Promotions Chair

- **Dr. Dharendra Mishra**, MPSTME, NMIMS University, Mumbai

Web Chair

- **Dr. Avinash More**, MPSTME, NMIMS University, Mumbai

Registration and Logistics Chairs

- **Dr. Seema Shah**, MPSTME, NMIMS University, Mumbai
- **Anjali Barmukh**, MPSTME, NMIMS University, Mumbai

Industry relations and Sponsorship Chairs

- **Arvind Kumar**, TCS Nagpur
- **Dr. Nikhil Gala**, MPSTME, NMIMS University, Mumbai

Message

Shri Amrish Patel

President, SVKM
Chancellor, SVKM's NMIMS University



Greetings from Shri Vile Parle Kelavani Mandal.

I wish to welcome delegates, experts and researchers to the SVKM's NMIMS Mumbai campus. I am happy to note that the Mukesh Patel School of Technology Management and Engineering (MPSTME), a constituent unit of SVKM's NMIMS, along with IEEE Mumbai section is holding an International Conference. Furthermore, it is noteworthy that the event is a signature conference, 4th in the series which IEEE Bombay section is jointly organizing.

NMIMS is committed to deliver quality programs in the higher education sector. In the two decades of its existence as a university it has made rapid strides in the sector. A look at the programs and domains in which NMIMS has made forays, shows that the university not only strives to disseminate knowledge but also takes pride in creating knowledge.

Consistent with the NMIMS vision of being globally recognised, MPSTME has made rapid strides in the engineering education sector. It offers programs in emerging as well as conventional domains.

The IEEE-MPSTME conference which aims to deliberate on how emerging technologies would bring prosperity to the Planet and People is consistent with the vision of the NMIMS University.

I am sure that the conference would bring about fruitful engagement in the academic community. I wish the conference a grand success.

Message

Dr. Ramesh Bhatt

Vice Chancellor,
SVKM's NMIMS University



I am pleased to welcome everyone to the 4th IEEE flagship conference, organized by IEEE Bombay Section and SVKM's NMIMS MPSTME. The theme of this conference is Frontiers of Technologies: Fuelling Prosperity of the Planet and People. The joint team of IEEE and MPSTME, led by Dr. Satyanarayana, IEEE Bombay Section Chair, and Dr. Alka Mahajan, Dean, MPSTME, ensured flawless planning and execution to bring this conference to fruition in a short period of 6 months. This is the third international conference being organized by MPSTME.

IBSSC 2022 provides a platform to researchers within India and abroad to exchange thoughts about technology research in Artificial Intelligence and Machine Learning, Data Science and Analytics, Communication and Information security, Robotics, and Automation. These tracks in the conference have attracted a large volume of submissions from various countries besides India, such as the USA, Japan, China, Saudi Arabia, Bangladesh, Columbia, Sri Lanka, and Mauritius.

I take this opportunity to thank all the authors who submitted their papers and congratulate the authors of the 140 papers that made it through the strict review process and have been selected for presentation. The technical discussions over the next two days, along with the expert talks about 5G, AI/ML, Cybersecurity, and Robotics, by renowned speakers from industry and academia, shall provide an enriching experience to all participants.

I believe that the young researchers, who form a large percentage of the authors, would make the maximum use of this opportunity to engage with their peers and seniors to take a step towards leveraging technology for societal contribution and personal growth.

Message

Dr. Sharad Mhaiskar

Pro Vice Chancellor,
SVKM's NMIMS University



Greetings from SVKM's NMIMS!

Let me at the outset welcome researchers, professional experts from the industry and academicians from across the country as well as from the international arena, for the IEEE-NMIMS 4th International signature conference organized by the IEEE Mumbai section. NMIMS is happy to host the conference and bring together the confluence of academic and professional communities.

MPSTME, with its one and a half decade of existence, in the higher education sector, has made rapid strides in the engineering education sector. A look at the programs hosted by MPSTME shows that the school delivers programs in the emerging areas like Data Science, AI along with ones in the conventional areas. The focus of MPSTME is to bring research to classrooms and maintain excellence in teaching and learning. The IEEE-NMIMS conference would match the vision of MPSTME as well as NMIMS.

A look at the schedule shows that there will be intense discussion on research in different areas, expert talks as well as tutorial sessions. This sort of intense discussion is bound to bring about a wealth of knowledge flow and highlight how technology can benefit people and the planet, which is the theme of the conference.

I understand the conference organizers have put in a lot of efforts to work out details for the three day conference. I am sure that their efforts will bear fruit.

I wish the conference all the success!

