Keynote speech 1: Educating for Industry 4.0 through AI, Robotics and Computer Science in Every Classroom, Prof Răzvan Bologa, (Bucharest University of Economic Studies, Romania)

Keynote speech 2: The Role and Limitations of Artificial Intelligence in Radiology Imaging, <u>Dr Osama Alnuaimi, (</u>Elias University Emergency Hospital, Romania).

Keynote speech 3 The Surgical Mind Meets Machine Learning: Rethinking Precision, Outcomes and the Future of Care, Professor Deiary Kader, (NHS South West London Elective Orthopaedic Centre, UK).

Parallel session 1:

From Data to Decisions: Employing Machine Learning and Deep Learning for a Sustainable Future & Emerging Trends in Data Science Theory and Multidisciplinary Applications

 IEEE 802.11 Retry Rate Analysis with a Hybrid Artificial Intelligence Approach
 Amin Sedighfar (Humber College & SemFio Networks Inc, Canada)

[1571184206]

 AirMapNet: Smart Air Pollution Mapping Using Deep Learning

Eman Alaaeldin Mahmoud (King Fahd University of Petroleum and Minerals, Saudi Arabia); Syed Saad Azhar Ali (King Fahd University of Petroleum & Minerals & Interdisciplinary Research Center for Smart Mobility and Logistics, Saudi Arabia); Sami El Ferik (King Fahd University of Petroleum & Minerals, Saudi Arabia)

[1571204115]

 A Layered LSTM Architecture for Precipitation Prediction and Regression in Urban Areas

Stefan-Marius N. Nicolae (National Institude Reseach and Development for INOE2000. Optoelectronics Romania): Alexandru Dandocsi (National Institute of Research and Development Optoelectronics - INOE 2000, Romania); Daniela Faur (National University of Science and Technology Polytechnic of Bucharest, Romania)

[1571172239]

 Daily Variation and Spatial Gradients of Ultrafine Particles in Bucharest Using Mobile Monitoring

Alexandru M Ilie (National Institute of Research and Development for Optoelectronics - INOE 2000 & University of Bucharest, Romania); Jeni Vasilescu (National Institute of R&D for Optoelectronics, Romania); Alexandru Dandocsi (National Institute of Research and Development for

Parallel session 2:

e-System Engineering (Main Track)

 AI-Based Real-Time Asthma Risk Prediction and Ventilator Control

Aynoor Al-Turk (Philadelphia University, Jordan); Kasim Mousa Al-Aubidy (Tishk International University & Director, Al Research Center, Iraq); Mohammed Baniyounis (Philadelphia University Jordan, Jordan); Mustafa Awwad Al-khawaldeh (Philadelphia University Jordan, Jordan)

[1571164281]

 Digital Twin Applications for Hydrogen Integration in Gas Micro Turbines: A Review of Modelling Approaches and System Challenges

Mihaela Ionela Bian (Technical University of Cluj Napoca & Servelect ESCO, Romania); Paula Veronica Unguresan (Technical University of Cluj-Napoca, Romania); Ionaș-Cătălin Dumitrescu (National Institute of Research & Development for Optoelectronics INOE 2000, Romania); Radu-Iulian Rădoi (National Institute of Research & Development for Optoelectronics INOE 2000, Romania)

[1571177598]

A Feedback-Enhanced Effort-Aware Just in Time Defect Prediction Pipeline

Huda AlGhussein (University of Sharjah, United Arab Emirates); Abdullah Mustafa (University of Sharjah, United Arab Emirates); Manar Abu Talib (University of Sharjah, United Arab Emirates); Mohammad Azzeh (Princess Sumaya University for Technology, Jordan); Ali Bou Nassif (University of Sharjah, United Arab Emirates)

[1571204871]

A LoRaWAN-Based Smart Home Energy Management System Empowered by Artificial General Intelligence

Khawla Alnajjar (University of Sharjah, United Arab Emirates); Sam Ansari (University of Sharjah, United Arab Emirates); Saeed Optoelectronics - INOE 2000, Romania); Andrei Valentin Dandocsi (National Institute of Research and Development for Optoelectronics - INOE 2000, Romania); Cristian Ioja (University of Bucharest, Romania)

[1571172023]

Organic Aerosol Classification Using Machine Learning Regression Techniques Andrei Valentin Dandocsi (National Institute Research and Development Optoelectronics - INOE 2000, Romania); Alexandru M Ilie (National Institute of and Research Development for Optoelectronics - INOE 2000 & University of Bucharest, Romania); Stefan-Marius N. Nicolae (National Institude of Reseach and Development for Optoelectronics INOE2000, Romania); Livio Belegante (National Institute of R&D for Optoelectronics, Romania); Jeni Vasilescu (National Institute of R&D for Optoelectronics, Romania)

[1571172719]

 Remote Sensing of Clouds: A Multisensor Synergy for Cloud Profiling

(National Institute Razvan Pirloaga Research and Development for Optoelectronics INOE 2000, Romania); Anca Nemuc (National Institute of R&D for Optoelectronics, Romania); Daniel-Eduard Constantin (Dunărea de Jos University of Galati, Romania); Andrei Radovici (Babeș-Bolyai University, Romania); Catalin Negoita (Dunărea de Jos University of Galati, Romania); Florica Toanca (National Institute of R&D for Optoelectronics, Romania)

[1571172719]

Parallel session 3: Artificial Intelligence for Improving Patient and Medication Safety

 On-spot Identification of Street Drugs Using Portable Fourier Transform Infrared Spectroscopy

Sulaf Assi (Liverpool John Moores University, United Kingdom (Great Britain)); Catarina Moreira Neves (Liverpool John Moores University, United Kingdom (Great Britain)); Jason Birkett (Liverpool John Moores University, United Kingdom (Great Britain)); Thomas Coombs (eSystems Engineering Society, United Kingdom (Great Britain)); Nikky Jones (Bournemouth University, United Kingdom (Great Britain)); Dhiya Al-Jumeily (Liverpool John Moores University, United Kingdom (Great Britain))

[1571169382]

Almansouri (University of Sharjah, United Arab Emirates); Mohammed haroub Alshehhi (University of Sharjah, United Arab Emirates); Mohammed Jasem (University of Sharjah, United Arab Emirates); Ahmed Obaid (University of Sharjah, United Arab Emirates); Abir Jaafar Hussain (University of Sharjah, United Arab Emirates); Soliman Mahmoud (University of Sharjah, United Arab Emirates) [1571203834]

