8TH IET SMART CITIES SYMPOSIUM 2024

1-3 DECEMBER 2024

HYBRID EVENT -WITH VIRTUAL ACCESS SYMPOSIUM – UNIVERSITY OF BAHRAIN

TECHNICAL SUPPORT:

THE INSTITUTION OF ENGINEERING AND TECHNOLOGY

Full-Paper Reviewed Manuscripts Submissions.
Symposium Proceedings will be submitted to the IET Inspec, IEEE Xplore, and Scopus Elsevier's indexing.
Distinguished Contents will also be examined by IET for possible submission to IET JOURNALS, after selection and extension.

8th IET-SCS-2024

The Institution of Engineering and Technology

TECHNICAL SPONSOR AND SUPPORT

An annually run IET symposium related to development of smart innovations for smart cities. The symposium objectives are: to create awareness through research and publications about the future prospects of smart cities. The symposium also serves as a platform to exchange ideas and thoughts in international prospect and stand. In addition, the symposium is emphasizing the role of academia, universities, industries, experts, and innovations for promoting smart cities solutions, projects, smarter ideas, consultancies and continuity in the form of indexed publications. The 8th IET International Smart Cities Symposium (8-scs-2024) will be held at the University of Bahrain, Bahrain, on December 1-3, 2024. The symposium will feature world-class plenary speakers, major technical symposiums, industry and academic panels, and invited tracks. For more information, please visit symposium website: https://www.iet-smartcities-symposium.com/. You are cordially invited to submit your latest research work to the symposium. Best paper awards will be selected from accepted papers. The symposium and tracks papers will be published and indexed in IET Inspec - IEEE Xplore, and will appear on other indexing databases.

TECHNICAL PROGRAM:

Details are found at:

https://www.iet-smartcities-symposium.com/

SYMPOSIUM KEYNOTE, PAPERS, AND PROCEEDING VOLUME SUMMARY

THE 8TH IET SCS-2024 SYMPOSIUM

SETUP AND PURPOSE

IET Technical Support: The Institution of Engineering and Technology


Education in Switzerland
2 Swiss Federal Institutes of Technology
EPFL
ETH
Germany
Austria
France
Italy
10 Cantonal (state) Universities
+ several local institutes of higher learning (HES)
Ecole Polytechnique Fédérale de Lausanne:
comes from third parties
IET
Professional


IET
The 2nd
Smart Cities Symposium
SCS19
Organized by the University of Bahrain in collaboration with The Institute of Engineering and Technology IET
University of Bahrain
Zain e-learning center
24-26 March
2019
Bahrain airport company


Smart City is an Open Season Hunting for attackers

17 Years … Way Forward and a Sense of a Purpose:

The first IET forum at the University of Bahrain has started since 2008. The first IET Smart Systems International Conference was also during 2008. Since the year 2008, we have been organizing the local IET forums, and then indexed Symposiums in an annual basis at University of Bahrain.

As annually planned, also this year of 2024, the University of Bahrain; 8th Smart Cities Symposium (1-3 December 2024) is also organized with collaboration of the IET, (The Institution of Engineering and Technology), UK.

Smart Cities is a new and emerging concept that have received a substantial attention for a while. This is because of the fast development of Engineering Concepts, IT and ICT sectors. Smart cities are a used term used to define employment of smart technologies and data as the means to solve cities' sustainability challenges and prosper. In this sense, many cities are in the process of transforming themselves to be smart. This can be achieved while relying on and using data and technology to improve several sectors. Sectors that are applicable for such transformations are:

{Transport, Energy use, Health issues, Health care, and Air quality, or to Drive economic growth}. Others are being built to be smart from the start. This is a term that relates to the present and to the future. Nevertheless, in general notion, cities world-wide consume substantial resources and global energy supply, which make them much under demand to be transformed to smart. Reports are also showing that, there are growing numbers of the world' s natural resources, global energy supply, healthcare issues, the need of fast and easy transports, and easy health care. In addition, over the coming twenty years, it is expected that cities worldwide will generate not less than 60 per cent of global GDP. In this sense there are potentials that, Engineering and High Technologies will help and participate to resolve several issues and demands of current cities.

The regional infrastructure, and the ICT backbone, are developing very fast, that makes the concept of smart cities are very applicable concepts locally. Therefore, the event will be an excellent platform and a site for energetic and dynamic discussions between locally demanding parties, possible international experts, and the community of academics, decision makers, researchers, practitioners, real estate developers in Bahrain, investors, and policy makers from the urban spheres. This is all with the aim to explore such emerging trends and innovative solutions to green and smart cities within the region.

The main purpose of the event is to create awareness about the prospects of Smart Cities. The event will serve as a platform to exchange ideas and throughout in an international prospect. The event objectives are also in emphasizing the role of academic institutions in promoting a smarter kingdom via its consultancy, building smarter ideas or continuity in the form of publications, and creating innovative solutions. In addition, such organization of the event, will also focus on networking opportunities, and that the event is a good starting point and could help in making networking opportunities for smart cities.

The event venue (the symposium) will be at University of Bahrain, and will run for three days, 1-3 December 2024. The symposium will involve both invited speakers (talking about load needs for smart cities), in addition to academic submitted papers (with review), as they will be published afterward within the IET (once satisfying the needed technical standards of the IET).

The event is also to create awareness about the prospects of Smart Cities. The symposium is a platform to exchange ideas and thoughts in international prospects. The symposium is a platform for emphasizing the role of academia in promoting Smart Cities, Digital Twins of Cities, Projects, Smarter Ideas, and Consultancies. The symposium is a platform for research community in forms of publications and creating innovative solutions.

8th Smart Cities Symposium -2024: IET Partner and Technical Support

17 YEARS OF CONTINUOUS ANNUAL IET FORUMS AND SYMPOSIUMS AT UOB

DETAILED TECHNICAL PROGRAM AND PARALLEL SESSIONS

DAY -I

SUNDAY, DECEMBER 01, 2024

Sunday, December 1st 2024, 8:30 - 9:00 (Asia/Bahrain)

DAY1 - GETTING READY, REGISTRATION AND PLATFORM TECHNICAL SETTING

DAY -I

Sunday, 1st December 2024 9:05 - 9:10 (Asia/Bahrain)

OC1: OPENING CEREMONY: WELCOMING TO THE 8TH SMART CITIES SYMPOSIUM BY UNIVERSITY OF BAHRAIN

MAIN-THEATRE HALL – VIRTAUL ACCESS

Welcoming to the 8th SMART CITIES SYMPOSIUM

OPENING SPEECH

TOWARDS SMART CITIES AND DIGITAL TWIN CITIES: A NOVEL PARADIGM

MAIN-THEATRE HALL – VIRTAUL ACCESS

December 1st - 2024, 09:00+03 - 09:10+03

OPENING CEREMONY: WELCOMING TO THE 8TH SMART CITIES SYMPOSIUM BY UNIVERSITY OF BAHRAIN

DAY -I

Sunday, 1st December 2024 9:10 - 9:15 (Asia/Bahrain)

OC1: Opening Ceremony: Welcoming to the 8th SMART CITIES SYMPOSIUM

MAIN-THEATRE HALL – VIRTAUL ACCESS

Opening Ceremony Welcome Speeches: Welcoming to the 8th SMART CITIES SYMPOSIUM

WELCOME SPEECH

UNIVERSITY OF BAHRAIN SMART CITIES EVENT

WELCOME SPEECH BY
THE UNIVERSITY OF BAHRAIN

1st December 2024, 09:10+03 - 09:15+03

Sunday, 1st December 2024 9:15 - 9:20 (Asia/Bahrain)

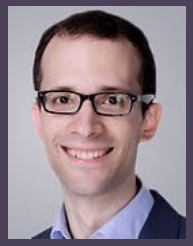
CP: IET Smart cities Symposiums, Projection from the Past, and the Future: Thanks, and Appreciations.

Thanks, and Appreciation
MAIN-THEATRE HALL – VIRTAUL ACCESS

DAY -I: SUNDAY, 1ST DECEMBER 2024

Keynote Speech: 01: Sunday, 1st December 2024, 09:20+03 - 10:00+03 (Asia/Bahrain)

PRINTABLE SENSORS AND ENERGY HARVESTERS FOR SMART CITIES



Professor, Dr. Vincenzo Pecunia, Ph.D. Cantab., FIMMM, FIET, FInstP, SMIEEE, P.Eng.
School of Sustainable Energy Engineering, Simon Fraser University, 10285 University Drive, Surrey, British Columbia V3T 0N1, Canada

Session Chair: Dr. Suresh Vishwakarma, P.Eng., CEng, MIET, MBA, PhD, PostDoc, Honorary Professor, Amity University, India, IET-UK Representative for Western Canada

MAIN-THEATRE HALL – VIRTAUL ACCESS

TALK ABSTRACT

In the pursuit of sustainable smart cities, the integration of low-cost, scalable, and energy-efficient technologies is paramount. This presentation explores the crucial role of printable electronics in advancing smart city infrastructure. Our research focuses on the development of printable semiconductors (e.g., organic semiconductors, lead-free perovskite derivatives, and carbon nanotubes) for low-cost ultra-low-power electronics, indoor photovoltaics, and sensors. These technologies offer significant potential for smart city applications involving distributed sensor networks, energy harvesting systems, and responsive urban environments. Specifically, we demonstrate how printable indoor photovoltaics, based on lead-free perovskite derivatives, could power IoT devices in indoor environments, reducing reliance on batteries and minimizing electronic waste. Furthermore, our printable light sensors, based on organic and perovskite-based semiconductors, could enable real-time monitoring, crucial for adaptive lighting and energy management systems in smart cities. The flexibility, cost-effectiveness, and low environmental impact of these printable technologies position them as potential key enablers of next-generation smart city applications. This talk will detail the technological innovations and application potential of our research, providing insights into how printable sensors and energy harvesters could contribute to the sustainable evolution of smart cities, from energy-efficient buildings to intelligent transportation systems.

SPEAKER DETAILS: DR. VINCENZO PECUNIA

Prof. Vincenzo Pecunia is the Head of the Sustainable Optoelectronics Research Group at Simon Fraser University, Canada. His research focuses on environmentally friendly, printable semiconductor devices for energy harvesting and sensing, with the aim of advancing sustainability-focused applications such as smart cities, digital homes, precision agriculture, and Industry 4.0. He has pioneered ultra-low-power printed electronics, indoor photovoltaics based on lead-free perovskite derivatives, and printable narrowband organic photodetectors with cutting-edge performance. In recognition of his contributions, Prof. Pecunia has been awarded the Fellowship of the Institution of Engineering and Technology (FIET), the Fellowship of the Institute of Materials, Minerals & Mining (FIMMM), and the Fellowship of the Institute of Physics (FInstP). Prof. Pecunia earned his PhD in Physics from the University of Cambridge. He has published extensively in top journals, including Nature, Nature Electronics, Advanced Materials, Advanced Energy Materials, Advanced Functional Materials, ACS Nano, and Nano Energy, and has authored books for Institute of Physics Publishing and Cambridge University Press.

DAY -I: SUNDAY, 1ST DECEMBER 2024

Keynote Speech: 01: Sunday, 1st December 2024, 10:00+03 - 10:30+03 (Asia/Bahrain)

THE CONVERGENCE OF ARTIFICIAL INTELLIGENCE, ELECTRIC VEHICLES, AND INDUSTRIAL TECHNOLOGY

Dr. Mrinal R Bachute
Associate Professor and Head of Industry Connect at Symbiosis Institute of Technology, Pune under Symbiosis International Pune, India
Session Chair: Dr. Tagore Ramlal, University of Trinidad and Tobago, and Chair, IET Trinidad and Tobago LN. Trinidad

MAIN-THEATRE HALL – VIRTAUL ACCESS

TALK ABSTRACT

The convergence of Artificial Intelligence (AI) and eMobility is transforming the transportation landscape. This talk explores the profound impact of AI on electric vehicle (EV) adoption, infrastructure optimization, and sustainable transportation .AI-driven EV charging optimization and energy management Predictive maintenance and vehicle health monitoring Intelligent routing and navigation for EVs Autonomous driving and its implications on eMobility Data analytics for EV adoption and infrastructure Insights into AI's role in enhancing eMobility efficiency and sustainability Understanding of AI-driven innovations in EV charging and infrastructure Perspectives on the future of transportation and the intersection of AI and eMobiliry.