Message

Dr. Meena Chintamaneni

Pro Vice Chancellor,
SVKM's NMIMS University



It gives me great pleasure that IEEE Bombay Section and SVKM's NMIMS Mukesh Patel School of Technology Management and Engineering are organizing the 4th IEEE Bombay Section Signature Conference (IBSSC-2022) themed "Frontiers of Technologies: Fuelling Prosperity of the Planet and People" from December 8 -10, 2022.

Over the past years, nanomedicine and artificial intelligence have appeared as promising technologies. Various marketed formulations are the outcome of nanotechnology. Artificial Intelligence in healthcare produces more accurate diagnosis and treatment plans. AI can also predict and track the spread of infectious diseases by analyzing data from healthcare, government, and other sources. Thus, both these technologies improved the quality of life and increased preventive care against diseases.

Research is one of the founding pillars of SVKM's NMIMS philosophy. Policies and systems have been made to promote research across all departments.

SVKM'S NMIMS has always invested in emerging technologies and innovations. The topic of the conference is interesting and brings together the researchers, industry personnel, faculty, national scholars, and students of varied disciplines all related areas to understand the current research and emerging future trends in the area of AI, Data Science, ML, Communication and Robotics & Automation.

I profoundly wish for the success of this meeting!!!!

Message

Dr. Satyanarayana Bheesette

Chair, IEEE Bombay Section & General Chair IBSSC 2022
Tata Institute of Fundamental Research, Mumbai



It gives me immense pleasure to be a part of the hosting team of the “International Conference IEEE Bombay Section Signature Conference (IBSSC-2022) during 8th to 10th December, 2022 to be held at the Mukesh Patel School of Technology Management & Engineering, Mumbai. The conference intends to bring together scientists, engineers and practitioners from different disciplines from across the world to discuss advances, future directions and opportunities in very carefully selected technology areas.

I take this opportunity to welcome all the delegates of the conference. On behalf of the entire IBSSC-2022 team, I would like to thank all the authors, reviewers, sponsors and speakers for their support and cooperation. The rapid development in technologies and changes in lifestyle impose various issues in many countries. The conference IBSSC-2022 has been crafted to challenge the hurdles and we are fortunate to have leading speakers to share their experience and perspectives to achieve smart solutions through their innovation. I hope that the conference serves as a locus for interdisciplinary, a space for discourse and collaboration.

I would like to express my appreciation to the organizing committee for their dedicated efforts to materialize the conference. Last, but not the least, I would like to thank our organising partner, MPSTME for providing such an excellent venue to this prestigious conference. I hope all the participants will have a fruitful and beneficial experience.

Message

Dr. Alka Mahajan

Conference Chair IBSSC 2022,
Dean, MPSTME, SVKM's NMIMS University



Greetings and a very warm welcome to all the delegates of IBSSC 2022 to the NMIMS University!

It is a matter of pride and privilege that the Mukesh Patel School of Technology Management and Engineering (MPSTME), is jointly organising the 4th Signature Conference of IEEE Bombay section this year. The international conference will see a confluence of researchers across the globe deliberating and presenting their research in the areas of AI, Automation, Communication and Data Science.

At the MPSTME, NMIMS University, we have always moved with the changing times and technology. We have been frontrunners in starting undergraduate and postgraduate programmes in AI and Data Science since 2015 and are also credited with introducing innovative technology management integrated programmes. Having established ourselves in these emerging areas we are now ready for the next wave of digital transformation and immersive technologies.

The response of researchers to the call for papers has been very heartening and the stringent review process has seen 140 papers making the mark. I am grateful to all the reviewers and the very diligent technical program committee.

I must thank the IEEE Bombay section for having faith in our capabilities and giving us this opportunity of co-hosting the conference. They have been a very patient and helping partner in organising a conference of this magnitude. The organising teams have spared no effort to ensure that the delegates have a hassle-free experience and they do deserve a pat on the back. I hope all of you have an invigorating learning experience.

Chief Guest and Keynote Speaker

Dr. Deepak Phatak



Professor Emeritus,
Department of Computer Science and Engineering,
Indian Institute of Technology, Bombay, Mumbai

Dr Deepak B. Phatak, Professor at IIT Bombay, has been working with the Institute since 1971. He obtained his Bachelor's degree in Electrical Engineering from SGSITS Indore in 1969, and his M Tech and Ph.D. from IIT Bombay. He headed the CSE department from 1991 to 1994. He was the first Dean of Resources of the Institute from 1995 to 1998. He was the founding head of the Kanwal Rekhi School of IT from 1998 to 2002. He held the Subrao Nilekani chair from 2003 to 2013. He retired in 2018, and is currently Professor Emeritus at the Institute.