IoT Technologies for Monitoring and Control of Top Lit Up Draft (TLUD) Gasifiers Marian Blejan (INOE2000, Romania); Gabriela Matache (INOE2000, Romania); Stefan-Mihai Sefu (INOE2000, Romania)

[1571176559]

 A New Lidar Receiver Telescope for near-Range Detection in the Framework of ACTRIS

Livio Belegante (National Institute of R&D for Optoelectronics, Romania); Doina Nicolae (National Institute of R&D for Optoelectronics, Romania); Jeni Vasilescu (National Institute of R&D for Optoelectronics, Romania); Anca Nemuc (National Institute of R&D for Optoelectronics, Romania); Victor Nicolae (National Institute of R&D for Optoelectronics INOE, Romania); Cristian Radu (INOE 2000, Romania); Ciocan Gabriela (National Institute of R&D for Optoelectronics INOE, Romania)

[1571170141]

Parallel session 4: Artificial Intelligence for Improving Patient and Medication Safety

 An Al-Driven Predictive Framework for Personalised Early Detection of Nocturnal Enuresis

Khaled Alblushi (University of Sharjah, United Arab Emirates); Abir Jaafar Hussain (University of Sharjah, United Arab Emirates); Eqab Almajali (University of Sharjah, United Arab Emirates)

[1571191722]

Artificial Intelligence for Heart Disease Risk Prediction: A Machine Learning Approach

Adebayo Adetola (Teesside University, United Kingdom (Great Britain)); Ndidi Bianca Ogbo (Teesside University, United Kingdom (Great Britain)); Mansha Nawaz (Teesside University, United Kingdom (Great Britain)); Sumaia

Prediction of Cocaine Content Using Handheld near-Infrared and Raman Spectroscopy and Partial Least Square Regression

Sulaf Assi (Liverpool John Moores University, United Kingdom (Great Britain)); Lily Parsons (Liverpool John Moores University, United Kingdom (Great Britain)); Jason Birkett (Liverpool John Moores University, United Kingdom (Great Britain)); Thomas Coombs (eSystems Engineering Society, United Kingdom (Great Britain)); Megan Wilson (Liverpool John Moores University, United Kingdom (Great Britain)); Leung Tang (Agilent Technology, United Kingdom (Great Britain)); Ana Blanco (Agilent Technologies, United Kingdom (Great Britain)); Sam Walker (Agilent Technologies, United Kingdom Britain)); Dhiya Al-Jumeily (Liverpool John Moores University, United Kingdom (Great Britain))

[1571180049]

Portable near-Infrared and Raman Spectroscopy with Chemometrics for Detecting Counterfeit Antibiotics

Thomas Coombs (eSystems Engineering Society, United Kingdom (Great Britain)); Ffreuer Paynter (Liverpool John Moores University, United Kingdom (Great Britain)); Dhiya Al-Jumeily (Liverpool John Moores University, United Kingdom (Great Britain)); Kudaisi Hamad M Al Monif (Saudi Ministry of Health, United Kingdom (Great Britain)); Ana Blanco (Agilent Technologies, United Kingdom (Great Britain)); Maha Mahmood (University of Anbar & Office of the Prime Minister's Advisor, USA); Leung Tang (Agilent Technology, United Kingdom (Great Britain)); Sam Walker (Agilent Technologies, United Kingdom (Great Britain)); Sulaf Assi (Liverpool John Moores University, United Kingdom (Great Britain))

[1571187590]

Detection of Cardiovascular Diseases and Diabetes Mellitus in Fingernails Using Scanning Electron Microscopy and Machine Learning

Megan Wilson (Liverpool John Moores University, United Kingdom (Great Britain)); Dhiya Al-Jumeily (Liverpool John Moores University, United Kingdom (Great Britain)); Jason Birkett (Liverpool John Moores University, United Kingdom (Great Britain)); Iftikhar Khan (Liverpool John Moores University, United Kingdom (Great Britain)); Ismail Abbas (Lebanese University, Lebanon); Sulaf Assi (Liverpool John Moores University, United Kingdom (Great Britain))

Elkazza (Teesside University, United Kingdom (Great Britain)); Shatha Rashed Ghareeb (Teesside University, United Kingdom (Great Britain)); Jamila Mustafina (Kazan Federal University, Russia)

[1571199812]

Machine Learning Prediction for Appendicitis: A Comprehensive Study of Blood Markers and Clinical Variables

Declan Ikechukwu Emegano (Operational Research Center in Healthcare, Turkey); Dilber Uzun Ozsahin (University of Sharjah, Sharjah, UAE & Near East University, Nicosia, North Cyprus, United Arab Emirates); Berna Uzun (Near East University, Cyprus); Ilker Ozsahin (Near East University, Turkey); Abir Jaafar Hussain (University of Sharjah, United Arab Emirates)

[1571202734]

The Effect of Patient, Donor, and Organ Viability Features in Kidney Transplant Survival Prediction

Natacha Usanase (Near East University, Cyprus); Abir Jaafar Hussain (University of Sharjah, United Arab Emirates); Ilker Ozsahin (Near East University, Turkey); Berna Uzun (Near East University, Cyprus); Dilber Uzun Ozsahin (University of Sharjah, Sharjah, UAE & Near East University, Nicosia, North Cyprus, United Arab Emirates)

[1571202931]

AlamViT: Swin-Enhanced Temporal MobileViT for Pain Recognition from Facial Expressions

Alya Alabdouli (University of Sharjah, United Arab Emirates); Tamer Rabie (University of Sharjah, United Arab Emirates)

[1571203241]

Al-Driven Feedback for Physiotherapy Assessments

Hamza Sarfraz (Teesside University, United Kingdom (Great Britain)); Naeimeh Nourmohammadi (Teesside University, United Kingdom (Great Britain)); Hiba Alsmadi, University (Teesside University, United Kingdom (Great Britain)); Ala Al Kafri (Teesside University, United Kingdom (Great Britain)); Gok Kandasamy (Teesside University, United Kingdom (Great Britain)

[1571203875]

Using Feature Importance to Compute Key Determinants of Anaemia: A Case Study-Based Approach