SPEAKER DETAILS: DR. MRINAL R BACHUTE

Dr. Mrinal R Bachute, PhD (Electronics), ME (Digital Electronics) is an Associate Professor and Head, of Industry Connect at Symbiosis Institute of Technology, Pune under Symbiosis International (Deemed University) Pune, India. She has more than 24 years of experience in teaching and research. She has guided many postgraduate and undergraduate students in their projects. She is currently guiding the doctoral research of 5 scholars. Dr. Mrinal's areas of specialization include computer vision, Digital Image Processing, Machine Learning Artificial Intelligence, and Adaptive Signal Processing. She has received research funding from the University of Pune and All India Council for Technical Education's Quality Improvement Program grants. She has presented her work at many international workshops and conferences and chaired technical sessions also. Her research papers have been published in reputed journals and conference proceedings at the national and international levels. Dr. Mrinal Bachute has also delivered invited talks and expert sessions at many national and international platforms, including at IET-UK's seminar in Vancouver Canada, ZE Power Engineering, Vancouver Canada, and at IET local network in Trinidad and Tobago. She has been a paper reviewer for conferences and reputed journals including IEEE access, springer nature and Elsevier.

DAY -I: SUNDAY, DECEMBER 1, PARALLEL SESSIONS

DAY -I: Sunday, December 1 10:30 - 13:00 (Asia/Bahrain):

Parallel Session: SA01: Internet of Things and Smart Applications-PART-A

Hall Hall-01: SESSION JOINING: HALL-01

Session Chair: Dr. Raja Mohamed M Sumsudeen

10:30 1571054800: Optimizing Sampling for Ontario's K-12 Wireless Network Data.
Dr. Salam Ismaeel (Humber College, Canada), Dr. Nihad Al-Juboori (Business Insights and Analytics, Canada), Dr. Mirza Kamaludeen (ig2 Group, Canada)

10:45 1571054797: Assessing K-12 Broadband Needs: Data and Industry Insights.
Dr. Salam Ismaeel (Humber College, Canada), Dr. Nihad Al-Juboori (Business Insights and Analytics, Canada), Dr. Mirza Kamaludeen (ig2 Group, Canada)

11:00 1571009697: Solar-Powered IoT-Enabled Smart Water Quality Monitoring System.
Ms. Ghadeer Mohammed Alhaddar (University of Bahrain, Bahrain), Ms. Hawra Bader Jaafer Ghayeb (UOB, Bahrain), Dr. Raja Mohamed M Sumsudeen (University of Bahrain, Bahrain)

11:20 1571048000: Real-time Astute Streetlight Traffic Flow Adaptation Using IoT and Machine Learning.
Dr. Sandeep Kumar Sharma (Manipal University Jaipur, India), Dr. Pramod Singh Rathore (Manipal University Jaipur, India), Mr. Sahil Choudhary (Manipal University Jaipur, India)

11:40 1571046125: IoT-Based Mobile Drug Dispenser for Developing Countries.
Dr. Keith Machingamidze (Harare Institute of Technology, Zimbabwe), Mr. Munyaradzi Charles Rushambwa (Harare Institute of Technology, Zimbabwe), Dr. Yogesh C K (VIT, India), Dr. Rajkumar Palaniappan (University of Technology Bahrain, Bahrain), Dr. Vikneswaran Vijean (Universiti Malaysia Perlis, Malaysia), Dr. Fizza Ghulam Nabi (University of the Punjab, Pakistan)

12:00 1571045626: Internet of Water: Quantifying IoT's Impact on Urban Water Management and Resource Optimization in Smart Cities.
Mrs. Swathi Chundru (Motivity Labs INC, USA & Motivity Labs Inc, USA), Mr. Arunkumar Thirunagalingam (Santander Consumer USA, USA), Mr. Praveen Kumar Maroju (Walmart, USA), Mr. Harsh Yadav (Senior Software Developer, USA), Dr. Pawan Whig (India, India)

12:20 1571045469: IoT Malware Detection and Identification Using Deep Learning and Behavioral Traffic Analysis.
Dr. Rajmohan Rajendran (SRM Institute of Science and Technology, India), Dr. Ananth kumar Tamilarasan (IFET College of Engineering, India), Dr. Saran Raj S (Vel Tech Rangarajan Dr Sagunthala R&D Institute of Science and Technology, India), Mr. Jayakumar D (IFET College Engineering, India), Mr. Ramkumar M o (IFET College Engineering, India)

12:40 1571045446: Consumer IoT: Online Purchasing Behaviour and Its Security Implications in Smart City.
Ms. Trisha Sharma (Himalayiya University, India), Dr. Ruchi Tyagi (Adjunct Faculty, Asian Institute of Technology, Thailand), Dr. Shailendra Kumar Pokhriyal (Himalayiya University & Harvard Summer School, India))

DAY -I: Sunday, December 1 10:30 - 13:00 (Asia/Bahrain):

Parallel Session: SA02: Artificial intelligence Computational Algorithms

Hall Hall-02: SESSION JOINING: HALL-02

Chair: Dr. Rajkumar Palaniappan

10:30 1571056945: AidBot: A ChatGPT based Chatbot for e-Commerce Platforms.
Mr. Grandhi Akshay (Amrita Vishwa Vidyapeetham, India), Mr. Harsha Vardhan R. (Amrita Vishwa Vidyapeetham, India), Dr. Lekshmi R. R. (Amrita Vishwa Vidyapeetham, India)

10:45 1571057270: Deep Embedded Clustering using Crowd Density Map.
Mrs. Melisa Gozet (Ankara University, Turkey & Ostim Teknik Üniversitesi, Turkey), Prof. Mehmet Karakose (Firat University, Turkey), Dr. Asım Egemen Yılmaz (Ankara University, Turkey)

11:00 1571037937: Blockchain's Impact on Healthcare: A Paradigm Shift.
Ms. Deepika Deepika (Chandigarh University, Afghanistan)

11:20 1571038175: Air Pollution Control via a Smoke Capturing Device for Vehicles.
Ms. Anamika Larhgotra (Chandigarh University, India), Prof. Navpreet Kaur Walia (Chandigarh University, India).

11:40 1571039608: HydroHarmony: Smart Irrigation and Fertilization Using Machine Learning and IoT.
Mr. Jatin Mittal (Chandigarh University, India & CDAC Mohali, India)

12:00 1571044652: IoT-Enhanced Car Sentry System for Comprehensive Vehicle Security and Environmental Monitoring: I-GUARD SENTRY SYSTEM.
Dr. Wan Syahirah W. Samsudin (Universiti Malaysia Pahang Al-Sultan Abdullah, Malaysia), Dr. Wan Nur Azhani W. Samsudin (Universiti Malaysia Pahang Al-Sultan Abdullah, Malaysia), Dr. Syamimi Mardiah Shaharum (Universiti Malaysia Pahang Al-Sultan Abdullah, Malaysia), Dr. Rajkumar Palaniappan (University of Technology Bahrain, Bahrain), Mr. Sreetharan Mathavan (Universiti Malaysia Pahang Al-Sultan Abdullah, Malaysia)

12:20 1571056217: An Efficient and Intelligent Model for the Classification Phishing Emails Using Machine Learning Approaches.
Mr. Imdad Ali Shah (Taylors University & Iqra University, Pakistan), Dr. Sarfraz Nawaz Brohi (University of the West of England (UWE) Bristol United Kingdom, United Kingdom (Great Britain)), Dr. Raja Majid Ali Ujjan Raja Majid Ali Ujjan (UWS, United Kingdom (Great Britain))

12:40 1571045845: Predicting Students' Adaptation to Online Learning Using Machine Learning Techniques.
Mr. Chetan Sharma (upGrad Education Private Limited Bangalore, Karnataka, India), Ms. Komal Sharma (Chitkara University Institute of Engineering and Technology Chitkara University Rajpura, Punjab, India), Mr. Shamneesh Sharma (upGrad Education Private Limited Bangalore, Karnataka, India), Dr. Purnima Bali (Shoolini University Solan, Himachal Pradesh, India), Mrs. Sunita Gupta (Punjabi University, Patiala & MULTANI MAL MODI COLLEGE, PATIALA, India)

DAY -I: Sunday, December 1 10:30 - 13:00 (Asia/Bahrain)

Parallel Session: SA03: Smart Environments -PART-A

Hall Hall-03: SESSION JOINING: HALL-03

Session Chair: Dr. Ananth Kumar Tamilarasan

10:30 1571055491: Elliptic Curve-Based Encryption for Medical Imaging.
Dr. Ammar J Odeh (Princess Sumaya University for Technology, Jordan), Dr. Qasem Abu Al-Haija (Jordan University of Science and Technology, Jordan), Prof. Walid Salameh (PSUT, Jordan), Dr. Anas Abu Taleb (Princess Sumaya University for Technology, Jordan)

10:45 1571056832: Blockchain for Smart Cities: Waste Management with Smart Contracts.
Ms. Nida Canpolat (Fırat University, Turkey), Mr. Hasan Yetis (Firat University, Turkey)
Prof. Mehmet Karakose (Firat University, Turkey)

11:00 1571007140: Modified Cognitive Reliability and Error Analysis Method for Risk Assessment in Hydrogen Valley Construction.
Dr. Ali Karasan (Yildiz Technical University, Turkey), Prof. İhsan Kaya (Yildiz Technical University, Turkey), Ms. Elifnaz Olgac (Yildiz Technical University, Turkey)

11:20 1571007143: Evolution of In-City Logistic Operations for Package Delivering Options Based on Citizen Perception.
Dr. Ali Karasan (Yildiz Technical University, Turkey), Prof. İhsan Kaya (Yildiz Technical University, Turkey), Ms. Elifnaz Olgac (Yildiz Technical University, Turkey)

11:40 1571039690: Environmental Modeling: Numerical Methods for Simulating Groundwater Flow and Contaminant Transport.
Mr. Jatin Mittal (Chandigarh University, India & CDAC Mohali, India)

12:00 1571040649: Transforming Healthcare with Blockchain Innovation.
Ms. Deepika Deepika (Chandigarh University, Afghanistan)

12:20 1571040779: Enhancing Object Detection in Autonomous Driving with Improved-YOLOv8.
Ms. Jaswinder Kaur (Chandigarh University, India)

12:40 1571044803: Enhancing Smart City Security: IoT-Driven ANPR Technology for Identifying Smuggling Vehicles.
Dr. P Kanimozhi (IFET College of Engineering, India), Ms. Harshini Sivasenthil (IFET College of Engineering, India), Dr. Ananth kumar Tamilarasan (IFET College of Engineering, India), Ms. Martina Jose mary (IFET College of Engineering, India).

Sunday, December 1, 13:00 - 13:30 (Asia/Bahrain)

ZB1: Day-1 - Mid-Day Break

DAY -I: Sunday, December 1, 13:30 - 15:30 (Asia/Bahrain):

PARALLEL SESSION 01: SB01: Smart Environments -PART-B

Hall Hall-01: SESSION JOINING: HALL-01

Session Chair: Dr. Surendran R

13:30 1571056211: Secure Model for Credit Card Fraud Detection Using ML Approaches.
Mr. Imdad Ali Shah (Taylors University & Iqra University, Pakistan), Prof. Noor Zaman Jhanjhi (Taylors University, Malaysia), Dr. Sarfraz Nawaz Brohi (University of the West of England (UWE) Bristol United Kingdom, United Kingdom (Great Britain)).

13:50 1571032380: Evaluating Smart Sustainable Urban approaches: a case study of Bahrain Bay.
Mr. Alawi Sayed Sadiq Alawi (University of Bahrain, Bahrain).

14:10 1571032386: Comparative Analysis of Urban Redevelopment in Muharraq City and Urban Development in Diyar Al Muharraq: Strategies, Challenges, and Community Engagement.
Mr. Abdulaziz Emad Obaid, Jr (University of Bahrain, Bahrain).

14:30 1571045116: Enhancing Urban Wellness: Real-Time Workout Posture Monitoring with Human Pose Estimation and Joint Angle Analysis using MediaPipe and OpenCV.
Dr. Syamimi Mardiah Shaharum (Universiti Malaysia Pahang Al-Sultan Abdullah, Malaysia), Dr. Wan Syahirah W. Samsudin (Universiti Malaysia Pahang Al-Sultan Abdullah, Malaysia), Dr. Ahmad Afif Mohd Faudzi (Universiti Malaysia Pahang Al-Sultan Abdullah, Malaysia), Normaniha Abd Ghani (Universiti Malaysia Pahang Al-Sultan Abdullah, Malaysia), Cheah Siew Ching (Universiti Malaysia Pahang Al-Sultan Abdullah, Malaysia), Dr. Rajkumar Palaniappan (University of Technology Bahrain, Bahrain).