He is known for his notable work for upgrading the Aakash tablet, for introducing Smart cards in Indian Payment systems, for initiating business incubation to encourage start-ups, for conducting large scale teacher training programs, for developing the IITBombayX MOOC platform, and for advocating blended MOOCs. He has been an IT advisor to financial and industrial organisations and has been a member of several boards, which include organizations such as RBI, SBI, UTI, HDFC AMC, etc.

Dr. Phatak is recipient of the 'Excellence in Teaching' award and the 'Industrial Impact Research Award' from IIT Bombay. He was conferred 'Life Time Achievement Awards' by Skoch foundation in 2003, by Data-Quest in 2008, by Dewang Mehta Business School Awards in 2010, by Interop in 2014, by IIT Bombay in 2014, and by CSI in 2018. He was listed among fifty most influential Indians, by Business week in 2009.

The President of India honored Dr. Deepak Phatak with Padma Shri (2013) in recognition of his exemplary services in Science and Technology.

Dr. Phatak strongly believes that teaching cannot be just a profession, but has to be one's Dharma. His dream is to see a resurgent India, catching up with the world and eventually leading the world.

Keynote Speaker

Dr. Tarun Sen

Managing Director,
Professor Emeritus of Accounting and Information Systems,
Post Graduate Program in Business Analytics, Virginia Tech.



Dr. Sen joined Virginia Tech in 1985 and spent 25 years as a Professor and Associate Dean responsible for the Pamplin College of Business Graduate, MBA, and International Programs. He taught in the Department of Accounting and Information Systems, the Northern Capital Region MBA program, and in the fully online Masters of Information Technology (MIT) program. He led the successful launch of Pamplin's first executive MBA program in the Washington, D.C. area, the MIT program in India, and the professional MBA program offered in various locations in the Commonwealth of Virginia.

Currently, he leads the design and development of programs of various durations in data analytics offered in Chennai, Mumbai, and Newport News in Virginia. This includes a collaboration with NMIMS in Mumbai India where he recently led the development of a successful MTech. program in Data Science. He also initiated the development of the VT NMIMS Institute for Global Education and Curriculum Innovation.

Dr. Sen was active in funded research and published in leading journals, including Management Science, INFORMS Journal on Computing, Decision Support Systems, and IEEE Transactions on Systems, Man, and Cybernetics. He has served on the editorial review boards and has participated in National Science Foundation SBIR review panels.

In 2002 Sen co-founded Entigence Corporation, a business intelligence consulting company in the Washington DC area and Bangalore. Entigence Corporation was subsequently acquired by Deloitte Consulting.

Dr. Sen has a Ph.D. in management information systems from the University of Iowa, an MBA from the Indian Institute of Management at Bangalore, India, and an undergraduate degree in mechanical engineering from the Indian Institute of Technology at Kanpur, India

Keynote Speaker

Dr. Anirban Bandyopadhyaya

PhD, IEEE Fellow,
Senior Director and Head of Strategic Applications,
GlobalFoundries Inc.



Dr. Anirban Bandyopadhyaya is the Senior Director and Head of Strategic Applications within the Mobility & Wireless Infrastructure Business Unit of GLOBALFOUNDRIES, USA. His work is currently focused on hardware architecture & technology evaluations for emerging RF and MMWave applications.

Prior to joining GLOBALFOUNDRIES, he was with IBM Microelectronics and with Intel where he worked on different areas like RF Design Enablement, Silicon Photonics, signal integrity in RF & Mixed signal SOC's. Dr. Bandyopadhyaya represents Globalfoundries in different industry consortia and alliances on RF/mmwave applications and is an IEEE Fellow and a Distinguished Lecturer of IEEE Electron Devices Society.

Keynote Speaker

Dr. Puneet Agarwal

Co-founder and CTO,
Style by Vida



Dr. Puneet Agarwal is Co-Founder and Chief Technology Officer at Style by Vida, a Fashion-Tech start-up. Puneet also serves as head of ZenLabs, the applied research center of Zensar Technologies Ltd., before this he worked as CTO of Zensar Technologies and as a Principal Scientist in TCS Research. Dr. Agarwal has worked in the IT Services industry for 24+ years, and has extensive exposure to many verticals such as: BFSI, Consumer Services, Hi-Tech & Manufacturing, Life Sciences, Governments, Utilities, Shipping and Logistics, Telecom etc.

He has published 50+ research papers in IEEE, ACM affiliated conferences, in the area of Deep Learning, Natural Language Processing, Knowledge Graphs, Time-Series, and Software Engineering. He has also filed 30+ unique patents. He has served on the program committee of reputed conferences such as ACM-KDD in recent past.

He has a Ph.D. degree from IIT Delhi, in the area of Knowledge graphs, Natural Language Processing, Distributed Parallel Processing, and Deep Learning, and a B.Tech. in Mechanical Engineering from NIT Trichy.