Rajen Vohra (University of Bolton, United Kingdom (Great Britain)); Jankisharan Pahareeya (RJIT Gwalior, India); Abir Jaafar [1571188039]

 Detection of Drugs in Artificial Saliva Using Infrared and Raman Spectroscopy

Megan Wilson (Liverpool John Moores University, United Kingdom (Great Britain)); Chloe Donlan (Liverpool John Moores University, United Kingdom (Great Britain)); Jason Birkett (Liverpool John Moores University, United Kingdom (Great Britain)); Ismail Abbas (Lebanese University, Lebanon); Dhiya Al-Jumeily (Liverpool John Moores University, United Kingdom (Great Britain)); Sulaf Assi (Liverpool John Moores University, United Kingdom (Great Britain))

[1571208147]

 Qualitative and Quantitative Determination of Drugs in Synthetic Oral Fluid Using Surface Enhanced Raman Spectroscopy and Machine Learning Algorithms

Sulaf Assi (Liverpool John Moores University, United Kingdom (Great Britain)); Rory Darling (Liverpool John Moores University, United Kingdom (Great Britain)); Megan Wilson (Liverpool John Moores University, United Kingdom (Great Britain)); Jason Birkett (Liverpool John Moores University, United Kingdom (Great Britain)); Molly Thompson (Liverpool John Moores University, United Kingdom (Great Britain)); Duncan Carmichael (Agriyork, United Kingdom (Great Britain)); Ismail Abbas (Lebanese University, Lebanon); Jan Lunn (Liverpool John Moores University, United Kingdom (Great Britain)); Dhiya Al-Jumeily (Liverpool John Moores University, United Kingdom (Great Britain))

[1571213955]

 Electrochemical Microsensor for the Assessment of Mercury in Ex Vivo Amalgam Samples

Ana-Maria Iordache (National Institute of and Development Research for Optoelectronics - INOE 2000, Romania); Bogdan Bita (National Institute of Research and Development for Optoelectronics - INOE 2000, Romania); Stefan Caramizoiu (National Institute for Research and Development in Optoelectronics - INOE 2000, Romania); Ana-Maria Florea (National Institute of Research and Development for Optoelectronics - INOE Romania); Luciana Maria Sutan 2000, (University of Bucharest, Romania); Ștefan-Marian Iordache (National Institute of Research and Development Optoelectronics - INOE 2000, Romania)

[1571174174]

Hussain (University of Sharjah, United Arab Emirates)

[1571206063]

Parallel session 5: Intelligent Solutions for Increased Sustainability in Logistics and Transport

Enhancing the Efficiency and Resilience of Urban Transport Infrastructure

Irina Makarova (Kazan Federal University, Russia); Vadim Mavrin (Kazan Federal University, Russia); Sarvar Imomnazarov (Namangan State Technical University, Uzbekistan); Avazbek Maxmudov (Namangan State Technical University, Uzbekistan)

[1571210098]

Optimizing Urban Parking Spaces to Improve the Efficiency of the Transport System

Irina Makarova (Kazan Federal University, Russia); Vadim Mavrin (Kazan Federal University, Russia); Aleksey Boyko (Kazan Federal University, Russia); Larisa Gabsalikhova (Kazan Federal University, Russia); Manoj Jayabalan (Bath Spa • University, United Kingdom (Great Britain))

[1571210104]

Development of a Diesel Engine Exhaust Gas Heat Recovery System Based on the Thermodynamic Rankine Cycle

Azat Galiakbarov (Kazan Federal University, Russia); Alexey Boldyrev (Kazan Federal University, Russia); Sergey Boldyrev (Kazan Federal University, Russia); Radik Rakhimov (Kazan Federal University, Russia); Lenar Fardeev (R&D Center KAMAZ PTC, Russia); Danis Israfilov (Kazan Federal University, Russia)

[1571210110]

 An Integrated IoT-GIS Framework for Intelligent School Transport Management
 Badr Ben Hichou (Harmony Technology, Morocco)

[1571210188] •

Optimizing Traffic Light Control Parameters to Improve Traffic Flow

Irina Makarova (Kazan Federal University, Russia); Vadim Mavrin (Kazan Federal University, Russia); Larisa Gabsalikhova (Kazan Federal University, Russia); Aleksey Boyko (Kazan Federal University, Russia); Jamila Mustafina (Kazan Federal University, Russia)

[1571211567]

Intelligent Solutions to Improve Pedestrian Safety

Irina Makarova (Kazan Federal University, Russia); Vadim Mavrin (Kazan Federal University, Russia); Larisa Gabsalikhova (Kazan Federal University, Russia); Aleksey Parallel session 6: AI-Powered Systems for Sustainable Agriculture and Smart Farming & Bridging the Gap: Recent Advances in AI & Generative AI for Industry Applications

Optimizing Deep Learning for NDVI Time-Series Forecasting in Cloud-Affected Grasslands

Manal Ali Alteneiji (University of Sharjah, United Arab Emirates); Ayad Turky (University of Sharjah, United Arab Emirates); Abir Jaafar Hussain (University of Sharjah, United Arab Emirates)

[1571188890]

Mitigating Disturbances in Smart Grids Using Sliding Mode Controller Approaches Yousif Ismail Al Mashhadany (University of Anbar, Iraq); Ali Ahmed Alrawi (University of Anbar, Iraq, Iraq); Sameer Algburi (Al-Kitab University, Iraq)

[1571193643]

A Comparative Analysis of Lightweight YOLOv11 and YOLOv12 Models for Automatic Whitefly Detection in Greenhouse Environment

Ramzi Habtoul, Rh (University of Gabes & ENIG, Tunisia); Marwa Zaabi (University of Lyon 2, Bron, France); Nadia Smaoui (ISAMS, University of Sfax, Tunisia); Abir Jaafar Hussain (University of Sharjah, United Arab Emirates)

[1571210327]

Comparative Analysis of Fractal-Based Metamaterial Resonators for Ku-Band Applications

Mustafa Mahdi Ali (Universidad de Málaga, Spain & Mustansiriyah University, Iraq); Enrique Márquez-Segura (Universidad de Malaga, Spain); T. A. Oleiwi (Al-Nahrain University, Iraq)

[1571200036]

Sarcasm Detection in News Headlines by Fine-Tuning a Transformer Model

Rakesh Raushan (Bangalore,India, United Kingdom (Great Britain))

[[1571210683]