14:50 1571057644: Detection of Neonatal Jaundice using Capsule Graph Neural Network Optimized with Wild Horse Algorithm.
Mr. Madhu sundar N (Saveetha Institute of Medical and Technical Sciences, India), Dr. Surendran R (Saveetha Institute of Medical and Technical Sciences, India)).

15:10 1571048514: Intelligent Intrusion Detection System Framework for Smart Infrastructure Using Deep Learning.
Soha Chauhan (Nirma University, India) Hardini Dalwadi (Nirma University, India), Nikunjkumar Mahida (Nirma University, India), Dr. Rajesh Gupta (Nirma University, India), Dr. Sudeep Tanwar (Nirma University & Institute of Technology, India).

DAY -I: Sunday, December 1 13:30 - 15:30 (Asia/Bahrain):

PARALLEL SESSION 02: SB02: Cybersecurity Solutions

Hall Hall-02: SESSION JOINING: HALL-02
Session Chair: Dr. Qasem Abu Al-Haija

13:30 1571039398: Blockchain-enabled Digital Approach for Efficient and Verifiable Voting System.
Dr. Sonali Mahendra Kothari (Symbiosis Institute of Technology, India & Symbiosis International Deemed University Pune, India), Mr. Vardhman Jain (Symbiosis Institute of Technology, India), Mr. Ruchir Mathur (Symbiosis Institute of Technology, India) Varsha Iyer (Symbiosis Institute of Technology Pune, India), Mr. Abhishek Anand (Symbiosis Institute of Technology, India), Mr. Shubham Naik (Symbiosis Instiotute of Technology, India)

13:50 1571044926: Machine Learning Techniques in Credit Card Fraud Detection: A Hybrid Supervised and Unsupervised Approach.
Mr. Li Phng Yeoh (Universiti Malaysia Perlis, Malaysia)

14:10 1571058244: Enhancing Transparency and Security in Smart City Infrastructure Management with Blockchain Technology.
Mr. Satya Nand (Symbiosis International Deemed University, India), Dr. Vimal Kamleshkumar Bhatt (Symbiosis Institute of Business Management, Pune, India) Mr. Daya Nand (Mumbai University, India) Ms. Anam Fatma (Symbiosis Institute of Business Management Pune, India)

14:30 1571056437: Enhancing Security and Efficiency in Mobile Payment Systems: An Integrated Approach Utilizing Advanced Technologies.
Dr. Ammar J Odeh (Princess Sumaya University for Technology, Jordan), Dr. Qasem Abu Al-Haija (Jordan University of Science and Technology, Jordan), Dr. Anas Abu Taleb (Princess Sumaya University for Technology, Jordan), Prof. Walid Salameh (PSUT, Jordan), Dr. Tareq Alhajahjeh (De Montfort University, United Kingdom (Great Britain))

14:50 1571055003: Navigating Cloud Computing Security: Strategies, Risks, and Best Practices.
Dr. Ammar J Odeh (Princess Sumaya University for Technology, Jordan), Dr. Qasem Abu Al-Haija (Jordan University of Science and Technology, Jordan), Dr. Tareq Alhajahjeh (De Montfort University, United Kingdom (Great Britain)), Prof. Raed Mesleh (German Jordanian University, Jordan)

15:00 1571045058: Beyond CrowdStrike: A Technical Analysis of SHIELD's Cyber Resilience Platform in Mitigating Large-Scale Outages.
Dr. Bhupinder Singh (Sharda University Greater Noida, India), Dr. Pushan Kumar Dutta (Amity University Kolkata, India & Amity School of Engineering and Technology, India), Dr. Sahil Lal (Sharda University, India), Dr. Manmeet Kaur Arora (Sharda University, India), Prof. Sayed Kenawy (Delta Higher Institute for Engineering & Technology, Egypt)

15:20 1571045240: An AI-Based context-aware text-to-face generation system for the Police Department.
Dr. Anandan P (Vellore Institute of Technology, Chennai, India), Mr. V Abinesh (Vellore Institute of Technology, Chennai, India), Ms. Pooja S (Vellore Institute of Technology, Chennai, India) Dr. Dominic Savio M (Vellore Institute of Technology, Chennai, India), Dr. Rajkumar Palaniappan (University of Technology Bahrain, Bahrain)

DAY -I: Sunday, December 1 13:30 - 16:00 (Asia/Bahrain):

PARALLEL SESSION 03: SB03: Smart Transportation System

Hall Hall-03: SESSION JOINING: HALL-03

Session Chair: Dr. Ayman Al-khazraji

13:30 1571013139: AI Applications in Reducing Traffic Congestion: Opportunities, Challenges and Future Directions.
Mrs. Ana Ferraz (Bahrain Polytechnic, Bahrain), Dr. Ayman Al-khazraji (University of Bahrain, Bahrain).

13:50 1571056636: A Pothole Detection and Mapping Approach Using Yolo-Based Federated Learning for Transportation Solutions in Smart Cities.
Mr. Çağatay Umut Öğdü (Firat University, Turkey), Prof. Mehmet Karakose (Firat University, Turkey)

14:10 1571048276: Enhancing Logistics Efficiency With ML-driven ERP Prediction for Distribution Management in Smart Transportation Systems.
Krish Gangajaliya (Nirma University, India), Jaivik Gajjar (Nirma University, India), Ms. Krisha Darji (Nirma University, India), Dr. Rajesh Gupta (Nirma University, India), Ms. Bhagyalakshmi Magotra (Central University of Jammu, India), Dr. Sudeep Tanwar (Nirma University & Institute of Technology, India).

14:30 1571047879: Design and Development of GPS-Integrated Black Box Suitable for Intelligent Transport System.
Dr. Baibaswata Mohapatra (APJTU, Uttar Pradesh, India)

14:50 1571044917: Enhancing Urban Mobility Through AI-Powered Transportation.
Srinivasan Adarsh V (Anna University, India), Mr. Saritakumar N (Anna University, India), Amrithaa S (Anna University, India), Amarnath V (Anna University, India), Mr. Nagarajan Prithiv (Anna University, India), Mr. Karthik Srinivasan (Saudi Electronic University & Riyadh, India)

15:10 1571047226: Digital Transformation Strategies for Enhancing Environmental Sustainability in Smart Cities.
Mr. Deepak Pandurang Gavade (M Com (BA) & Author, India)

15:30 1571078166: Impact of Artificial Intelligence and Internet of Things Technologies on Smart Cities and Urban Planning.
Saurabh Vishwakarma (Software Engineer, Canada), Dr. Suresh Vishwakarma (Institution of Engineering and Technology, Canada)

15:40 1571042447: AI-Driven Energy Optimization: Integrating Smart Meters, Controllers, and Cloud Analytics for Efficient Urban Infrastructure Management.
Dr. Pawan Whig (India, India), Mr. Anumaan Whig (Independent Researcher, India), Mr. Siva Subrahmanyam Balantrapu (Independent Researcher, USA), Mr. Naved Alam (Jamia Hamdard, India) Mr. Rohit Subhash Shinde (Independent Researcher, USA)

16:00 1571044651: An Alternate Soft Starter for DC Motors.
Dr. Maamar Taleb (UOB, Bahrain), Mr. Mohammed Abdulla Bucheeri (University of Bahrain, Bahrain), Abdulla Khalid Talha (University of Bahrain, Bahrain)

DAY -I: Sunday, December 1 13:30 - 16:00 (Asia/Bahrain):

PARALLEL SESSION 04: SB04: Smart Cities Solutions

Hall Hall-04: SESSION JOINING: HALL-4

Session Chair: Dr. Ruchi Tyagi

13:30 1571045254: Climate Change Adaptation and Mitigation Strategies at Future Smart Cities.
Dr. Suresh Vishwakarma (Institution of Engineering and Technology, Canada), Dr. Ruchi Tyagi (Adjunct Faculty, Asian Institute of Technology, Thailand), Dr. Amrita Chaurasia (Christ University, Ghaziabad, India)

13:50 1571045260: Optimization Production Floor Layout Using the Product Layout Approach.
Dr. Fizza Ghulam Nabi (University of the Punjab, Pakistan), Dr. Ahtisham Ashraf (University of the Punjab Lahore, Bahrain), Dr. Touseef Imtiaz (University of the Punjab Lahore, Bahrain), Dr. Mariam Altaf Tarar (University of the Punjab Lahore, Bahrain), Dr. Rajkumar Palaniappan (University of Technology Bahrain, Bahrain), Dr. Sindhu Ravindran (Amrita Viswa Vidhyapeetam, India)

14:10 1571045457: Driving smart city development: The role of sustainable development goal 4.
Ms. Simran Rani (Himalayiya University, India), Ruchi Tyagi (2Adjunct Faculty Asian Institute of Technology, Thailand. Ex-Senior Faculty Birmingham City University- RAK Campus, UAE), Shailendra Kumar Pokhriyal (3Professor, School of Management, Himalayiya University, Dehradun, India)

14:30 1571045506: Smart Cities' Approaches to Menstrual Hygiene Management.
Ms. Nidhi Bhatia (IIT Delhi, India), Dr. Biswajita Parida (Faculty, Canada)

14:50 1571045521: Menstrual Hygiene Management in Smart Cities.
Ms. Nidhi Bhatia (IIT Delhi, India), Dr. Biswajita Parida (Faculty, Canada)

15:10 1571045590: A Role of Digital Financial Literacy in Enhancing Social Inclusion within Smart Cities.
Ms. Kavita Joshi (Amity University Noida, India & Amity College of Commerce and Finance India, India)

15:30 1571046164: Quantitative Impact of Artificial Intelligence on Smart Cities: A Comparative Study using Federated Learning.
Mr. Subash Banala (Capgemini, USA), Prof. Leela Manush Gutta (Tek Leaders Inc, USA), Mr. Nageswara Rao Kanchepu (Citi Group, USA), Dr. Pronaya Bhattacharya (Amity University, Kolkata, India), Dr. Pawan Whig (India, India)

15:40 1571046663: Automated Rice Counting using Canny Edge Detection Technique Mr. Rahul Goraksha (Symbiosis Institute of Technology, India), Dr. Durgesh Nandan (S R University, Warangal, India)

16:00 1571046801: A comprehensive review: Hyperspectral Image Enhancement and various classification techniques in remote sensing applications.
Dr. G Kalaiarasi (Jai Shriram Engineering College, India), Mr. A Anandkumar (Jai Shriram Engineering College, India)

16:15 1571048201: Password ProtectorPro: A Password Cracking Detection and Prevention Tool for Mission Critical Systems.
Dr. Qasem Abu Al-Haija (Jordan University of Science and Technology, Jordan), Ms. Rand Abu-Ghazaleh (Princess Sumaya University for Technology, Jordan), Ms. Ayat Hafez (Princess Sumaya University for Technology, Jordan) Ms. Sara Mansour (Princess Sumaya University for Technology, Jordan), Ms. Yara Aljammal (Princess Sumaya University for Technology, Jordan)

SUNDAY, DECEMBER 1 15:25 - 15:30 (ASIA/BAHRAIN)

CD-1: CLOSING OF DAY-1

DAY -II

MONDAY, DECEMBER 02, 2024

DAY -II: 2ND MONDAY, DECEMBER 2024

Keynote Speech: 03: 2nd Monday, December 2024, 9:00 – 9:30 Asia/Bahrain)

ENHANCEMENT OF THE SMART CITY CONCEPT THROUGH A LOW-COST-ON-THE-ROAD-UNIT FOR TRAFFIC MANAGEMENT

Dr. Fotis Giannopoulos
Prisma Electronics S.A., HQ-Factory: 87 Demokratias Ave, 68 100, Alexandroupolis, Greece
Session Chair: Dr. Anup Vibhute, Professor in E&TC Engg, Dr. D Y Patil Institute of Technology, Pune 411018, India

MAIN-THEATRE HALL – VIRTAUL ACCESS

TALK ABSTRACT

Smart cities are cities that embrace technology and incorporate it, benefiting from it and improving the safety and quality of life of their citizens. Over the past years, IoT solutions have proven the added value they bring in many aspects of everyday life in the modern cities. Prisma Electronics, via its integrated and ever-expanding PrismaSense smart solutions ecosystem, attempts to integrate IoT and sensor networks-related novelties in the modern citizens' everyday lives, thus improving them. Two recent applications of PrismaSense are going to be presented: The first focuses on safety and energy efficiency improvement and provides critical infrastructure structural health condition and energy efficiency monitoring for the maritime industry with direct application to more critical infrastructures of any city. The second focuses on facilitating and operating independent, parallel satellite communication channels for the maritime industry, provided by Prisma Electronics' first nanosatellite mission. The ultimate goal is to effectively and uninterruptedly collect, analyze and fuse data to achieve data-driven decisions and condition-based maintenance for critical assets, guaranteeing citizen safety in the smart cities of the future.