Keynote Speaker

Mr. R. Muralidharan



Chair, LMAG, Bombay Section,
Chief Technology Officer, Tata Advanced Systems, Mumbai,
Past Chair - IEEE India Council & Bombay Section

R. Muralidharan, Fellow Indian National Academy of Engineering and Life Senior Member IEEE, is a Systems Engineering professional for 43 years and is currently CTO at Tata Advanced Systems Ltd., Mumbai, India. At TASL, he is responsible for Technology of mission critical real time solutions for Indian Defense. He is a 1979 batch post graduate in Electrical Engineering (Computers) from IIT Bombay, India. In 1987, the then Indian Prime Minister Mr Rajiv Gandhi had invited him to be a member of the Distinguished Young Scientists team.

Mr. Muralidharan, an IEEE volunteer for 45 years, is a Past chair of IEEE India Council and Bombay Section, Was Member of Board of Governors, Engineering Council of India, 2003-04. He was an IEEE ComSoc Standards board member during 2008 to 2010. He was also an IEEE Computer Society distinguished lecturer for 3 years. Muralidharan was Vice Chair of the Wireless Innovation Forum (SDR Forum V2.0) for 5 years and has been actively involved with the Forum for the last 10 years. Currently, he is a member of the Board of Directors of the Forum. Last year, his research paper, co-authored with Vincent Kovarik titled " AI Enabled Design Agent for Software Engineering" was accepted for presentation at American-CSE's The 19th International Conference on Software Engineering Research & Practice (SERP'21: July 26-29, 2021, USA) and publication in SPRINGER NATURE - Research Book Series: Transactions on Computational Science & Computational Intelligence.

The paper "Performance Optimization of Deep Space Communication Network using Embedded ML/DL" co-authored with Prof. DR Vaman has been accepted for presentation at IEEE WiSEE'22.

SCHEDULE-AT-A-GLANCE

Day-1: 8th December, 2022 (Thursday)

Time	Activity
9:00 AM to 10:00 AM	Registration and Breakfast
10:00 AM to 11:15 AM	Tutorial-1 on “5G” by Mr. Saurabh Srivastava, VP and Head L&D, Reliance JIO
11:15 AM to 11:30 AM	TEA BREAK
11:30 AM to 1:00 PM	Tutorial-2 on “Cybersecurity” by Dr. Faruk Kazi, Dean R&D, VJTI
1:00 PM to 1:45 PM	LUNCH BREAK
TUTORIAL-3 (PARALLEL SESSIONS)	
1:45 PM to 3:45 PM	TUTORIAL on “Sensors” by Mr. Hitesh Mehta, MD, FiberOptika
	TUTORIAL on “Robotics/RPA” by Ms. Reema Shah, CEO, Laesfera
	TUTORIAL on “Data Science on AWS Cloud” by Mr. Sanchit Jain, Data Analytics & Cloud Practice Lead, Quantiphi
4:00 PM to 5:00 PM	Inaugural Function, Chief Guest - Dr. Deepak B. Phatak, Professor Emeritus, IIT Bombay
5:00 PM to 5:30 PM	HIGH TEA

SCHEDULE-AT-A-GLANCE

Day-2: 9th December, 2022 (Friday)

Time	Activity
9:00 AM to 10:00 AM	Registration and Breakfast
10:00 AM to 10:45 AM	Online Expert Talk-1 on “AI/ML” by Dr. Tarun Sen, MD, Professor Emeritus, Virginia Tech
10:45 AM to 11:30 AM	Expert Talk-2 on “5G Infra” by Dr. Dr. Anirban Bandyopadhyay, PhD, IEEE Fellow, Senior Director & Head of Strategic Applications, GLOBALFOUNDRIES Inc
11:30 AM to 11:45 AM	TEA BREAK
11:45 AM to 1:15 PM	Paper Presentation -1 (In 4 Parallel Tracks – 7A, 7B, 7C, 7D)
1:15 PM to 2:00 PM	LUNCH BREAK
2:00 PM to 3:30PM	Paper Presentation -2 (In 2 Parallel Tracks – 8A, 8B)
3:30 PM to 3:45 PM	TEA BREAK
3:45 PM to 5:15 PM	Paper Presentation -3 (In 3 Parallel Tracks – 9A, 9B, 9C)
5:15 PM to 6:15 PM	IEEE Bombay Section's K Shankar Paper Awardee 2021 Presentation
7:30 PM to 10:00 PM	GALA DINNER

SCHEDULE-AT-A-GLANCE

Day-3: 10th December, 2022 (Saturday)