Hospital Billing Cost Prediction for High-Cost, High-Need Patients Using Regression Analysis and Neural Networks with Explainable AI

Sutanuka Nayak (India)

[1571210859]

Boyko (Kazan Federal University, Russia); Sarvar Imomnazarov (Namangan State Technical University, Uzbekistan); Avazbek Maxmudov (Namangan State Technical University, Uzbekistan)

[1571217109]

 Application of VR Technologies in Designing Truck Assembly Processes

Irina Makarova (Kazan Federal University, Russia); Aleksey Boyko (Kazan Federal University, Russia); Larisa Fatikhova (Kazan Federal University, Russia); Ildar Khamatov (Kazan Federal University, Russia)

[1571218953]

TECHNICAL PROGRAM-Tuesday, 11[™] November 2025

Keynote speech 4: Computational Intelligence in Healthcare Technology: Current Landscape, Challenges, & Future Directions for GenAl, Prof Adel Al-Jumaily, (School of IT & Engineering at MIT Sydney, Australia)

Keynote speech 5: Soft Computing for Smart Automation: The Role of Fuzzy Logic, Neural Networks, and Genetic Algorithms in Real-Time Control, <u>Prof Kasim Mousa Alwan Al-Aubidy</u>, (*Tishk International University, Erbil, Iraq*)

Keynote speech 6: The Role of Al in Healthcare, Ami@LJMU, (Liverpool John Moores University, UK)

Parallel sessions

Parallel session 7: Large Language Models and Future Directions - What's Expected Next? & Emerging Trends in Data Science Theory and Multidisciplinary Applications

 Developing AI Agents for Course Planning: A Fine-Tuned LLaMA-3 Framework with Retrieval-Augmented Generation

Chede Edward Ekene (Teesside University, United Kingdom (Great Britain)); Hiba Alsmadi, University (Teesside University, United Kingdom (Great Britain)); Naeimeh Nourmohammadi (Teesside University, United Kingdom (Great Britain)); Ala Al Kafri (Teesside University, United Kingdom (Great Britain)); Gok Kandasamy (Teesside University, United Kingdom (Great Britain))

[1571195709]

 Enhancing RLHF in LLMs: Comparing BERT, XGBoost, and Deep Models for Bias Detection Walid Torfa (University of Sharjah, United Arab Emirates); Omar Elgendy (University of Sharjah, United Arab Emirates); Ali Bou Nassif (University of Sharjah, United Arab Emirates)

[1571202191]

• Investigating Large Multimodal Models' Potential in Arabic Handwriting Recognition

Najla Alsaedi (Taibah University, Saudi Arabia); Bushra Aljohani (Taibah University, Saudi Arabia); Raghad Alharbi (Taibah University, Saudi Arabia); Liyakathunisa Ansari (Taibah University, Saudi Arabia) Parallel session 8: Emerging Trends in Data Science Theory and Multidisciplinary Applications

 Harmonizing the CAMS Data with Observational in-Situ Measurements Through Dynamic Downscaling Procedures

Simona Andrei (National Institute of Research and Development for Optoelectronics INOE2000, Romania); Mariana Adam (National Institute of Research and Development for Optoelectronics INOE2000, Romania); Alexandru Dandocsi (National Institute of Research and Development for Optoelectronics - INOE 2000, Romania); Vasile Craciunescu (Romanian National Meteorological Administration, Romania); Ştefan Gabrian (Romanian National Meteorological Administration & Administration National University of Science Polytechnica Technology Romania); Ştefan Dinicilă (Romanian National Meteorological Administration & Babes-Bolyai University, Romania); Raluca Ştefan (Romanian National Meteorological Administration & National University of Science and Technology Polytechnica Bucharest, Romania); Antoanela Dumitru (Romanian National Meteorological Administration. Romania); Mihaela Neacsu National (Romanian Meteorological Administration, Mihaela Romania): Caian (Romanian National Meteorological Administration, Romania)

[1571204331]

[1571189194]

• Intelligent Indexing for AI Platforms

Vanchhit Khare (Assistant Vice President & M&T Bank, USA); Sakshi Kiran Naik (Independent Researcher, USA)

[1571206390]

A Low-Cost U-Shaped Patch Antenna with Resonating Ground Structure

Maryam Liaqat (University of Okara, Punjab & Federal University of Pernambuco, Recife Brazil, Pakistan); Ali Raza (University of São Paulo, Brazi, Brazil); Matheus Henrique Barros da Silva (Federal University of Pernambuco, Recife Brazil, Brazil); Ghulam Nabi (University of Okara, Pakistan); Maklayne Barros De Pontes Santiago (Federal University of Pernambuco, Brazil); Sumbal Yousaf (University of Okara, Pakistan); Frederico Nunes (UFPE, Brazil); Antonino Celso Dantas Antonino (Federal University of Pernambuco, Brazil)

[1571158257]

Low-Cost Environmental Monitoring System: Integration of Commercial and Laboratory-Developed Sensors for Real-Time Air Quality Assessment

Stefan Caramizoiu (National Institute for Research and Development in Optoelectronics - INOE 2000, Romania); Matei-David-Stefan Zichisanu (University of Bucharest, Romania); Teodor-Paul Chirita (University of Bucharest, Romania); Ana-Maria Iordache (National Institute of Research and Development for Optoelectronics - INOE 2000, Romania); Ana-Maria Florea (National Institute of Research and Development for Optoelectronics -INOE 2000, Romania); Bogdan Bita (National Institute of Research and Development for Optoelectronics - INOE 2000, Romania); Ștefan-Marian Iordache (National Institute of Research and Development for Optoelectronics - INOE 2000, Romania)

[1571174166]

SOCIALYNX: An AI-Powered Platform for Strategic Social Media Engagement into Institutional Insights

Shubhi Sharma (UPES, India); Rajnish Kumar (Advanced Institute of Convergence Technology, SNU, Korea, India); Riya Malhotra (UPES Dehradun, India)

[1571189575]

Moving Beyond Chance to Accurately Predict Football Wins with Data-Driven Insights

Joseph Maugbe Jacob (Teesside University, United Kingdom (Great Britain)); Aliyu Abubakar (Teesside University, United Kingdom (Great Britain)); Hiba Alsmadi, University (Teesside University, United Kingdom (Great Britain)); Michael Lawson (Middlesbrough FC, United Kingdom (Great Britain)); Ala Al Kafri (Teesside University, United Kingdom (Great Britain))