SPEAKER DETAILS: DR. FOTIS GIANNOPOULOS

Dr. Fotis Giannopoulos received his diploma in Electrical and Computer Engineering from the National Technical University of Athens. He has a PhD degree in Signal Processing and Pattern Recognition from the National Technical University of Athens. He is experienced in designing, simulating and testing analog and digital circuits. He is also experienced in designing Internet of Things (IoT) applications and products. He is currently a member of the R&D department of Prisma Electronics.

DAY -II: 2ND MONDAY, DECEMBER 2024

Keynote Speech: 04: 2nd Monday December 2024, 9:30 – 10:30 (Asia/Bahrain)

ARTIFICIAL INTELLIGENCE IN SMART CITIES: TRANSFORMING DIGITAL HEALTHCARE FOR URBAN COMMUNITIES

Dr. Vikneswaran Vijean

Associate Professor, Faculty of Electronic Engineering & Technology, Universiti Malaysia Perlis, Kampus Induk Pauh Putra, Pauh, Perlis, Malaysia

Session Chair: EUR ING. Ir. Victor Nagesparan, Assistant Professor, UCSI University. Malaysia

MAIN-THEATRE HALL – VIRTAUL ACCESS

TALK ABSTRACT

The keynote will explore how AI-driven innovations are revolutionizing healthcare systems to meet the challenges of growing urban populations. Key applications, such as AI-powered public health monitoring, predictive healthcare analytics, and enhanced accessibility to medical services, will be highlighted as pivotal solutions to urban healthcare challenges. Additionally, insights from ongoing research on cardiovascular disease diagnostics through phonocardiograms and functionality brain analysis in ketum-dependent subjects will be shared, demonstrating AI' s potential in personalized and specialized healthcare.

SPEAKER DETAILS: DR. ABDEL KHOODARUTH

Associate Professor Dr. Vikneswaran Vijean is a Research fellow of Sports Engineering Research Center and Postgraduate Program Chair (Computer Department), Faculty of Electronic Engineering & Technology, Universiti Malaysia Perlis, Malaysia. He is well-versed in the academic and research industries, specializing in bio-signal processing. He received his PhD from University Malaysia Perlis, Malaysia, in the area of Biomedical Electronic Engineering. Dr. Vikneswaran's research interests span over evoked responses, phonocardiogram analysis, speech analysis, and artificial intelligence, among others, resulting in numerous international peer-reviewed publications and copyrights. Dr. Vikneswaran is a renowned speaker, active reviewer for many ISI-indexed journals, and a registered engineer with professional affiliations including the Engineering Council, UK, Institution of Engineering and Technology, UK, and the Board of Engineers Malaysia. He is also an Engineering Technology Accreditation Council (ETAC) Panel registered with the Board of Engineers Malaysia. He is recognized as a dedicated educator, prolific researcher, and influential figure in bio-signal processing, committed to advancing knowledge and fostering industry-academia collaborations.

DAY -II: MONDAY, DECEMBER 2, PARALLEL SESSIONS

2nd Monday, December 2024 10:30 – 13:00 (Asia/Bahrain)

PARALLEL SESSION 01: SC02: Smart Algorithms Applications-A

Hall Hall-01: SESSION JOINING: HALL-01

Session Chair: Dr. Mrs. Anamika Jiwane and Dr. Fariel Khan

10:30 1571048744: A New Hybrid CNN Model for Abnormal Behavior Detection in Smart Campus.
Dr. Merve Yilmazer (Munzur University, Turkey), Prof. Mehmet Karakose (Firat University, Turkey), Mr. Berhan Turku Ay (Huawei, Turkey)

10:45 1571049225: Enhancing Medical Students' Skill Development: The Role of Virtual Patient Simulation Tools.
Ms. Fayzeh Abdulkareem Jaber (University of Technology Bahrain, Bahrain & Arabian Gulf University, Bahrain), Dr. Nour Abdulkareem Jaber, Ph (University of La Verne, USA), Dr. Asif Mahmood (Arabian Gulf University, Bahrain) Dr. Ayman Al-khazraji (University of Bahrain, Bahrain)

11:00 1571049670: ANN-Based Ship Maneuvering Motion Control.
Mr. Mohammed Majid Msallam (University of Technology, Iraq), Mr. Nasir Awad (Mustansiryiah University, Iraq), Dr. Ammar K. Al Mhdawi (De Montfort University, United Kingdom (Great Britain)) Dr. Ayman Al-khazraji (University of Bahrain, Bahrain), Dr. Suha S. Husain (University of Technology, Iraq), Dr. Amjad Humaidi (University of Technology, Iraq)

11:20 1571015019: Examining the Contribution of Machine Learning and Deep Learning in Tuberculosis Detection.
Ms. Shivani Bhardwaj (Shoolini University, India), Mr. Gaurav Gupta (Shoolini University, India), Dr. Saikat Gochhait (Symbiosis International Deemed University, India).

11:40 1571078115: Leak Detection by Using Hydro Turbines.
Fahad Mursal, Abdulla Ebrahim, Abdulla Hamad, Dr. Salwa Baserrah (University of Bahrain, Bahrain)

12:00 1571042837: Application of ML: The Sustainable Advantages of Sulfur-Based Binders in Pavement Construction.
Dr. Md Arifuzzaman (King Faisal University, Saudi Arabia)

12:20 1571043210: Assistive Technology for Currency Recognition Using Deep Learning.
Ms. Fahmina Taranum (Osmania University, India)

12:40 1571043119: Libraries and Interactive Environment: Technological and Non-Technological Approaches.
Mrs. Anamika Jiwane (University of Bahrain, Bahrain), Mrs. Fariel Khan (University of Bahrain, Bahrain)

13:00 1571043247: Strategic Integration: BCG Matrix and Business Cycle for Global Resilience in Economic Strategy.
Mr. Deepak Pandurang Gavade (M Com (BA) & Author, India)

DAY -II: Monday, December 2 10:30 – 13:00 (Asia/Bahrain)

PARALLEL SESSION 02: SC03: New Technologies for Smart Cities-PART-A

Hall-02: SESSION JOINING: HALL-02, Session Chair: Dr. Amrita Chaurasia

10:30 1571050160: Advancements in Embryo Development and Cryopreservation: Innovations Driving Fertility Treatments
Dr. Nour Abdulkareem Jaber, Ph (University of La Verne, USA).

10:45 1571050229: Digital Twin Technology for River Basin Management: A Framework for Proactive Flood Mitigation and Water Resource Optimization.
Dr. Pushan Kumar Dutta (Amity University Kolkata, India & Amity School of Engineering and Technology, India), Mrs. Subhra Mullick (Indian Statistical Institute, India), Prof. Sayed Kenawy (Delta Higher Institute for Engineering & Technology, Egypt), Dr. Pronaya Bhattacharya (Amity University, Kolkata, India)

11:00 1571051620: Development of Precision Medicine for Hepatic Cancer Evolving Molecular Profiling Techniques Through Artificial Intelligence.
Dr. Surendran R (Saveetha Institute of Medical and Technical Sciences, India), Dr. Balamurugan K S (Karpaga Vinayaga College of Engineering and Technology, India), Dr. Sundara Rajulu Navaneethakrishnan (Dhanalakshmi Srinivasan University Trichy, India), Dr. Tamilvizhi T (Panimalar Engineering College, India), Dr. Kumutha D (SJB Institute of Technology, Bangalore, VTU, India), Mrs. G. Kalyani (Ruralcare Innovators LLP, India)

11:20 1571043821: Classification of Similar Dermatological Diseases from Skin Lesion Images with Ensemble Learning.
Mrs. Elif Nur Aygun (Manisa Celal Bayar University, Turkey), Dr. Erdal Özbay (Fırat University, Turkey), Mr. Mehmet Kaya (Firat University, Turkey)

11:36 1571044354; AI-Driven Solutions for Enhancing Public Safety in Smart Cities.
Prof. Durga Pavani A (Geetanjali College of Engineering and Technology, India), Dr. Saravanan Matheswaran (Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, India), Dr. Ravi (Jj College of Engineering and Technology, India), Mr. Sundaramurthy B (Vinayaka Missions Kirupananda Variyar Engineering College, India)

11:53 1571044364: Beyond Boundaries: Quantum Cryptography Safeguarding Industry 5.0 in Smart Cities
Dr. Shradha Chavan (Symbiosis Skills and Professional University, India), Dr. Aaradhana Deshmukh (Symbiosis Skills and Professional University, Kiwale, Pune, India)

12:10 1571044386: ABCD's for Smart Cities: Communication Infrastructure.
Dr. Shradha Chavan (Symbiosis Skills and Professional University, India), Dr. Aaradhana Deshmukh (Symbiosis Skills and Professional University, Kiwale, Pune, India)

12:26 1571044443: Predicting Brucellosis Outbreaks in Dairy Cattle Using Deep Learning Techniques
Dr. Mokammel Hossain Tito (Bangabandhu Sheikh Mujibur Rahman Agricultural University, Bangladesh), Prof. Md. Siddiqur Rahman (Bangladesh Agricultural University (BAU), Bangladesh), Dr. Alifa Nasrin (Combined Military Hospital (CMH), Bangladesh), Dr. Md. Asaduzzaman (National Heart Foundation Hospital & Research Institute, Bangladesh), Dr. Md. Ashrafuzzaman (Medical Officer, Islamic University, Bangladesh), Dr. Shahzad Khan (King Faisal University, Saudi Arabia), Dr. Muhammad S Chohan (King Faisal University, Saudi Arabia), Dr. Md Arifuzzaman (King Faisal University, Saudi Arabia) Prof. Afzal H Asif (King Faisal University, Saudi Arabia)

12:43 1571044448: Assessments on Linearized Feedback Control in Regulating Electrical Stimulations for Revival of Sitting-to-Standing Movement on Subjects with Injuries of the Spinal Cord.
Mr. Mohammed Ahmed (Abubakar Tafawa Balewa University Bauchi, Nigeria & Universiti Tun Hussein Onn Malaysia, Malaysia), Prof. Muhammad Hamisu Muhammad (Abubakar Tafawa Balewa University, Bauchi, Nigeria), Dr. Babul Salam Ibrahim (Gulf University for Science & Technology Kuwait, Kuwait)

1:00 1571044463: Evaluating YOLOv8 for Road Damage Detection.
Mrs. Arwa Salem Yalos Alenezi (UOB, Bahrain), Prof. Mohab A. Mangoud (UoB, Bahrain)

DAY -II: Monday, December 2 13:00 – 13:30 (Asia/Bahrain)

ZB2: Day-2 – Mid-Day Break

DAY -II: Monday, December 2 13:30 – 15:30 (Asia/Bahrain)

PARALLEL SESSION 01: SD01: New Technologies for Smart Cities-PART-B

Hall Hall-01: SESSION JOINING: HALL-01

Session Chair: Dr. Md. Arifuzzaman

13:30 1571035688: Offline Based On-Field Fruit Ripeness Detection System.
Dr. Parthasarathi Sadhasivam (Thiagarajar College of Engineering, Madurai, India), Dr. Rajkumar S (Thiagarajar College of Engineering, Madurai, India), Dr. M Rajalakshmi (Thiagarajar College of Engineering, Madurai, India)

13:54 1571039267: Design an Underwater VLC Communication System.
Dr. Meet Kumari (Dept. of ECE, UIE Chandigarh University, Gharuan, Mohali, India), Dr. Neha Sharma (Chitkara University Institute of Engineering & Technology, Chitkara University, Rajpura, Punjab, India), Dr. Abhineet Anand (Bahra University, Simla Hills HImchal Pradesh, India)

14:18 1571044099: Improved DDoS Attack Detection Algorithm for SDN Networks Using Random Opposition-Based Particle Swarm Optimization and Machine Learning
Mr. Dharmaraj T B (PPG Institute of Technology, India), Dr. Stalin Subbiah (Bahrain Polytechnic, Bahrain), Ms. Ramya M (PPG Institute of Technology, India), Mr. Praveen Prabhu (PPG Institute of Technology, India), Dr. Om Prakash (PPG Institute of Technology, Bahrain)