Time	Activity
9:00 AM to 9:30 AM	Registration and Breakfast
9:30 AM to 11:00 AM	Paper Presentation -4 (In 4 Parallel Tracks – 11A, 11B, 11C, 11D)
11:00 AM to 11:15 AM	TEA BREAK
11:15 AM to 1:00 PM	Paper Presentation -5 (In 4 Parallel Tracks – 12A, 12B, 12C, 12D)
1:00 PM to 2:00 PM	LUNCH BREAK
2:00 PM to 3:30PM	Expert Talk-4 on “AI/NLP” by Dr. Puneet Agarwal, Co-founder and CTO, Style by Vida
3:30 PM to 3:45 PM	TEA BREAK
3:45 PM to 4:15 PM	Valedictory Function and Section Awards Function, Chief Guest - Mr. R. Muralidharan, Past Chair - IEEE India Council & Bombay Section, Chair, LMAG, Bombay Section, Chief Technology Officer, Tata Advanced Systems, Mumbai

TECHNICAL SESSION PLAN

DAY	TIME	SESSION	TRACK NAME	ROOM NO
9-Dec-2022 (Friday)	11:45 to 13:15	7A	RAA	102
9-Dec-2022 (Friday)	11:45 to 13:15	7B	AIML	104
9-Dec-2022 (Friday)	11:45 to 13:15	7C	AIML	103
9-Dec-2022 (Friday)	11:45 to 13:15	7D	ACISC	101
9-Dec-2022 (Friday)	14:00 to 15:30	8A	DSA	102
9-Dec-2022 (Friday)	14:00 to 15:30	8B	AIML	104
9-Dec-2022 (Friday)	15:45 to 17:15	9A	ACISC	103
9-Dec-2022 (Friday)	15:45 to 17:15	9B	AIML	104
9-Dec-2022 (Friday)	15:45 to 17:15	9C	MULTI-TRACK	102
10-Dec-2022 (Saturday)	9:30 to 11:00	11A	AIML	104
10-Dec-2022 (Saturday)	9:30 to 11:00	11B	AIML	103
10-Dec-2022 (Saturday)	9:30 to 11:00	11C	DSA	102
10-Dec-2022 (Saturday)	9:30 to 11:00	11D	RAA	101
10-Dec-2022 (Saturday)	11:15 to 13:00	12A	AIML	104
10-Dec-2022 (Saturday)	11:15 to 13:00	12B	ACISC	103
10-Dec-2022 (Saturday)	11:15 to 13:00	12C	AIML-RAA	101
10-Dec-2022 (Saturday)	11:15 to 13:00	12D	MULTI-TRACK	102

TECHNICAL SESSION DETAILS FOR ORAL PRESENTATION

7A - RAA (Friday, 9-Dec-2022) - 11:45 to 13:15				
SN	PAPER ID	PAPER TITLE	REGISTERED AUTHOR/(S)	TIME
1	165	Non-contact detection of trench quality by UAV-LiDAR system	Wen Xiao	11:45-12:00
2	168	A new path following method of AUV using line-of-sight with sideway	Lie Xu	12:00-12:15
3	227	ROI based real time straight lane line detection using Canny Edge Detector and masked bitwise operator.	Manan Doshi	12:15-12:30
4	247	Simulation And Real Time Study of VR Controlled Robotic Manipulator Using ROS	Sasidharan Vairavasamy, Noel Innocent J	12:30-12:45
5	272	Design and Implementation of CRONE Controller for Automatic Voltage Regulator (AVR) System	Pritesh Shah, Ravi Sekhar	12:45-13:00
6	264	MATLAB and Simulink for Building Automation	Pritesh Shah, Ravi Sekhar	13:00-13:15
7B - AIML (Friday, 9-Dec-2022) - 11:45 to 13:15				
SN	PAPER ID	PAPER TITLE	REGISTERED AUTHOR/(S)	TIME
1	2	Advancement in Communication using Natural Language based VideoBot System	Flewin Dsouza	11:45-12:00
2	28	Explainable Approach for Species Identification using LIME	Mihir Nikam	12:00-12:15
3	30	Diabetes Detection Using Machine Learning Algorithms	Kunjal Shah	12:15-12:30

4	32	Robust deep learning framework for the detection of melanoma in images	Trisha Sarkar	12:30-12:45
5	33	A Study of LIME and SHAP Model Explainers for Autonomous Disease Predictions.	Sannidhi Rao	12:45-13:00
6	35	Performance Analysis of Machine Learning Algorithms for COVID-19 Detection	Pranjali G. Gulhane	13:00-13:15