[1571191973]

NLG Feedback System

Oluwatoyin Chinell Olotu (Liverpool John Moores University, United Kingdom (Great Britain)); Hoshang Kolivand (Dep CS LJMU, United Kingdom (Great Britain)); Reino Niskanen (Liverpool John Moores University, United Kingdom (Great Britain)); Omar Aldhaibani (Liverpool John Moores University, United Kingdom (Great Britain)); Syed Naqvi (Liverpool John Moores University, United Kingdom (Great Britain))

[1571193558]

Pedagogically Driven Prompt Engineering Towards Developing Mathematical Literacy of Russian Students

Andrew V. Danilov (Kazan Federal University, Russia); Rinata Zaripova (Kazan Federal University, Russia); Leila Salekhova (Kazan Federal University, Russia); Timur R. Fazliakhmetov (Kazan Federal University, Russia); Marina Lukoyanova (Kazan Federal University, Russia); Nailya Batrova (Kazan Federal University & KFU, Russia)

[1571199736]

A Hybrid CNN and Vision Transformer Model for Brain Tumor Classification Using EffViT-Net

Roba Mohmmad Alamir, H (Taibah University, Saudi Arabia); Layan Abdulsatar Qurban (Taibah University, Saudi Arabia); Leena Obaid (Taibah University, Saudi Arabia); Liyakathunisa Syed (Taibah University, Saudi Arabia)

[1571203706]

Authorship Identification of AI-Generated Academic Texts: A Pilot Study in the Russian University Context

Andrew V. Danilov (Kazan Federal University, Russia); Rinata Zaripova (Kazan Federal University, Russia); Timur R. Fazliakhmetov (Kazan Federal University, Russia); Leila Salekhova (Kazan Federal University, Russia); Eduard Krylov Gennadievich (Izhevsk State Technical University, Russia)

[1571210319]

Enhancing Signature Verification Using Siamese
 Neural Networks and Vision Transformers

Yasmeen Alluhaibi (Taibah University, Saudi Arabia); Maimounah Allhujaili (Taibah University, Saudi Arabia); Nouf Aljabri (Taibah University, Saudi Arabia); Liyakathunisa Ansari (Taibah University, Saudi Arabia)

[1571214309]

Parallel session 9: From Data to Decisions: Employing Machine Learning and Deep Learning for a Sustainable Future

 AI and IoT Technologies for Remotely Accessed Laboratories

Kasim Mousa Al-Aubidy (Tishk International University & Director, Al Research Center, Iraq)

[1571172988]

 Chaotic Map-Based Authentication Protocol for 5G Networks Security Analysis with Tamarin Prover

Israa J. Mohammed Al-Kalfa (Malaga University, Iraq); Abdulmajeed Al-Jumaily (Universidad Carlos III de Madrid & SABAAG Advanced Technology, Spain); Karam J. Mohammed (Ministry of Higher Education & Scientific Research, Iraq); Saba Jasim Aljumaili (eSystems Engineering Scociety, Spain); Haitham Ameen Noman (Princess Sumaya University for Technology, Jordan); Mohammed Harbi Adhab (Scientific Research Commission & Information and Technology Communications Research Center, Iraq)

[1571178223]

 Aerodynamic Torque Estimation Techniques During Partial Load Operation of Wind Turbine via Fuzzy Logic and Least Square Methods

Abdulwahid A. Saif (King Fahd University of Petroleum & Minerals, Saudi Arabia)

[1571180496]

Real-Time Muscle Diseases Detection System
 Based on Electromyographic Signals

Yousif Ismail Al Mashhadany (University of Anbar, Iraq); Kasim Mousa Al-Aubidy (Tishk International University & Director, Al Research Center, Iraq); Sameer Algburi (Al-Kitab University, Iraq)

[1571182999]

Al Stock Market Prediction Dashboard

James M Roberts (Liverpool John Moores University, United Kingdom (Great Britain)); Hoshang Kolivand (Dep CS LJMU, United Kingdom (Great Britain)); Yasir Hussain (Liverpool John Moores University, United Kingdom (Great Britain)); Mostafa Tajdini (Staffordshire University & School of Computing and Digital Technologies, United Kingdom (Great Britain))

[1571187864]

 Machine Learning-Based Enhancements for Indian Sign Language Translation

Praise Olawuni (Liverpool John Moores University, United Kingdom (Great Britain)); Omar Aldhaibani (Liverpool John Moores University, United Kingdom (Great Britain)); Mustafa AL-Jumaili (University Of Anbar, Iraq); Hoshang Kolivand (Dep CS LJMU, United Kingdom (Great Britain)); Wasiq Khan

Parallel session 10: From Data to Decisions: Employing Machine Learning and Deep Learning for a Sustainable Future

Shahrazad: Hybrid Arabic Book Recommendation System

Mary Q Al-Shihani (Heriot-Watt University Dubai, United Arab Emirates); Abrar Ullah (Heriot-Watt University, United Arab Emirates)

[1571202321]

 An Approach Combining CNN and VGG16 for Detecting Voice Spoofing

Ban Alameri (University of Mustansiriyah, Iraq & Malaga University. Spain)

[1571202738]

A Machine Learning Framework for Multi-Stage Prediction of Chronic Kidney Disease Based on a New Dataset from Iraq

Akeel Shaker Mahmoud (University of Anbar, Iraq) [1571203254]

Real-Time Autonomous Navigation on a Raspberry Pi with Deep Learning and Sensor Fusion

Brian Orimba (Liverpool John Moores University, United Kingdom (Great Britain)); Omar Aldhaibani (Liverpool John Moores University, United Kingdom (Great Britain)); Sithu Ye Htun (Liverpool John Moores University, United Kingdom (Great Britain)); Hoshang Kolivand (Dep CS LJMU, United Kingdom (Great Britain)); Rand Mohammed (Liverpool John Mooer University, United Kingdom (Great Britain))

 Lightweight Convolutional Neural Networks for Retinal Disease Classification

Duaa Kareem Qasim (Imam Alkadhim University College, Iraq); Sabah Abdulazeez Jebur (Imam Alkadhim University College, Iraq); Lafta Raheem Ali Alkhazraji (Imam Ja'afar Al-Sadiq University, Iraq); Abdul Jalil Khalaf (Imam AlKadhim University College, Iraq); Abir Jaafar Hussain (University of Sharjah, United Arab Emirates)