14:42 1571044438: Comparative Analysis of Machine Learning Models for Predicting Foot and Mouth Disease Outbreaks in Cattle.
Dr. Mokammel Hossain Tito (Bangabandhu Sheikh Mujibur Rahman Agricultural University, Bangladesh), Mr. Tonmoy Kumar Das (Bangabandhu Sheikh Mujibur Rahman Science and Technology University, Bangladesh), Mr. Md. Arafat Hossain (Bangabandhu Sheikh Mujibur Rahman Science and Technology University, Bangladesh) Mr. Safiullah Samani (Bangabandhu Sheikh Mujibur Rahman Science and Technology University, Bangladesh), Mr. Asraful Islam Jihad (Bangabandhu Sheikh Mujibur Rahman Science and Technology University, Bangladesh), Ms. Puja Das (Bangabandhu Sheikh Mujibur Rahman Science and Technology University, Bangladesh), Mr. Barshon Saha (Bangabandhu Sheikh Mujibur Rahman Science and Technology University, Goplaganj, Bangladesh), Dr. Md Arifuzzaman (King Faisal University, Saudi Arabia)

15:06 1571044904: Smart City Infrastructure: Predictive Maintenance Using Machine Learning.
Sekar G (Anna University, India), Dr. Raja J (Adhiparasakthi Engineering College, India)

15:25 1571045230: Enhancing E-Waste Management in Smart Cities with Smart Contract Technology.
Ms. Shyamala devi R (IFET College of Engineering, India) Dr. Ananth kumar Tamilarasan (IFET College of Engineering, India), Ms. Martina Jose mary (IFET College of Engineering, India), Dr. P Kanimozhi (IFET College of Engineering, India), Ms. Dharniga R (IFET College of Engineering, India)

DAY -II: Monday, December 2 13:30 – 15:30 (Asia/Bahrain)

Parallel Session 02: SD03: Smart Energy Systems – Technology Solutions

Hall-02: SESSION JOINING: HALL-02

Session Chair: Dr. Marwa M Eid

13:30 1571028223: Wind Turbine Fault Detection and Diagnosis Using Machine Learning Techniques.
Dr. Mohammed Majid M. Al-Khalidy (University of Bahrain & Engineering College, Bahrain) Farah Shaheen (University of Bahrain, Bahrain)

13:50 1571033511: Optimizing Wastewater Treatment Plant Operations: A Machine Learning Approach for Energy Consumption and Climate Dynamics Analysis Mr. Mahmoud Elshabrawy Mohamed (Computer Science and Intelligent Systems Research Center, Virginia, USA), Mr. Faris H. Rizk (Computer Science and Intelligent Systems Research Center, Virginia, USA), Mr. Ahmed Mohamed Zaki (Computer Science and Intelligent Systems, USA), Dr. Marwa M Eid (Delta University for Science and Technology, India) Prof. Ali E. Takieldeen (Delta University for Science and Technology, Egypt), Prof. Abdelhameed Ibrahim (Bahrain Polytechnic, Bahrain), Dr. Abdelaziz Abdelhamid (Ain Shams University, Egypt), Mrs. Laith Abualigah (TBD, USA)Prof. Sayed Kenawy (Delta Higher Institute for Engineering & Technology, Egypt)

14:10 1571057533: Greedy Algorithm-Based Environmental Impact Analysis of Renewable Energy Integration in Smart cities.
Dr. Rajeshbabu S (Kamaraj College of Engineering and Technology, India)

14:30 1571057267: Building Information Modeling (BIM) in Energy, Sustainability, and Optimization).
Dr. Saraa Naseer Alasadi (American University of Bahrain, Bahrain)

14:50 1571044768: Integration of renewable energy in smart cities.
Mrs. Supriya Haresh Shukla (University of Bahrain, Bahrain)

15:10 1571044615: Promoting Energy positive buildings in Smart Cities for a greener future.
Mrs. Anjali Sharma, Executive Engineer, MP Western Region Power Distribution Company, India and Ms. Shraddha Sharma, Senior Staff Data Scientist, Entergy, USA

15:30 1571042991: Feasibility Analysis of the Offshore Wind Energy Potential in Bahrain using the RETScreen Software.
Mr. Mohammed Abu Ajrah (University of Bahrain, Bahrain & Jubail Industrial College, Saudi Arabia), Dr. Raja Mohamed M Sumsudeen (University of Bahrain, Bahrain)

15:45 1571044473: Investigating the Impact of Electric Vehicles Integration on Bahrain's Distribution Network.
Mr. Ebrahim Alsaleh (University of Bahrain, Bahrain & Electricity and Water Authority, Bahrain), Dr. Fadhel Albasri (University of Bahrain, Bahrain) Dr. S Ali Al-Mawsawi (University of Bahrain, Bahrain)

DAY -II: Monday, December 2 13:30 – 15:30 (Asia/Bahrain)

Parallel Session 03: SD04: Smart Cities and AI Computational Algorithms

Hall-03: SESSION JOINING: HALL-03

Session Chair: Dr. Qasem Abu Al-Haija

13:30 1571031110: An Approach to Summarize Multilingual News using Deep Learning Technique.
Dr. Sapna Gambhir (YMCA Institute of Engineering, India), Dr. Sumita Gupta (Amity School of Engineering & Technology & Amity University, Noida, India), Dr. Rana Majumdar (ASET, Amity University, India))

13:50 1571031150: Face Minder Secure Campus: Revolutionizing Campus Security with AI Surveillance.
Dr. Faizal Hajamohideen (University of Technology and Applied Sciences, Oman), Ms. Nusiba Mohammed Al-Nofli (University of Technology and Applied Sciences, Oman), Ms. Afaf Darwish Al-Maimani (University of Technology and Applied Sciences, Oman).

14:10 1571031532: Comparative Analysis of Prediction Techniques in Metal 3D Printing Using Machine Learning.
Mrs. Arwa Salem Yalos Alenezi (UOB, Bahrain), Dr. Mohammed Majid M. Al-Khalidy (University of Bahrain & Engineering College, Bahrain).

14:30 1571038874: An Approach Towards Highly Accurate Prediction of Parkinson's Disease using Boosted Decision Tree.
Mr. Kuldeep Sharma (Chandigarh University, India)

14:50 1571039155: Enhancing Alzheimer's Disease Prediction Using Random Forest along with Grid Search Optimization on Darwin Dataset.
Ms. Priyanka Rani (Chandigarh University, India)

15:10 1571058181: Recommendation System for Carbon Dioxide Emissions Reduction in Bahrain Using Machine Learning.
Mr. Yaqoob Neaman Alhasan (Bahrain Polytechnic, Bahrain & King Hamad University Hospital, Bahrain), Prof. Abdelhameed Ibrahim (Bahrain Polytechnic, Bahrain)

15:25 1571048205; Review of quantum theories for the design of post-quantum cryptosystems: CRYSTALS-Kyber as a case study.
Mr. Yaser Alkurdi (Princess Sumaya University for Technology, Jordan), Dr. Qasem Abu Al-Haija (Jordan University of Science and Technology, Jordan), Dr. Mustafa Ahmad Al-Fayoumi (Princess Sumaya University for Technology, Jordan)

15:45 1571049460: University Intelligent Voice Assistance: A study on AI Based Digital Academic Assistance.
Dr. Faizal Hajamohideen (University of Technology and Applied Sciences, Oman)

Monday, December 2 15:30 – 15:35 (Asia/Bahrain)

CD-2: Closing of Day-2

DAY -III

TUESDAY, DECEMBER 03, 2024

DAY -III: 3RD TUESDAY, DECEMBER 2024

Tuesday, 3rd December 2024, 8:30 – 9:00 (Asia/Bahrain) - D3: Day3 – Getting Ready, and Platform Technical Help

Keynote Speech: 05

RE-IMAGING SMART CITIES SEARCH APPLICATIONS WITH LLMS

Dr. Lakshmanan Sethu Sankaranarayanan, TAM - GenAI/AI & ML Solutions, Google USA, California, USA
Session Chair: Ms. Shefali Vishwakarma, Member, IET - Communities Committee America, Simon Fraser University, Burnaby BC, Canada
MAIN-THEATRE HALL – VIRTAUL ACCESS

TALK ABSTRACT

Talk Abstract: The ever-expanding landscape of smart cities presents a challenge: efficiently navigating the vast amount of data and resources available to citizens. Traditional search applications often struggle to keep pace with the dynamic nature of these environments. This talk explores how Large Language Models (LLMs) can revolutionize smart city search, offering a more intuitive and comprehensive user experience. We begin by outlining the limitations of current search functionalities in smart cities. Siloed data and keyword-based search make it difficult for citizens to find the information they need, hindering engagement and overall user satisfaction. Next, we introduce the transformative potential of LLMs. By ingesting and understanding vast amounts of unstructured data, LLMs can provide a more nuanced and context-aware search experience. Imagine a resident asking, "What's the fastest way to get to the public library considering current traffic conditions and nearby bike-sharing availability?" An LLM-powered search engine could not only understand the natural language query but also synthesize data from transportation departments, bike-sharing services, and real-time traffic feeds to deliver an optimal answer. The talk will delve into the specific applications of LLMs in smart city search. We'll explore how LLMs can personalize search results based on user preferences and past interactions, fostering a more user-centric experience. We'll also discuss the potential for LLMs to anticipate user needs and proactively surface relevant information, promoting proactive citizenry and engagement with city services. In conclusion, this talk presents a compelling vision for the future of smart city search, powered by the transformative capabilities of Large Language Models. By harnessing the power of LLMs, we can empower citizens to navigate their smart cities with greater ease and efficiency, ultimately fostering a more connected and thriving urban environment.

SPEAKER DETAILS: ABOUT LAKSHMANAN SETHU SANKARANARAYANAN

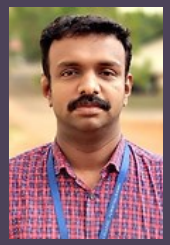
Lakshmanan is an award winning Technical Account Manager for Google Cloud in North America where he works with enterprise customers to help them innovate on AI/ML Solutions. He has delivered five + Keynote speeches for IEEE international conferences in 2024 & 2024 across the globe and reviewed 110+ IEEE Research papers and springer journals. He is currently focusing on Generative AI/ML & Data Solutions. With more than a decade of experience in the technology industry. He has a passion to transform enterprise organizations with Google Cloud. Prior to Google, He had helped fortune 500 companies to migrate to cloud across North America & Asia & UK regions. Lakshmanan's influence in AI extends to his contributions as a member of the Technical Advisory Board for AI/ML solutions at Packt and as a Technical Editor for AI publications. He is also serving on the Advisory Board for both the University of Colorado and University of California, Irvine.

DAY -III: 3RD TUESDAY, DECEMBER 2024

3rd Tuesday, December 2024, 9:45 – 10:45 (Asia/Bahrain)

KN6: Keynote Speaker-6

SECURING THE VISUAL LANDSCAPE: IMAGE CRYPTOGRAPHY SOLUTIONS FOR SMART CITIES



Dr. Renjith V Ravi, FIETE, C.Eng (IE) Associate Professor, Electronics and Communication Engineering Chair, M.E.A Engineering College, Vengoor, Pattikkad PO, Malappuram, India

Session Chair: Dr. Neha Tyagi, Associate Professor, Department of Computer Science & Engineering, Amity School of Engineering & Technology, Amity University, Noida, India

MAIN-THEATRE HALL – VIRTAUL ACCESS

TALK ABSTRACT

Abstract: It is very important to ensure the security of visual data which has become an integral part of smart cities. Images and videos collected through various sensors and cameras are critical for the smooth functioning of smart cities, such as security monitoring, traffic management, etc. However, this visual data may be vulnerable to unauthorized access, misuse and alteration. The science of image cryptography offers effective solutions to ensure the privacy and integrity of images and videos. This keynote speech explores the importance of image cryptography for securing visual data in smart cities. It discusses the benefits that can be achieved through image cryptography such as privacy protection, security against unauthorized exploitation, and assurance of data integrity. In addition, the lecture will present advanced image cryptography techniques that meet the specific needs of smart cities.