7C - AIML (Friday, 9-Dec-2022) - 11:45 to 13:15

SN	PAPER ID	PAPER TITLE	REGISTERED AUTHOR/(S)	TIME
1	38	VGG FaceNet Based Sketch to Face Recognition with Morphable Model	Ajita Patil	11:45-12:00
2	43	Deep learning optimizer performance analysis for Pomegranate fruit quality gradation	Rupali Kale	12:00-12:15
3	44	Diabetic Retinopathy Detection using Android Application	Pranoti Nage	12:15-12:30
4	47	A research attempt to predict and model personalities through users' social media details	Muskan Goyal	12:30-12:45
5	50	Monkeypox Skin Lesion Classification Using Transfer Learning Approach	Arya Shah	12:45-13:00
6	59	Gradient Boosting Approach for Sentiment Analysis for Job Recommendation and Candidate Profiling	Swapnil Singh	13:00-13:15

7D - ACISC (Friday, 9-Dec-2022) - 11:45 to 13:15

SN	PAPER ID	PAPER TITLE	REGISTERED AUTHOR/(S)	TIME
1	11	Energy-Efficient Algorithm for Cluster Formation and Cluster Head Selection for WSN	M Ravinder	11:45-12:00

2	19	Applications of Blockchain in Healthcare	Rajat Parab	12:00-12:15
3	45	Decentralized Ride Hailing System using Blockchain and IPFS	Om Naik	12:15-12:30
4	94	Securing Unmanned Aerial Vehicles by Encrypting MAVLink Protocol	Noshin Sabuwala	12:30-12:45
5	95	SC Connect: Secure Server Access from Mobile Device	Wilfred Almeida	12:45-13:00
6	100	Bitland-A Decentralized Commercial Real Estate Platform	Sakshi Pande, Shrushti Mandollikar	13:00-13:15

8A - DSA (Friday, 9-Dec-2022) - 14:00 to 15:30

SN	PAPER ID	PAPER TITLE	REGISTERED AUTHOR/(S)	TIME
1	10	Highlighting Prominent Features for Size Reduction in Time Series data using Clustering Techniques	Anupama Jawale	14:00-14:15
2	29	Statistical and Sentiment Analysis on Investment Pattern of Indians	Jash Jain	14:15-14:30
3	56	Variables identification for Students Performance Prediction	Vandana Bharadi	14:30-14:45
4	61	PSO Adaptive Fading Memory Kalman Filter Based State Estimation of Indoor Thermal Model with Unknown Inputs	Bed Prakash Das	14:45-15:00
5	77	Forecasting Customer Churn in the Telecommunications Industry	Devansh Gupta	15:00-15:15
6	107	A Requirement Gathering Framework for Electronic Document Management Systems	Soulakshmee D. Nagowah	15:15-15:30

8B - AIML (Friday, 9-Dec-2022) - 14:00 to 15:30

SN	PAPER	PAPER TITLE	REGISTERED	TIME
----	-------	-------------	------------	------

	ID		AUTHOR/(S)	
1	64	Plant Leaf Disease Detection and Classification Based on Machine Learning Model	Aashish Jha	14:00-14:15
2	73	Automatic Twitter Rumour Detection using Machine Learning	Devarsh Patel, Riddhi Gawande	14:15-14:30
3	96	Application of Fuzzy Matching Algorithms for Doctors Handwriting Recognition	Riya Patil, Prasad Peshave	14:30-14:45
4	98	A Comparative Study on Machine Learning Models to Predict Lung Cancer and Types of NSCLC	Riya Adsul	14:45-15:00
5	260	Feature Selection based False Data Detection Scheme using Machine Learning for Power System	Rohit Bhakar	15:00-15:15
6	284	Classification Studies on Vibrational Patterns of Distributed Fiber Sensors using Machine Learning	Yada Sai Pranay	15:15-15:30

9A - ACISC (Friday, 9-Dec-2022) - 15:45 to 17:15

SN	PAPER ID	PAPER TITLE	REGISTERED AUTHOR/(S)	TIME
1	102	Social media users' privacy protection from social surveillance using Blockchain Technology	Purnima Ahirao	15:45-16:00
2	118	E-sewa app for self-employed women	Riona Dsouza	16:00-16:15
3	166	Implementation of RFID-based Lab Inventory System	Vishrut Chokshi	16:15-16:30
4	171	Forensic Techniques to Detect Hidden Data in Alternate Data Streams in NTFS	Rahul Hermon	16:30-16:45
5	172	Test Pattern generation for detection of Hardware Trojans	Sandip Chakraborty, Archisman Ghosh	16:45-17:00

		based on improved Genetic Algorithm		
6	81	Blockchain for Challenges of Logistics and Supply Chain Information System	Devarsh Patel	17:00-17:15