[1571131255]

Deep Learning with Transfer Learning for Detecting Abnormalities in X-Ray Images

Dina Jasim Abd (Imam Alkadhim University College, Iraq); Sabah Abdulazeez Jebur (Imam Alkadhim University College, Iraq); Lafta Raheem Ali Alkhazraji (Imam Ja'afar Al-Sadiq University, Iraq); Riyam M. Alsammarraie (Madenat Alelem University College, Iraq); Abir Jaafar Hussain (University of Sharjah, United Arab Emirates)

[1571132514]

Predicting Primary School Students'
Performance in Mathematics Using Multivariate
Regression Algorithms

(Liverpool John Moores University, United Kingdom (Great Britain))

[1571193974]

 Intelligent Visual Odometry: Leveraging SURF Descriptors for Autonomous UAV Navigation

Wissem Dilmi (King Fahd University of Petroleum and Minerals, Saudi Arabia); Sami El Ferik (King Fahd University of Petroleum & Minerals, Saudi Arabia); Mohamed Ghoneim (King Fahd University of Petroleum and Minerals, Saudi Arabia); Abdulwahid A. Saif (King Fahd University of Petroleum & Minerals, Saudi Arabia)

[1571200350]

Rawaa Alumeily (Liverpool John Moores University, United Kingdom (Great Britain)); Sulaf Assi (Liverpool John Moores University, United Kingdom (Great Britain)); Hoshang Kolivand (Dep CS LJMU, United Kingdom (Great Britain)); Abdullah Al Hamid (King Faisal University, Saudi Arabia); Thar Baker (University of Khorfakkan, United Arab Emirates); Dhiya Al-Jumeily (Liverpool John Moores University, United Kingdom (Great Britain))

[1571169379]

Parallel session 11: Intelligent system Applications with Biomedical Engineering and Artificial limb Manufacturing

 Transformer-CNN Architecture for Robust Classification of Blood Groups

Mohanad Abdulsalam Alaskari (University of Anbar, Iraq); Zahraa Kadhim Mansoor (Al-Iraqia University, Iraq); Mudhafar Hussein Ali (AL-Iraqia University, Iraq)

[1571179973]

 Intelligent System for Limb Risk Assessment Using Antagonistic Muscle Control and Bionic Jumping

Yousif Ismail Al Mashhadany (University of Anbar, Iraq); Ali Ahmed Alrawi (University of Anbar, Iraq, Iraq); Sameer Algburi (Al-Kitab University, Iraq)

[1571180041]

 Detection and Validation for Concrete Crack with Intelligent System Based on Image Processing

Yousif Ismail Al Mashhadany (University of Anbar, Iraq); Mohanad Abdulsalam Alaskari (University of Anbar, Iraq); Sameer Algburi (Al-Kitab University, Iraq)

[1571180815]

 Edge-Al-Driven Diagnostics: A Modular Framework for Real-Time Smart Healthcare with Sensor-Robotics Integration

Poornima Galiveeti (S-Vyasa University, India & Lincoln University, USA)

[1571184011]

 Artificial Joints in Prosthetic Limbs Enhancing Materials for Durability and Biocompatibility

Yousif Ismail Al Mashhadany (University of Anbar, Iraq); Ali Ahmed Alrawi (University of Anbar, Iraq, Iraq)

[1571184252]

 A Real-Time Human-Machine Interface for Servo Motor Control Based on EMG Signal Synchronization

Yousif Ismail Al Mashhadany (University of Anbar, Iraq); Kasim Mousa Al-Aubidy (Tishk International University & Director, Al Research Center, Iraq); Sameer Algburi (Al-Kitab University, Iraq)

[1571184834]

 Deep Learning-Based Real-Time Object Classification and Recognition Evaluation

Parallel session 12: e-System Engineering (Main Track)

• The Strategic Role of Artificial Intelligence in Administrative Law

Ahmed Subhi Abdalkafor (University of Anbar, Iraq); Ahmed Ghanim Mohammed (University of Anbar, Iraq); Mohammed Shihab Hammed, Sr (University of Anbar' & 'IT Company', Iraq); Khobaib Basim Mohammed, Jr (University of Anabr, Iraq)

[1571177205]

In-Flow Intelligent Sensor for Monitoring the Functionality of Hydraulic Oils

Adriana Mariana Borș (National Institute of Research & Development for Optoelectronics INOE 2000, Subsidiary IHP, Romania); Ana-Maria Iordache (National Institute of Research and Development for Optoelectronics - INOE 2000, Romania); Marian Blejan (INOE2000, Romania); Liliana Dumitrescu (National Institute of Research & Development for Optoelectronics INOE 2000, IHP, Romania); Alina Iolanda Popescu (National Institute of Research & Development for Optoelectronics INOE 2000, Subs, Romania)

[1571177494]

 A Hybrid Artificial Intelligence Model for Cyberattack Application: Phishing Detection

Musadaq Hadi (IQ-CERT, University of Technology, Iraq); Reham Saeed (University of Technology, Iraq); Mays AL-Bayati (University of Information Technology and Communications, Iraq); Abdulhakeem Qusay Albayati (Al-Iraqia University, Iraq)

[1571184259]

Artificial Intelligence to Preserve Teacher Expertise: A Virtual Teacher ChatBot Support System for Newly Qualified English Language Teachers

Luke Topham (Liverpool John Moores University, United Kingdom (Great Britain)); Wasiq Khan (Liverpool John Moores University, United Kingdom (Great Britain)); Peter Atherton (Liverpool John Moores University, United Kingdom (Great Britain)); Iftikhar Khan (Liverpool John Moores University, United Kingdom (Great Britain)); Tom Reynolds (Eden Fifty One, United Kingdom (Great Britain))

[1571199663]

Shahad Mohammed (University of Anbar, Iraq); • Khalid Shaker (University of Anbar, Iraq))

[1571184889]

Tactical Analysis and Opponent Strategy Prediction for Middlesbrough FC Using Machine Learning and Business Intelligence

Samson Ijogho (Teesside University, United Kingdom (Great Britain)); Sumaia Elkazza (Teesside University, United Kingdom (Great Britain)); Hiba Alsmadi, University (Teesside University, United Kingdom (Great Britain)); Ala Al Kafri (Teesside University, United Kingdom (Great Britain)); Michael Lawson (Middlesbrough FC, United Kingdom (Great Britain))