SPEAKER DETAILS: DR. RENJITH V RAVI

Dr Renjith V Ravi is presently employed as Associate Professor and Head of the Department of Electronics and Communication Engineering and Institute level Coordinator of the Post Graduate Programmes at MEA Engineering College, Kerala, India. He possesses B.Tech. degree in Electronics and Communication Engineering in, M.E. degree in Embedded System Technology and Ph.D. in Electronics and Communication Engineering. He is a member of the panel of academic auditors of APJ Abdul Kalam Technological University, Kerala and had conducted external academic auditing in various affiliated institutions under the same University. He had published several research articles in SCIE and Scopus indexed journals, Edited books and international conferences inside and outside the country. He is an academy graduate and academy mentor in Web of Science and a certified peer reviewer from Elsevier Academy. He has been serving as a reviewer for various SCIE and Scopus indexed journals from IEEE, ACM, Springer, Elsevier, Taylor & Francis, IET, Inderscience, World Scientific, IOS Press De-Gruyter and IGI Global and completed more than 700 peer reviews in Web of Science. He has been published five edited books and currently editing one edited book from renowned international publishers. He got granted one patent, one industrial design and two copyrights. He had been awarded several outstanding achievement and outstanding service awards, and several best paper awards from international Conferences. He is a Fellow of IETE and member of IE, ISTE, CRSI, IACSIT, IAENG, SDIWC and senior member of SCIEI and SAISE and a chartered engineer certified by the Institution of Engineers (India). He has been served as the Program Committee member, Session Chair as well as reviewer of several National and International conferences conducted in India and abroad. His research areas include Image Cryptography, Image Processing, Machine Learning, Internet of Things Etc. He is currently focusing his research in the area of secure image communication using image cryptography.

DAY -III: TUESDAY, DECEMBER 3, PARALLEL SESSIONS

DAY -III: Tuesday, December 3 10:30 – 13:00 (Asia/Bahrain)

Parallel Session 01: SE02: Smart Monitoring and Solutions

Hall-01: SESSION JOINING: HALL-01

Session Chair: Ms. Shikha Vishwakarma

10:30 1571020704: AI Catering for the Safe and Optimum Operation of the Detectors at the Large Hadron Collider.
Hasan Aljamea (University of Bahrain, Bahrain), Dr. Mehmet Özgür Sahin (IRFU, CEA, Université Paris-Saclay, France), Dr. Zouhir Bahri (University of Bahrain, Bahrain)

10:55 1571036962: Development and Performance Analysis of Arduino-Based Low-Cost Power Quality Analyzer
Dr. Raja Mohamed M Sumsudeen (University of Bahrain, Bahrain), Dr. R Narmathabanu (Velammal College of Engineering and Technology, Madurai, Tamil Nadu, India), Dr. Durairaj Devaraj (Kalasalingam University, India))

11:20 1571041805: Pioneering Rocket Design for Future Space Expedition
Mr. Mostafa Sheikh (Abu Dhabi University, United Arab Emirates), Dr. Hazaa Aldhaheri (Abu Dhabi University, United Arab Emirates), Dr. Nehayan AlMazrouei (Abu Dhabi University, United Arab Emirates), Mr. Khalaf Alhosani (Abu Dhabi University, United Arab Emirates), Prof. Sharul Sham Dol (Abu Dhabi University, United Arab Emirates), Mr. Ahmad Al Ramahi (Abu Dhabi University, United Arab Emirates)

11:45 1571057619: Obesity prediction and Nutrition Recommendation using KNN and Random Forest algorithm for Increased Accuracy.
Ms. Vineetha B (Saveetha Institute of Medical and Technical Sciences, India), Dr. Surendran R (Saveetha Institute of Medical and Technical Sciences, India), Ms. Logapriya E (Saveetha School of Engineering, India)

12:15 1571058261: Encapsulation of fucolam in double emulsion and its stabilization using ultrasound technique for using in smart food.
Dr. Ammar Kadi (South Ural State University, Russia), Dr. Uday Bagale (South Ural State University, Russia), Dr. Ahmed Adnan Al-Khafagi (Al-Mustaqbal University, Iraq), Dr. Varisha Anjum (South Ural State University, Russia), Dr. S Towfek (Middle East University, Jordan), Dr. Irina Potoroko (South Ural State University, Russia)

12:40 1571057637: Hybrid Quantum - Classical Approaches for Efficient credential Equivalence Certificates Using Qiskit.
Ms. Sumathy Krishnan (Saveetha Institute of Medical and Technical Sciences, India), Dr. Surendran R (Saveetha Institute of Medical and Technical Sciences, India), Ms. Maha Sweta Sathiamurthy (Puducherry Technological University, India)

DAY -III: Tuesday, December 3 10:30 – 13:00 (Asia/Bahrain)

Parallel Session 02: SE03: Smart Homes, Smart Hospitals, and Smart Campuses

Hall-02: SESSION JOINING: HALL-02
Session Chair: Dr. Salwa Baserrah

10:30 1571010113: A Survey on Early Detection of Brain Tumor Using Machine Learning and Deep Learning Techniques.
Ms. Elma Shrenitha (Vardhaman College of Engineering, India), Ms. Mullangi Manvith (Vardhaman College of Engineering, India), Mr. Dantalapally Sushanth (Vardhaman College of Engineering, India), Dr. Jabbar MA (Vardhaman College of Engineering, India).

10:50 1571033020: Preserving Historical and Cultural Identity Through Urban Redevelopment: A Case Study on Muharraq City.
Ms. Avni Durga Hemanth (University of Bahrain, Bahrain) , Dr. Fay Al khalifa (University of Bahrain, Bahrain)

11:10 1571037780: Optimally Improved Microstrip Patch Antenna Bandwidth Enhancement for Wireless Power Transfer Applications .
Balami Ishaku (Abubakar Tafawa Balewa University, Nigeria)

11:30 1571037922: Refining Optical Character Recognition Results with Natural Language Processing Techniques.
Dr. Srinivas Kumar Palvadi (Srinivas University, India)

11:50 1571040983: Digitalising urbanism: Increasing need for technologies-based infrastructure in smart cities.
Mrs. Pallavi Vishwakarma (India), Dr. Suresh Vishwakarma (Institution of Engineering and Technology, Canada)

12:10 1571078113: Automatic Speed Limiter of a VFD Driven Three-Phase Induction Machine in Electric Vehicles.
Sayed Hasan, Mahmood Jaffer, Haider Ali, Mohamed Sadeq, Dr. Salwa Baserrah (University of Bahrain, Bahrain)

12:30 1571046154: AGSQTL: Adaptive Green Space Quality Transfer Learning for Urban Environmental Monitoring.
Mrs. Swathi Chundru (Motivity Labs INC, USA & Motivity Labs Inc, USA), Mr. Siva Subrahmanyam Balantrapu (Independent Researcher, USA), Mr. Praveen Kumar Maroju (Walmart, USA), Mr. Naved Alam (Jamia Hamdard, India) Dr. Pawan Whig (India, India)

12:45 1571042729: Smart Cities and Public Space: The Role of Smart Technologies in Enhancing Public Spaces.
Mr. Nazish Abid (University of Bahrain, Bahrain), Mrs. Somi Sareen (National Institute of Technology Patna, India) Dr. Mazharul Haque (National Institute of Technology Patna, India)

13:00 1571090703: Security Technology Evaluation Criteria Model for Telemedicine Consultation System: A Literature Review.
Zhu Xuehua, (Guangxi Vocational and Technical College, China), Nor Shahniza Kamal Bashah (Universiti Teknologi MARA, Malaysia)

DAY -III: Tuesday, December 3 10:30 – 13:00 (Asia/Bahrain)

Parallel Session 03: SE04: Robotics and Systems Intelligence

Hall Hall-03: SESSION JOINING: HALL-03
Chair: Prof. Islam Hamdi El Ghonaimy

10:30 1571016718: Electroencephalography Integration with Human Thoughts for Robotics Applications – Building a Learning System.
Prof. Ebrahim Abdulla Mattar (University of Bahrain, Bahrain)

10:55 1571017219: Haar Cascade based AI Assist for Attendance Logging and Tracking.
Mr. Nickil Vishwaa M. S. (Amrita Vishwa Vidyapeetham, India), Mr. Balashivaram Ganesan (Amrita Vishwa Vidyapeetham, India), Mr. Nirek Saravanan (Amrita Vishwa Vidyapeetham, India), Mr. Arun K. S. (Amrita Vishwa Vidyapeetham, India), Dr. Lekshmi R. R. (Amrita Vishwa Vidyapeetham, India)

11:20 1571018393: Machine learning as a smart tool in improving the architecture of car parking design.
Prof. Islam Hamdi El Ghonaimy (University of Bahrain & Consultant, Bahrain) Ms. Walaa Fathi Abdullah Sultan (University of Bahrain, Bahrain)

11:45 1571058209: AI-Driven Autonomous Surveillance for Smart Cities: Integrating Robot with AWS Cloud Services.
Mr. Vaibhav Saini (Verolt Technologies Pvt Ltd, India), Ms. Ayushi Jain (Verolt Engineering Pvt Ltd, India), Ms. Pramoda Meduri (Verolt Technologies Pvt Ltd, India)

12:10 1571044894: Video Object Detection Segmentation Using Yolov8 Algorithm for Autonomous Driving
Mrs. Nafiye Nur Apaydin (Firat University, Turkey)
Mr. Orhan Yaman (Firat University, Turkey) Prof. Mehmet Karakose (Firat University, Turkey)

12:25 1571044815: Integrating Machine Learning Models for Real-Time Pollution Monitoring in Smart Cities.
Dr. Ravi (Jj College of Engineering and Technology, India)Dr. Veni Jayakumar (Anna University, India), Dr. Saravanan Matheswaran (Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, India), Mr. V Sivaraman (Jawaharlal Nehru Technological University, India), Dr. Amirthalingam V (Vinayaka Missions Kirupananda Variyar Engineering College, India), Dr. Prabaharan Sengodan (College of Engineering and Information Technology, Buraydah Colleges & Buraydah Colleges, KSA, Saudi Arabia)

12:45 1571057652: Predicting Coffee Prices Trends and Demand Hit Record Using Multi Variate Time Series-RNN for Mitigating Supply Chain Risks.
Ms. Raveena S (Saveetha Institute of Medical and Technical Sciences, India), Dr. Surendran R (Saveetha Institute of Medical and Technical Sciences, India)

DAY -III: Tuesday, December 3 13:00 – 13:30 (Asia/Bahrain) - ZB3: Day-3 – Mid-Day Break

DAY -III: Tuesday, December 3 13:30 – 16:30 (Asia/Bahrain)

Parallel Session 01: SF00: Smart Healthcare and Technology Solutions

Hall-01: SESSION JOINING: HALL-01

Session Chair: Dr. Zouhir Bahri

13:30 1571033502: Monkeypox Medical Image Classification Using Deep Learning Models with Feature Extraction
Mr. Ahmed Eslam (Delta Higher Institute of Engineering and Technology, Egypt), Mr. Mohamed Gamal (Mansoura University, Egypt), Prof. Sayed Kenawy (Delta Higher Institute for Engineering & Technology, Egypt), Prof. Hossam El-Din Salah Moustafa (Mansoura University & Professor of Electronics and Communications Engineering, Founder of Biomedical Engineering Program, Egypt))

13:50 1571035986: Enhancing Heart Disease Prediction Accuracy: Comprehensive Analysis of XGBoost and AdaBoost, Mr. Kalyan Maji (Haldia Institute of Technology, India), Dr. Subir Gupta (Haldia Institute of Technology, India) Dr. Pushan Kumar Dutta (Amity University Kolkata, India & Amity School of Engineering and Technology, India)

14:10 1571058250: An Efficient Deep Learning Approach for Image Classification for Pneumonia 3D CT-Scan.
Mr. Mahmoud Al Hamad (Bahrain Polytechnic, Bahrain)

14:30 1571057943: Automatic Health and Safety System.
Mr. Dominic M Ocharo (Jomo Kenyatta University of Agriculture and Technology, Kenya & Pavicon Kenya Limited, Kenya), Mr. Brian Kimaiyo (Jomo Kenyatta University of Agriculture and Technology, Kenya), Victor Nzia (Jomo Kenyatta University of Agriculture and Technology, Kenya), Dr. Hezekiah Nganga (Jomo Kenyatta University of Agriculture and Techonology, Kenya), Dr. Stephen Kiambi (Jomo Kenyatta University of Agriculture and Technology, Kenya)

14:50 1571057675: Machine Learning-Enhanced Shatavari Recommendations for Menstrual Health.
Ms. Logapriya E (Saveetha School of Engineering, India), Dr. Surendran R (Saveetha Institute of Medical and Technical Sciences, India)

15:10 1571053911: Advancing Healthcare: Unveiling a Machine Learning-Powered Multi-Disease Prediction System for Enhanced Clinical Decision Support.
Mr. A Anandkumar (Jai Shriram Engineering College, India), Dr. T Rajkumar (NGP Institute of Technology, Coimbatore, India) Mrs. A Kavitha (NGP Institute of Technology, Coimbatore, India), Mrs. J Uma (Jai Shriram Engineering College, India), Mr. M Karthick (NGP Institute of Technology, Coimbatore, India)