9B - AIML (Friday, 9-Dec-2022) - 15:45 to 17:15

SN	PAPER ID	PAPER TITLE	REGISTERED AUTHOR/(S)	TIME
1	103	Wavelet Decomposition based Automated Alcoholism Classification using EEG Signal	Aradhana Manekar	15:45-16:00
2	104	Detection of Multiclass Objects in Satellite Images Using an Improved Algorithmic Approach	Abhimanyu Singh	16:00-16:15
3	105	Major and Sub-Class Classification of Arrhythmia using Eigen Vectors in ConvNet	Umamaheswari S, Sangeetha D	16:15-16:30
4	108	Genius – Brain Training Mobile Application for the Elderly	Leckraj Nagowah	16:30-16:45
5	109	A Survey on Image Processing based Techniques for Space Debris Detection	Punam Pande	16:45-17:00
6	121	Predicting chronic diseases using clinical notes and fine-tuned transformers	Swati Saigaonkar	17:00-17:15

9C - MULTI-TRACK (Friday, 9-Dec-2022) - 15:45 to 17:15

SN	PAPER ID	PAPER TITLE	REGISTERED AUTHOR/(S)	TIME
1	76	Citation Count Prediction Using Different Time Series Analysis Models	Priya Porwal	15:45-16:00
2	106	Deep-3DConvNet: A network to detect abnormal activities at megastores	Mohd. Aquib Ansari	16:00-16:15
3	198	Cyber Attack Detection and Implementation of Prevention	Aishwarya Bhalme	16:15-16:30

		Methods For Web Application		
11A - AIML (Saturday, 10-Dec-2022) - 09:30 to 11:00				
SN	PAPER ID	PAPER TITLE	REGISTERED AUTHOR/(S)	TIME
1	130	CpG Island Detection Using Transformer Model with Conditional Random Field	Mohammed Imamul Hassan Bhuiyan	09:30-09:45
2	146	Food Recognition using Transfer Learning	Ankit Basrur	09:45-10:00
3	150	Design of an efficient approach for Performance Enhancement Of COVID-19 Detection using Auxiliary Google Net by using Chest CT Scan Images	Sushila Ratre	10:00-10:15
4	148	Depth Estimation of Monocular Images using Transfer Learning based UNET Model	Suchitra Patil	10:15-10:30
5	151	Realtime Deepfake Detection using Video Vision Transformer	Abhishek Doshi	10:30-10:45
6	153	TransUNet for psoriasis lesion segmentation	Ritesh Raj	10:45-11:00
11B - AIML (Saturday, 10-Dec-2022) - 09:30 to 11:00				
SN	PAPER ID	PAPER TITLE	REGISTERED AUTHOR/(S)	TIME
1	154	Prediction of Anxiety Disorders using Machine Learning Techniques	Anika Kapoor	09:30-09:45
2	169	Fuzzy Expert System for Acidification and Deacidification Process in Red Wine Grape Juice	Pratiksha Kamble	09:45-10:00
3	175	Early Prediction of Coronary Heart Disease using Boosting-based Voting Ensemble Learning	Subhash Mondal	10:00-10:15
4	186	Prediction of Student's Wellbeing from Stress and Sleep Questionnaire data using Machine Learning Approach	Sharisha Shanbhog	10:15-10:30

5	195	DCNN Based Human Activity Recognition Using Micro-Doppler Signatures	Ajay Waghumbare	10:30-10:45
6	203	Multi-Part Knowledge Distillation for the Efficient Classification of Colorectal Cancer Histology Images	Shankey Garg	10:45-11:00

11C - DSA (Saturday, 10-Dec-2022) - 09:30 to 11:00

SN	PAPER ID	PAPER TITLE	REGISTERED AUTHOR/(S)	TIME
1	97	A Comprehensive Study of Road Traffic Accidents: Hotspot Analysis and Severity Prediction Using Machine Learning	Utkarsh Gupta, Varun Mk	09:30-09:45
2	156	Observation of Online vs Offline Learning Experience	Karan Mehta	09:45-10:00
3	157	Big Data architecture in radio astronomy: the SKA	Karan Mehta	10:00-10:15
4	222	Statistical Data Analysis using GPT-3	Ashwin Sharma, Wilfred Almeida	10:15-10:30
5	223	Case Study on Transport Of Petroleum In Nigerian Cities	Snehee Chheda	10:30-10:45
6	91	Wireless Charging in a Dynamic Environment for Electric Vehicles	Sandeep Ushkewar	10:45-11:00

11D - RAA (Saturday, 10-Dec-2022) - 09:30 to 11:00

SN	PAPER ID	PAPER TITLE	REGISTERED AUTHOR/(S)	TIME
1	259	Design And Development of Drone	Manav T.P	09:30-09:45
2	262	Fraud Detection and Monitoring of Water Tankers using IoT	Mishtee Gandhi	09:45-10:00
3	274	A Novel Method in Procedural Maze Generation	Akash Ajith, Sharon Rose Babu	10:00-10:15
4	283	Design and Implementation of IoT Based Local Weather Station	Akshaj Raut	10:15-10:30