[1571199750]

 Financial Fraud Detection Using Machine Learning Models

Anita Ukwu (Teesside University, United Kingdom (Great Britain)); Shatha Rashed Ghareeb (Teesside University, United Kingdom (Great Britain)); Jamila Mustafina (Kazan Federal University, Russia)

[1571199819]

 Blockchain-Based Authentication System for Pharmaceutical Product Verification

Benson A Okpara (Teesside University, United Kingdom (Great Britain)); Zia Ush Shamszaman (Teesside University, United Kingdom (Great Britain)); Shatha Rashed Ghareeb (Teesside University, United Kingdom (Great Britain)); Jamila Mustafina (Kazan Federal University, Russia

[1571199831]

TECHNICAL PROGRAM-Wednesday, 12[™] November 2025

Parallel session 13: e-System Engineering (Main Track)

 Human Activity Recognition Using Machine Learning Techniques

Bolarinwa Oluwaferanmi Olayinka (Teesside University, United Kingdom (Great Britain)); Sumaia Elkazza (Teesside University, United Kingdom (Great Britain)); Mansha Nawaz (Teesside University, United Kingdom (Great Britain)); Ndidi Bianca Ogbo (Teesside University, United Kingdom (Great Britain)); Shatha Rashed Ghareeb (Teesside University, United Kingdom (Great Britain)); Jamila Mustafina (Kazan Federal University, Russia))

[1571199842]

 Bank Customer Churn Prediction: A Machine Learning Approach

Kathryn Bussey (Teesside University, United Kingdom (Great Britain)); Shatha Rashed Ghareeb (Teesside University, United Kingdom (Great Britain)); Jamila Mustafina (Kazan Federal University, Russia)

[1571199854]

 Firm Size, Risk-Taking and Firm Performance: A Machine Learning Approach Using FTSE 100 Firms

Priscilla Layomi Ayegbusi (Teesside University, United Kingdom (Great Britain)); Shatha Rashed Ghareeb (Teesside University, United Kingdom

Parallel session 14: Intelligent system Applications with Biomedical Engineering and Artificial limb Manufacturing

 Design a Home Nursing Robot for Senior People
 Safa A. Albarwary (Tishk International University, Iraq); Rand Basil Mohammed (Tishk International University, Iraq)

[1571193470]

A Hybrid Sliding Mode Control Approach for Enhancing Human-Robot Interaction

Yousif Ismail Al Mashhadany (University of Anbar, Iraq); Sameer Algburi (Al-Kitab University, Iraq); Kasim Mousa Al-Aubidy (Tishk International University & Director, Al Research Center, Iraq)

[1571200042]

Mathematical Modelling, Acquisition, and Preprocessing of Core Biosignals (EEG, EOG, ECG, EMG) for Smart Healthcare Applications

Yousif Ismail Al Mashhadany (University of Anbar, Iraq); Zainab Najeeb Abdulhameed (University of Anbar, Iraq); Tariq Mohammed Salman (Mustansiriyah University & College of Engineering, Iraq)

[1571201428]

Explainable AI for Chest X-Rays: Combining Grad-CAM and LLMs for Improved Diagnosis

Ayodele Kolawole (Teesside University, United Kingdom (Great Britain)); Ndidi Bianca Ogbo (Teesside University, United Kingdom (Great

(Great Britain)); Jamila Mustafina (Kazan Federal University, Russia)

[1571199860]

 Optimizing Task Allocation in IT Project Management Using Cooperative Game Theory: A Shapley Value Approach

Omid Garmsirinejad (Teesside University, United Kingdom (Great Britain)); Shatha Rashed Ghareeb (Teesside University, United Kingdom (Great Britain)); Jamila Mustafina (Kazan Federal University, Russia)

[1571199861]

 Arrhythmia Recognition Algorithm Using Squared Krawtchouk-Tchebichef Polynomial-Based Feature Extraction

Ammar Al-Zubaidi (University of Baghdad, Iraq); Raafat Salih Muhammad (University of Baghdad, Iraq); Hayder Saadi Radeaf (University of Baghdad, Iraq); Basheera M. Mahmmod (University of Baghdad & College of Engineering, Iraq); Sadiq H. Abdulhussain (University of Baghdad, Iraq); Muntadher Alsabah (Al-Farahidi University, Iraq); Abir Jaafar Hussain (University of Sharjah, United Arab Emirates)

[11571200182]

 A Real-Time Object Detection and Navigation System for Visually Impaired Individuals

Giritharan Paramasivan (Teesside University, United Kingdom (Great Britain)); Muhammad Diyan (Teesside University, United Kingdom (Great Britain)); Ikram Asghar (Teesside University, United Kingdom (Great Britain)); Shatha Rashed Ghareeb (Teesside University, United Kingdom (Great Britain)); Jamila Mustafina (Kazan Federal University, Russia)

[1571201165]

 Challenges and Solutions for Integrating Modern Authentication Methods in Legacy Systems

Adedayo Jalil Bello (Teesside University, United Kingdom (Great Britain)); Muhammad Diyan (Teesside University, United Kingdom (Great Britain)); Ikram Asghar (Teesside University, United Kingdom (Great Britain)); Shatha Rashed Ghareeb (Teesside University, United Kingdom (Great Britain)); Jamila Mustafina (Kazan Federal University, Russia)

[1571201538]

Parallel session 15: Al and its Applications in Healthcare

Investigation of Tracking Performance for Par-4
 Delta Parallel Robot with Nature-Inspired
 Optimizations of Fuzzy-PID Controller

Shaymaa Mahdi (University of Technology & Collage of Artificial Intelligence Engineering, Iraq); Ahmed Ibraheem Abdulkareem (University of Technology, Iraq); Amjad Humaidi (University of Technology & Collage of Artificial Intelligent Engineering, Iraq); Ammar K. Al Mhdawi (De Montfort University, United Kingdom (Great Britain))

[1571202965]

Britain)); Mansha Nawaz (Teesside University, United Kingdom (Great Britain)); Shatha Rashed Ghareeb (Teesside University, United Kingdom (Great Britain)); Jamila Mustafina (Kazan Federal University, Russia)

[1571201544]