14:30 1571048106: A Transfer Learning-Based Computer-Aided Lung Cancer Detection System in Smart Healthcare, Mr. Rezaul Haque (East West University, Dhaka, Bangladesh) Ms. Shyama Sultana (International American University line California, USA), Dr. Al Rafy (Touro University, USA), Mr. Md Babul Islam (University of Calabria, Italy & University College Dublin, Ireland), Mr. Masum Alam Arafat (Kyungdong University, Korea (South)) Dr. Pronaya Bhattacharya (Amity University, Kolkata, India) Dr. Pushan Kumar Dutta (Amity University Kolkata, India & Amity School of Engineering and Technology, India)

14:50 1571057616: Enhancing the Web-based Gamified Learning Service using Response Time.
Mr. Uppuluri Raju (Saveetha Institute of Medical and Technical Sciences, India), Dr. Surendran R (Saveetha Institute of Medical and Technical Sciences, India), Ms. Logapriya E (Saveetha School of Engineering, India)

16:10 1571044999: Leveraging Distributed Data for Glaucoma Detection: A Federated Learning Approach
Dr. Saida Sarra Boudouh (LIM Laboratory University of Laghouat Algeria, Algeria), Ms. Maroua Cheknane (LIM Laboratory, University of Laghouat, Algeria), Dr. Tahar Bendouma (University of Laghouat, Algeria)

16:30 1571044220: Supervised Machine Learning-Based Comparative Study for Diabetes Prediction with Performance Tuning
Mr. Necip Cinar (Dicle University, Turkey), Mr. Mehmet Kaya (Firat University, Turkey)

16:45 1571044288: Comparison of Deep Learning Architectures Used in the Classification of Diabetic Retinopathy Images.
Mr. Ahmet Bahadir Karli (Dicle University, Turkey), Mrs. Buket Kaya (Firat University, Turkey)

17:00 X-Pand: Explainable Random Forest with Feature Selection for COVID-19 like Pandemics in Smart Cities.
Dr. Pronaya Bhattacharya (Amity University, Kolkata, India), Mr. Ashwin Verma (Institute of Technology, Nirma University, Ahmadabad, India), Dr. Ashwani Kumar (Bennett University, Greater Noida, India), Mr. Tamoghna Mukherjee (Amity University Kolkata, India), Dr. Bharat Bhushan (Sharda University, India), Dr. Pushan Kumar Dutta (Amity University Kolkata, India & Amity School of Engineering and Technology, India)

DAY -III: Tuesday, December 3 13:30 – 15:30 (Asia/Bahrain)

Parallel Session 02: SF01: Internet of Things and Smart Applications-PART-B

Hall Hall-02: SESSION JOINING: HALL-02
Session Chair: Dr. Aymen Al-Khazraji

13:30 1571042390: Transforming Urban Solutions for Smart Cities through Crowdsourced Feedback.
Mr. Sudarsh Chaturvedi (NIMS University Rajasthan, Jaipur, India) Mr. Krishnakant Bharadwaj (NIMS University Rajasthan, Jaipur, India) Mr. Hill Patel (NIMS University Rajasthan, Jaipur, India), Mr. Aryan Gothwal (NIMS University Rajasthan, Jaipur, India), Dr. Nilesh P. Bhosle (NIMS University Rajasthan, Jaipur, India), Dr. Jayant Jagtap (NIMS School of Computing and Artificial Intelligence, India & NIMS University, India)

13:50 1571042419: IoT based Real-Time Patient Health Monitoring and Alert System.
Mr. Mohamad Zafar Badar (University of Bahrain, Bahrain & Sadeed Technology and Business Solutions, Bahrain) Prof. Mohab A. Mangoud (UoB, Bahrain)

14:10 1571044433: IoT-Enabled Voice-Activated Mouse Control and Digital Painting System.
Dr. P Kanimozhi (IFET College of Engineering, India), Ms. Jayasri A R (IFET College of Engineering, India), Dr. Ananth kumar Tamilarasan (IFET College of Engineering, India)

14:30 1571078165: Application of AI and IoT technologies to control air pollution in smart cities.
Saurabh Vishwakarma (Software Engineer, Canada), Dr. Suresh Vishwakarma (Institution of Engineering and Technology, Canada)

14:50 1571078131: Enhancing Ecological Balance through IoT: Smart Automation in Plant Hydration.
Dr. Ujwala Kshirsagar (Symbiosis Institute of Technology Pune, India & Symbiosis Institute of Technology, India), Ms. Ankita Gupta (Symbiosis Institute of Technology Pune, India), Mr. Aniketh Mehta (Symbiosis Institute of Technology Pune, India), Mr. Sailesh Pasam (Symbiosis Institute of Technology Pune, India)

15:10 1571057995: Artificial Intelligence Based Explainable Smart Healthcare: Integration and Analysis of IoT Data.
Mrs. Kübra Arslanoğlu (Firat University, Turkey), Prof. Mehmet Karakose (Firat University, Turkey)

15:30 1571056852: Analysis of Machine Learning Models for IoT Malware Detection in Network Traffic.
Ms. Maram W. Aljasim (Bahrain Polytechnic, Bahrain & NCSC BH, Bahrain), Prof. Abdelhameed Ibrahim (Bahrain Polytechnic, Bahrain)

DAY -III: Tuesday, December 3 13:30 – 15:40 (Asia/Bahrain)

Parallel Session 03: SF03: Design Solutions & Smart Cities Design-PART-B

Hall-03: SESSION JOINING: HALL-03
Session Chair: Mirnal Mungra

13:30 1571023105: Community-Cantered Sustainable Design Data Collection Project: Ultras Community in Bahrain.
Mr. Abdulaziz Emad Obaid, Jr (University of Bahrain, Bahrain), Dr. Fay Al khalifa (University of Bahrain, Bahrain).

13:50 1571024808: Machine Learning and Smart Cities: A Comparative Analysis of Ensemble and Instance-based Methods for Concrete Strength Prediction.
Dr. Md Arifuzzaman (King Faisal University, Saudi Arabia), Dr. Wadea Sindi (Director, Jeddah Development Authority, Saudi Arabia), Dr. Manal Aburizaiza (Yanbu Industrial College, Saudi Arabia), Mr. Kaffayatullah Khan (King Faisal University, Saudi Arabia)

14:10 1571033505: Role of Urban Greening in Chandigarh City's Sustainable Development.
Ms. Avni Durga Hemanth (University of Bahrain, Bahrain) , Dr. Fay Al khalifa (University of Bahrain, Bahrain)

14:30 1571046152: Smart Urban Planning and Design Solutions for Sustainable Cities
Mr. Deepak Pandurang Gavade (M Com (BA) & Author, India)

14:50 1571045263: Urban Sustainability Through Green-Crunch Organic Delivery.
Dr. Ananth kumar Tamilarasan (IFET College of Engineering, India), Mr. Suresh Kumar K (IFET, India), Ms. Gokulalakshmi A (IFET College of Engineering, India), Ms. Martina Jose mary (IFET College of Engineering, India), Ms. Shyamala devi R (IFET College of Engineering, India), Dr. Rajmohan Rajendran (SRM Institute of Science and Technology, India)

15:20 1571061145: Characterization and Performance of sustainable concrete using Box Behnken design approach.
Mr. Nayeemuddin Mohammed (Prince Mohammad Bin Fahd University, Saudi Arabia), Dr. Muhammad Ajmal (University of Bahrain, Bahrain), Dr. Hiren Mewada (Prince Mohammad Bin Fahd University, Saudi Arabia) Dr. Danish Ahmed (Prince Mohammad Bin Fahd University, Saudi Arabia), Ms. Tasneem Sultana (Sharnbasva University, India)

15:40 1571055722; Designing Lightweight High-Performance Torsion Bars Using Composite Materials and Validating with FEA and Experimental Testing.
Dr. Durgesh Nandan (School of CS & AI, SR University, Warangal, Telangana, India 506371) , Dr. V. Raghavendra Rao (SRM Institute of Science and Technology, India), Dr. Prashant Kumar Shrivastava (APJ Abdul Kalam University, India), Dr. Mallikarjuna Makana (NBKR Institute of Science and Technology, India)

16:00 1571045245: Smart City Network Optimization through Load Balancing in Hybrid WiFi-LiFi Networks.
Mr. Suresh Kumar K (IFET, India), Dr. Ananth kumar Tamilarasan (IFET College of Engineering, India), Dr. Hari Krishnan D (Cochin College of Engineering, India), Dr. J Arul king (Anna University, India)

DAY -III: Tuesday, December 3 13:30 – 15:40 (Asia/Bahrain)

Parallel Session 04: SF04: Design Solutions & Smart Cities Design-PART-C

Hall-04: SESSION JOINING: HALL-04

Session Chair: Dr. Araddhana Deshmukh

13:30 1571044993: HSV Histogram-Based Method for Fire Detection in Smart Cities.
Mrs. Nafiye Nur Apaydin (Firat University, Turkey), Mrs. Kudret Dinc (Firat University, Turkey), Mr. Orhan Yaman (Firat University, Turkey,)Prof. Mehmet Karakose (Firat University, Turkey)

13:50 1571045083: Comparative Study of Social Withdrawal Symptoms in Control and Ketum Dependent Subjects.
Dr. Vikneswaran Vijean (Universiti Malaysia Perlis, Malaysia), Dr. Rajkumar Palaniappan (University of Technology Bahrain, Bahrain), Dr. Sindhu Ravindran (Amrita Viswa Vidhyapeetam, India), Dr. Lim Chee Chin (Universiti Malaysia Perlis, Malaysia), Mrs. Rokiah Abdullah (Universiti Malaysia Perlis, Malaysia), Dr. Yogesh C K (VIT, India)

14:10 1571045089: Leveraging Computer Vision and CNN for Advanced Weather Forecasting.
Dr. Anandan P (Vellore Institute of Technology, Chennai, India) Dr. Shivansh Singh (Vellore Institute of Technology, Chennai, India), Dr. Suryadevara Aneesh Gouri Kartheek (Vellore Institute of Technology, Chennai, India), Dr. Yogesh C K (Vellore Institute of Technology, Chennai, India), Dr. Rajkumar Palaniappan (University of Technology Bahrain, Bahrain)

14:30 1571045128: Automated Attendance Tracking System Through Deep Learning Methods.
Dr. Vikneswaran Vijean (Universiti Malaysia Perlis, Malaysia), Dr. Rajkumar Palaniappan (University of Technology Bahrain, Bahrain), Dr. Lim Chee Chin (Universiti Malaysia Perlis, Malaysia)

14:50 1571045152: Coronary heart disease at the tertiary care hospital.
Mr. Ayush Kumar Sinha (Chandigarh University, India), Mr. Amit Singh (Chandigarh University, India), Mr. Shivam Singh (Chandigarh University, India)

15:20 1571045218: Exploring Responsible Leadership in Smart Cities' Human Resource Management.
Dr. Suresh Vishwakarma (Institution of Engineering and Technology, Canada), Dr. Ruchi Tyagi (Adjunct Faculty, Asian Institute of Technology, Thailand), (Dr. Anurag Sharma, Industry Fello, University of Petroleum and Energy Studies, India).