		- An Experimental Setup		
5	31	Design and Analysis of Strawberry-Picking Industrial Robotic Arm	Adnan Amir, Akshat Verma, Abhinav Goswami, Ashish Kabra, Shrikar Nakhye and Sanket Chaudhary	10:30-10:45
6	1	Design and Implementation of an IoT Based Patrol Robot	Adnan Amir, Aaryaman Chandgothia, Moksh Goel	10:45-11:00
12A -AIML (Saturday, 10-Dec-2022) - 11:15 to 13:00				
SN	PAPER ID	PAPER TITLE	REGISTERED AUTHOR/(S)	TIME
1	213	An approach to detect abusive content incorporating Word2Vec and Multilayer Perceptron	Devendra Tayal	11:15-11:30
2	233	AI based Classification for Autism Spectrum Disorder Detection using Video Analysis	Shivani Pandya	11:30-11:45
3	239	A Solution to the techno-economic generation expansion planning using Enhanced Dwarf Mongoose Optimization Algorithm	Bimal Kumar Dora	11:45-12:00
4	244	Dynamic Pricing using Reinforcement Learning in Hospitality Industry	Inderpreet Singh	12:00-12:15
5	252	Classification Of Brain Images for Identification Of Tumors	Rohan Prasad	12:15-12:30
6	255	Voice Based Authentication Using Mel-Frequency Cepstral Coefficients and Gaussian Mixture Model	Diya Bakhai	12:30-12:45
7	273	Comparative Study of CNN Models on the Classification of Dyslexic Handwriting.	Subha Sreekumar	12:45-13:00
12B -ACISC (Saturday, 10-Dec-2022) - 11:15 to 13:00				
SN	PAPER ID	PAPER TITLE	REGISTERED AUTHOR/(S)	TIME

1	179	Antennas in Airborne Applications	Aamir Shaikh	11:15-11:30
2	200	Implementation of 5G Technology in Rural Education of India	Aarushi Tiwari, Vinit Upadhyay	11:30-11:45
3	234	Intelligent Farm Monitoring System Using LoRa Enabled IoT	Shraddha Gore	11:45-12:00
4	271	Computationally efficient image encryption technique based on selective pixel diffusion	Shabir Parah	12:00-12:15
5	161	Forensic Analysis of Windows 11 Prefetch Artifact	Akash Budhrani	12:15-12:30
6	163	Dynamic Load balancing in SDN using Energy Aware Routing and Optimization Algorithm	Jayesh Dafda	12:30-12:45

12C – AIML - RAA (Saturday, 10-Dec-2022) - 11:15 to 13:00

SN	PAPER ID	PAPER TITLE	REGISTERED AUTHOR/(S)	TIME
1	54	Deep Learning for Crowd Image Classification for Images Captured Under Varying Climatic and Lighting Conditions	Hemant Ingale	11:15-11:30
2	88	Using Fractional Derivative in learning algorithm for Artificial Neural Network: Application for salary prediction	Manisha Joshi	11:30-11:45
3	282	A Hybrid ANN coupled NTOPSIS Approach: An Intelligent Multi-Objective Framework for solving Engineering Problems	Asmi Choudhary, Avaneesh Kumar, Reetu Jain	11:45-12:00
4	285	Motor Modelling and Magnetic adhesion Simulation for Hybrid Wall Climbing AGV	Lokesh Ramesh, Crispin Marie Peter G	12:00-12:15

12D - MULTI-TRACK (Saturday, 10-Dec-2022) - 11:15 to 13:00

SN	PAPER ID	PAPER TITLE	REGISTERED AUTHOR/(S)	TIME
1	216	An online dashboard platform	Sajeewa Pemasinghe	11:15-

		for weather data of major Sri Lankan cities, and global climate trends		11:30
2	266	Implementation of NAT44 and NAT64 using TC-BPF and eXpress Data Path (XDP)	Mohit P. Tahiliani	11:30-11:45
3	267	Empirical Evaluation of Traffic Shaping Algorithms for Time Sensitive Networking	Mohit P. Tahiliani, Kunj Naik	11:45-12:00
4	183	A New Class of Bilateral SISO- (Single Input Single Output) Active Filters Targeted for Health-Care Applications	Umar Mohammad	12:00-12:15



**MUKESH PATEL SCHOOL OF
TECHNOLOGY MANAGEMENT
& ENGINEERING**

IBSSC 2022



sponsored by