The Preference Decision Analysis on Biomedical and Food Cell Preservation Techniques

Natacha Usanase (Near East University, Cyprus); Dilber Uzun Ozsahin (University of Sharjah, Sharjah, UAE & Near East University, Nicosia, North Cyprus, United Arab Emirates); Abir Jaafar Hussain (University of Sharjah, United Arab Emirates); Ilker Ozsahin (Near East University, Turkey); Berna Uzun (Near East University, Cyprus)

[1571202923]

Deep Learning Framework for Melanoma Subtype Classification from mRNA Expression Profiles

Abdulaziz Abdullatif Mohammad Abdullatif (University of Sharjah, United Arab Emirates); Ali Bou Nassif (University of Sharjah, United Arab Emirates); Bassel Al Homsi (University of Sharjah, United Arab Emirates)

[1571203058]

Developing Assistive Control Systems for Artificial Hands Using Brain-Computer Interface Mahdi Rashedi (Liverpool John Moores University & GALLIFORD TRY, United Kingdom (Great Britain)); Hoshang Kolivand (Dep CS LJMU, United Kingdom (Great Britain)); Omar Aldhaibani (Liverpool John Moores University, United Kingdom (Great Britain)); Yousefi Fares (Liverpool John Moores University, United Kingdom (Great Britain)); Karl O. Jones (Liverpool John Moores University, United Kingdom (Great Britain))

[1571203599]

Parallel session 16: Al and its Applications in Healthcare

Personalised Federated Learning at Scale:
Hierarchical Boosting with Bayesian Fusion

Sandeep Ghosh (University of Lincoln, United Kingdom (Great Britain)); Mohammed Al-khafajiy (University of Lincoln, United Kingdom (Great Britain)); Saeid Pourroostaei Ardakani (University of Lincoln, United Kingdom (Great Britain)); Thar Baker (University of Khorfakkan, United Arab Emirates)

[1571205968]

Enhancing the Performance of a Servo Hydraulic System with Five Effective Nature-Inspired Optimizations for PID Controllers

Shakir Mahmood Mahdi (University of Technology, Iraq); Idrees A. Zahid (University of Technology, Iraq); Amjad Humaidi (University of Technology & Collage of Artificial Intelligent Engineering, Iraq)

[1571202998]

Design and Comparative Study of Extended State Observers for Magnetic Levitation System

Ahmed Rashid (Middle Technical University & Electrical Engineering Technical College, Iraq); Luay Thamir (University of Technology, Iraq); Mustafa K. Khashan (University of Technology-Iraq, Iraq); Israa R. Shareef (University of Technology-Iraq, Iraq); Huthaifa AL-Khazraji (University of Technology - Iraq, Iraq); Shakir Mahmood Mahdi (University of Technology, Iraq); Shaymaa Mahdi (University of Technology & Collage of Artificial Intelligence Engineering, Iraq); Rawnaq A. Mahmod (University of Technology-Iraq, Iraq); Amjad Humaidi (University of Technology & Collage of Artificial Intelligent Engineering, Iraq)

[1571203002]

The Impact of Question Formulation on Student Performance in Online Assessments

Nouha Khouili (LATIS & ISITCOM, Tunisia); Jihen Khalfallah (LATIS, Tunisia); Jaleleddine Ben Hadj Slama (LATIS/ENISo- University of Sousse & National Engineering School of Sousse, Tunisia)

[1571203135]

• BMS-Based Fuzzy Logic Controller Design

Anwar Hameed (Middle Technical University, Iraq); Ayad Qasim Al-dujaili (Middle Technical University, Iraq); Amjad Humaidi (University of Technology & Collage of Artificial Intelligent Engineering, Iraq); Shaymaa Mahdi (University of Technology & Collage of Artificial Intelligence Engineering, Iraq); Firas A. Raheem (University of Technology - Iraq & Control and Systems Engineering, Automation and Robotics Research Unit, Iraq); Israa Abdulameer Abdul jabbar (University of Technology, Iraq); Shakir Mahmood Mahdi (University of Technology, Iraq)

[1571072622]

Real-Time Low-Cost Automatic Collision Detection with Owner Notification for Parked Vehicles

Sam Ansari (University of Sharjah, United Arab Emirates); Antanios Kaissar (University of Sharjah, United Arab Emirates); Soliman Mahmoud (University of Sharjah, United Arab Emirates); Khawla Alnajjar (University of Sharjah, United Arab Emirates); Eqab Almajali (University of Sharjah, United Arab Emirates); Anwar Hasan Jarndal (United Arab Emirates); Anwar Hasan Jarndal (United Arab Emirates); Ali Bou Nassif (University of Sharjah, United Arab Emirates); Yousef M. Ali (University of Sharjah, United Arab Emirates); Abir Jaafar Hussain (University of Sharjah, United Arab Emirates)

[11571204796]

Mathematics Commitment Among Secondary School Students in the UK: Cultural and Demographic Technological Perspectives

Marzieh Moradi (Kings Leadership Academy Liverpool, United Kingdom (Great Britain)); Stephen Bodman (Kings Leadership Academy Liverpool, United Kingdom (Great Britain))

[1571208756]

Intelligent Software System for Low-Cost, Brightfield Segmentation: Algorithmic Implementation for Cytometric Auto-Analysis Surajit Das (ITMO University, Russia); Pavel Zun (ITMO University, Russia)

[1571212357]

Semi-Supervised Learning-Based Genetic Biomarkers Dataset for Multiple-Stage Hepatocellular Carcinoma Prediction

Ahmed Ammar Kubba (University of Sharjah, United Arab Emirates); Manar Abu Talib (University of Sharjah, United Arab Emirates); Jibran Sualeh Muhammad (University of Birmingham, United Kingdom (Great Britain)); Ali Bou Nassif (University of Sharjah, United Arab Emirates); Abdalla Sayed Mohamed (University of Sharjah, United Arab Emirates); Darko Castven (University of Lübeck, Germany); Jens U. Marquardt (University of Lübeck, Germany)

[1571204849]

Workshop on AI past, present and future LJMU UpGrad, India

List of posters (in-person)

- Daily variation and spatial gradients of ultrafine particles in Bucharest using mobile monitoring
- Organic Aerosol Classification Using Machine Learning Regression Techniques
- Harmonizing the CAMS data with observational in-situ measurements through dynamic downscaling procedures