15:40 1571045226: Tooth Classification and Numbering by YOLOv8 in Bitewing Dental Images.
Dr. Ahmad Afif Mohd Faudzi (Universiti Malaysia Pahang Al-Sultan Abdullah, Malaysia), Dr. Syamimi Mardiah Shaharum (Universiti Malaysia Pahang Al-Sultan Abdullah, Malaysia), Dr. Wan Syahirah W. Samsudin (Universiti Malaysia Pahang Al-Sultan Abdullah, Malaysia), Dr. Rajkumar Palaniappan (University of Technology Bahrain, Bahrain), Ms. Nor Azleen Arafin (University Malaysia Pahang Al-Sultan Abdullah, Malaysia)

16:00 1571078146: On Board Charger for Electric Vehicle.
Dr. Mrinal Bachute (India), Ms. Vaishnavi Kulkarni (Symbiosis Institute of Technology Pune, India), Mr. Rahul P Bachute (Pune University, India & Ajeenkya D Y Patil School of Engineering, India)

DAY -III: Tuesday, December 3 15:30 – 15:40 (Asia/Bahrain) – Short Break

Tuesday, December 3 15:40 – 16:00 (Asia/Bahrain)

CD-3: Closing Remarks of 8th SMART CITIES SYMPOSIUM, 2024

Closing Remarks of 8th IET SMART CITIES SYMPOSIUM, 2024

Session Chair: Dr. Archana Kanawde, Ph.D.
Associate Professor, Electronics & Telecommunication Engineering, Marathwada Mitra Mandal's College of Engineering

MAIN-THEATRE HALL – VIRTAUL ACCESS

KEYNOTES AND PARALLEL SESSIONS HYBRID JOINING

Keynotes and Parallel Sessions Hybrid Joining:

To join sessions in Main Hall	MAIN-THEATRE HALL – VIRTAUL ACCESS
To join sessions in Hall-01:	SESSION JOINING: HALL-01
To join sessions in Hall-02	SESSION JOINING: HALL-02
To join sessions in Hall-03	SESSION JOINING: HALL-03
To join sessions in Hall-04	SESSION JOINING: HALL-04
To join sessions in Hall-05	SESSION JOINING: HALL-05

IET CERTIFICATE OF PAPERS PRESENTATION, AND ATTENDANCE

IET will issue Certifications for Papers Presentations and Attendance.
Please contact the Symposium Organization Committee for the Certificates.
https://www.iet-smartcities-symposium.com/

SYMPOSIUM PRESENTATION TEMPLATES

Presentation Templates are found the event website.

https://www.iet-smartcities-symposium.com/

IET SYMPOSIUM REGISTRATION IS OPEN

This is a free attendance event supported by the IET, for Symposium Registration, visit the IET Registration Platform

IET Registration Platform

https://localevents.theiet.org/3f484d

or at

https://www.iet-smartcities-symposium.com/

ACCESSING : 8TH SCS-2024 - HALLS, 1-3 DECEMBER 2024

To join sessions in Main Hall — MAIN-THEATRE HALL – VIRTAUL ACCESS

To join sessions in Hall-01: — SESSION JOINING: HALL-01

To join sessions in Hall-02 — SESSION JOINING: HALL-02

To join sessions in Hall-03 — SESSION JOINING: HALL-03

To join sessions in Hall-04 — SESSION JOINING: HALL-04

To join sessions in Hall-05 — SESSION JOINING: HALL-05

8TH IET SMART CITIES SYMPOSIUM PROGRAM

1-3 DECEMBER 2024

KEYNOTES AND PARALLEL SESSIONS DETAILS

DAY-I

SUNDAY, 1ST DECEMBER 2024

Main-Hall : Main Hall Opening by 8:30 am

9:00 am

MAIN-THEATRE HALL – VIRTAUL ACCESS

Opening Ceremony

OPENING SPEECH

SUNDAY 1ST DECEMBER 2024, 09:05+03 - 09:10+03

WELCOME: WELCOME SPEECH

THE SMART CITIES SYMPOSIUM : UOB Admin: University of Bahrain

SUNDAY THE 1ST OF DECEMBER 2024, 09:20+03 - 10:00+03

KN1: KEYNOTE SPEAKER -1

PRINTABLE SENSORS AND ENERGY HARVESTERS FOR SMART CITIES

Professor, Dr. Vincenzo Pecunia, Ph.D. Cantab., FIMMM, FIET, FInstP, SMIEEE, P.Eng.
School of Sustainable Energy Engineering, Simon Fraser University, 10285 University Drive, Surrey, British Columbia V3T 0N1, Canada

Session Chair:
Dr. Suresh Vishwakarma, P.Eng., CEng, MIET, MBA, PhD, PostDoc, Honorary Professor, Amity University, India, IET-UK Representative for Western, Canada

KN2: KEYNOTE SPEAKER -2

THE CONVERGENCE OF ARTIFICIAL INTELLIGENCE, ELECTRIC VEHICLES, AND INDUSTRIAL TECHNOLOGY

Dr. Mrinal R Bachute
Associate Professor and Head of Industry Connect at Symbiosis Institute of Technology, Pune under Symbiosis International Pune, India

Session Chair:
Dr. Tagore Ramlal, University of Trinidad and Tobago, and Chair, IET Trinidad and Tobago LN. Trinidad

Sunday 1st December 2024: 11:00 +03 to 01:00 +03		
Parallel Session: Hall-1 SA01: Internet of Things and Smart Applications-PART-A SESSION JOINING: HALL-01	Parallel Session: Hall -2 SA02: Artificial intelligence Computational Algorithms SESSION JOINING: HALL-02	Parallel Session: Hall-3 SA03: Smart Environments -PART-A SESSION JOINING: HALL-03
13:00 +03 to 13:30 +03: ZB1: Day-1 - Mid-Day Break		

Sunday 1st December 2024: 13:30 +03 to 16:30 +03			
Parallel Session: Hall-1 SB01: Smart Environments -PART-B SESSION JOINING: HALL-01	Parallel Session: Hall-2 SB02: Cybersecurity Solutions SESSION JOINING: HALL-02	Parallel Session: Hall-3 SB03: Smart Transportation System SESSION JOINING: HALL-03	Parallel Session: Hall-4 SB04: Smart Cities Solutions SESSION JOINING: HALL-4
CD-1: Closing of Day-1			

MONDAY, 2ND DECEMBER 2024

Main-Hall: Getting Ready: Main Hall Opening by 8:30 am

9:00 am

MAIN-THEATRE HALL – VIRTAUL ACCESS

KN4: KEYNOTE SPEAKER -2

MONDAY 2ND DECEMBER 2024, 09:00+03 - 09:30+03

ENHANCEMENT OF THE SMART CITY CONCEPT THROUGH A LOW-COST-ON-THE-ROAD-UNIT FOR TRAFFIC MANAGEMENT

Dr. Fotis Giannopoulos
Prisma Electronics S.A., HQ-Factory: 87 Demokratias Ave, 68 100, Alexandroupolis, Greece

Session Chair:
Dr. Anup Vibhute, Professor in E&TC Engg, Dr. D Y Patil Institute of Technology, Pune 411018, India

KN5: KEYNOTE SPEAKER-3

MONDAY 2ND DECEMBER 2024, 09:30+03 - 10:45+03

SMART CITIES IN SMALL ISLAND NATIONS: PAVING THE WAY TO GREEN SMALL ISLAND DEVELOPING STATES

Dr. Abdel Khoodaruth
CEng MEI RPEM MIE, Professor Sir Edouard Lim Fat Engineering Tower, University of Mauritius, Mauritius

Session Chair:
EUR ING. Ir. Victor Nagesparan, Assistant Professor, UCSI University. Malaysia

Monday 2nd December 2024: 10:30 +03 to 13:00 +03

Parallel Session: Hall-1	Parallel Session: Hall-2	Parallel Session: Hall-3
SC02: Smart Algorithms Applications-A	SC03: New Technologies for Smart Cities-PART-A	SC04: New Technologies for Smart Cities-PART-D
SESSION JOINING: HALL-01	SESSION JOINING: HALL-02	SESSION JOINING: HALL-03

13:00 +03 to 13:30 +03: ZB1: Day-1 - Mid-Day Break

Monday 2nd December 2024: 13:00 +03 to 15:15 +03

Parallel Session: Hall-1	Parallel Session: Hall-2	Parallel Session: Hall-3
SD01: New Technologies for Smart Cities-PART-B	SD03: Smart Energy Systems – Technology Solutions	SD04: Smart Cities and AI Computational Algorithms
SESSION JOINING: HALL-01	SESSION JOINING: HALL-02	SESSION JOINING: HALL-03

CD-2: Closing of Day-2

DAY-III

Tuesday, 3rd December 2024

Main-Hall: Getting Ready: Main Hall Opening by 8:30 am

9:00 am

MAIN-THEATRE HALL – VIRTAUL ACCESS

KN5: KEYNOTE SPEAKER -5

TUESDAY, 3RD DECEMBER 2024, 09:00+03 - 09:45+03

RE-IMAGING SMART CITIES SEARCH APPLICATIONS WITH LLMS

Dr. Lakshmanan Sethu Sankaranarayanan,
TAM - GenAI/AI & ML Solutions, Google USA, California, USA

Session Chair:
Ms. Shefali Vishwakarma, Member, IET - Communities Committee America, Simon Fraser University, Burnaby BC, Canada

KN6: KEYNOTE SPEAKER -6

TUESDAY, 3RD DECEMBER 2024, 09:45+03 - 10:25+03

SECURING THE VISUAL LANDSCAPE: IMAGE CRYPTOGRAPHY SOLUTIONS FOR SMART CITIES

Dr. Renjith V Ravi, FIETE, C.Eng (IE) Associate Professor, Electronics and Communication Engineering Chair,
M.E.A Engineering College, Vengoor, Pattikkad PO, Malappuram, India

Session Chair:
Dr. Neha Tyagi, Associate Professor, Department of Computer Science & Engineering, Amity School of Engineering & Technology, Amity University, Noida, India

Tuesday, 3th December 2024: 10:30 +03 to 01:00 +03

Parallel Session: Hall-1	Parallel Session: Hall-2	Parallel Session: Hall-3
SE02: Smart Monitoring and Solutions	SE03: Smart Homes, Smart Hospitals, and Smart Campuses	SE04: Robotics and Systems Intelligence
SESSION JOINING: HALL-01	SESSION JOINING: HALL-02	SESSION JOINING: HALL-03

ZB-3: Mid-Day Break: 13:00 +03 to 13:30 +03

Tuesday, 3rd December 2024: 01:30 +03 to 15:30 +03

Parallel Session: Hall-1	Parallel Session: Hall-2	Parallel Session: Hall-3	Parallel Session: Hall-4
SF00: Smart Healthcare and Technology Solutions	SF01: Internet of Things and Smart Applications-PART-B	SF03: Design Solutions & Smart Cities Design-PART-B	SF03: Design Solutions & Smart Cities Design-PART-C
SESSION JOINING: HALL-01	SESSION JOINING: HALL-02	SESSION JOINING: HALL-03	SESSION JOINING: HALL-4

Main-Hall: CD-3: Closing Remarks; 15:40 +03 to 16:00 +03

MAIN-THEATRE HALL – VIRTAUL ACCESS

Closing Remarks of 8th IET SMART CITIES SYMPOSIUM, 2024
Session Chair:
Dr. Archana Kanawde, PhD
Associate Professor, Electronics & Telecommunication Engineering, Marathwada Mitra Mandal's College of Engineering

SB-3: Day-3 - Symposium Ending

links to Virtual Halls: Please find the (emails for 8th IET Smart Cities Symposium -2024 at UOB).

Main Hall (for keynotes):

https://teams.microsoft.com/l/team/19%3axG7sMdr62OyGEDAe9aCcouXO4N-nSaOkdVnOV8eCMIk1%40thread.tacv2/conversations?groupId=757055ce-6416-4abe-b18e-f9da8fc2b055&tenantId=026137b5-e313-46d1-9b2f-026ecb50c842

Hall- No.1:

https://teams.microsoft.com/l/team/19%3aNplhIeQKOQ7ei67IhDjqpHlKazCwwq7ZVdO8xLj_8s01%40thread.tacv2/conversations?groupId=36a17ce2-8d71-474f-9a12-da2931cfbfd0&tenantId=026137b5-e313-46d1-9b2f-026ecb50c842

Hall-No.2:

https://teams.microsoft.com/l/team/19%3aXeMATrXyfI3P0dUVd8tkliLoBVXQhXx53znBydJ1kFk1%40thread.tacv2/conversations?groupId=345c3a17-5f27-4b00-be24-7c99df4cee96&tenantId=026137b5-e313-46d1-9b2f-026ecb50c842

Hall No.3:

https://teams.microsoft.com/l/team/19%3aMoHW33f4s-ligjoOr1E8_M-BAYMJmeYW6MPV6R3UtVg1%40thread.tacv2/conversations?groupId=dc484145-fee2-4e6c-88cf-56f49554dd6e&tenantId=026137b5-e313-46d1-9b2f-026ecb50c842

Hall No.4:

https://teams.microsoft.com/l/team/19%3aYKZYjRGYP2F1GF8sHhYEbi6Rv4EkZJBHZakkdI9w3Vc1%40thread.tacv2/conversations?groupId=1ff0e4f4-6440-4b8c-8766-9fab074fd85c&tenantId=026137b5-e313-46d1-9b2f-026ecb50c842

Hall No.5:

https://teams.microsoft.com/l/team/19%3anY8hbNhmLgVpmOAyOfywvZKm9qTd2UR-O9JAtP_mz-M1%40thread.tacv2/conversations?groupId=6ce24244-bdd8-410d-a7b2-f8dacc0f1050&tenantId=026137b5-e313-46d1-9b2f-026ecb50c842