





# The 15th International Conference on the Developments in eSystems Engineering









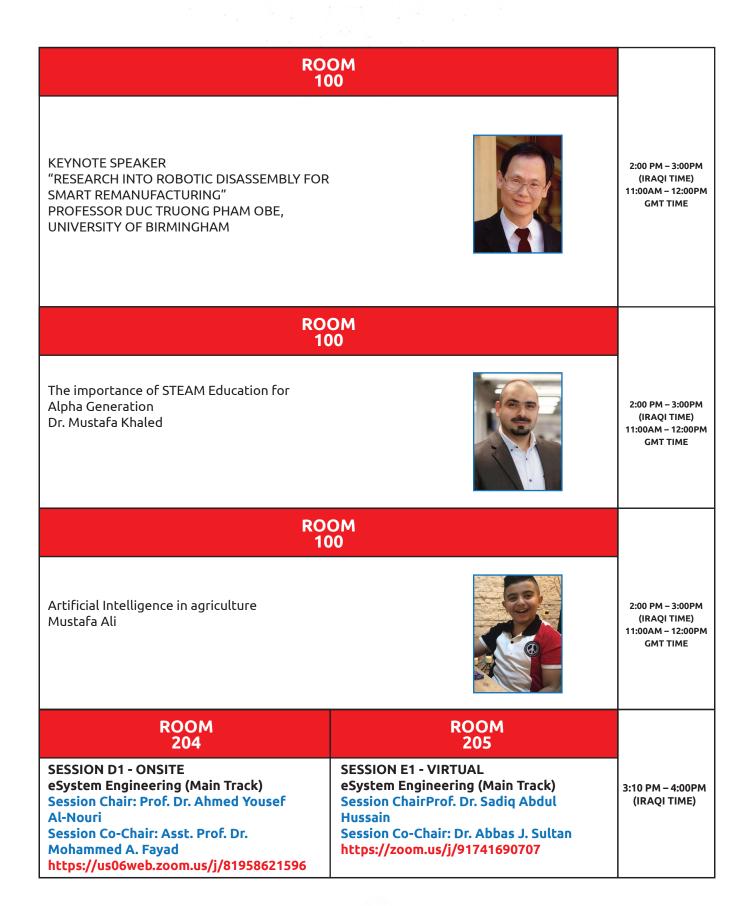




REGISTRATION & COFFEE BREAK TREAT YOURSELF WITH A LOVELY CUP OF TEA OR COFFEE		(IRAQI T	- 7:00AM
CONFERENCE OPENING THIS WILL BE BROADCAST LIVE Link to be included			
THE AMERICAN UNIVERSITY IN BAGHDAD MAIN LECTURE THEATRE I IRAQI NATIONAL ANTHEM QURAN CITATION THE PM OF IRAQ -WELCOME SPEECH MINISTER OF HIGHER EDUCATION- WELCOME SPEECH PROF. DHIYA ALJUMAILI AUIB PRESIDENT- WELCOME SPEECH UNIVERSITY OF ANBAR - WELCOME SPEECH CONFERENCE GENERAL CHAIR PROF. HAIDER DHAHAD KEYNOTE SPEAKER OUR HOSPITALS IN THE POST-COVID ERA: TECHNOLOGICAL" "AND DESIGN IN UNCERTAIN FUTURE PROFESSOR SALMAN RAWAF, IMPERIAL COLLEGE LONDON, UK DEEP LEARNING WITH TENSORFLOW MUSTAFA AHMED		– 11:30AM I TIME)	ROOM
COFFEE BREAK TREAT YOURSELF WITH A LOVELY CUP OF TEA OR COFFEE	11:30 AM – 11:45AM (IRAQI TIME)		

en e			
ROOM 204	ROOM 205		
2279 ESSION CHAIR: PROF. DR. EMAD AL-SHELKIN ESSION CHAIR: ASST. PROF. DR. HUSSAM H. ALI ESSION CO-CHAIR: ASST. PROF. DR. HUSSAM H. ALI ESSION CO-CHAIR: ASST. PROF. DR. HUSSAM H. ALI ITTPS://USOWERE.ZOOM.US/J/82191509234 • "Industrie 4.0" and Smart Manufacturing: A State of the Art Review [1570843921] Ahmed Thamer Hassan (University of Technology, Iraq); Amjad Barzan Abdulghafour (University of Technology, Iraq); Luma Al-kindi (University of Marith Al-Anbiyaa & Al-Nahrain University, Iraq); Israa B Al-mashhadani (AliDNahrain University & College of Engineering, Iraq); Shaimaa Mudhafar Hashim (Al-Nahrain University, Iraq); Kaiser A. Reshak (University of Warith Al-Anbiyaa, Mi Al-Azzawi (American University of Iraq-Baghdad Baghdad, USA); Dhrgam Al Kafaf (American University of Inde Baghdad, Iraq); Moein Enayati (Mayo Clinic, USM) • A Multi-Weapon Detection Using Deep Learning (YOLOV7) [1570873067] Baib Abdullah (Al-Mustansryia, Iraq); Maned Safa Mila Harbi Sauod (Al-Mustansryia, Iraq); Hamed Safa Mila Marbi Sauod (Al-Mustansryia, Iraq); Hamed Safa Mila Austi (Safodad University of Brunel, United Kingdom (Great) Bib Abdullah (Al-Mustansryia, Iraq); Hamed Safa AliRaweshidy (University of Baghdad, Iraq) Audify Multiple Object Detection and Tracking Uniprove the Execution Time [157087200] • Ashad N Razak (University of Technology & UOT, Inag); Hadeel N. Abdullah (University of Technology, Iraq);	SESSION B1 - ONSITE ESYSTEM ENGINEERING (MAIN TRACK) SESSION CO-CHAIR: DR. AWS AL-TAIE HTTPS://ZOOM.US/J/95153654731 Investigation on the Integrated Cloud and BlockChain (ICBC)Technologies to Secure Healthcare Data Management Systems [1570870374] Aymen Badr (University of Diyala, Iraq); Lamia Chaari (University of Computer Science and Multimedia of Sfax & Laboratory of Technologies for Smart Systems at Digital Research Center of Sfax (CRNS), Tunisia); Samiha Ayed (Université Technologique de Troyes, France) • A Hybrid Modified ABC-PSO Algorithm for Optimal Robotic Path Planner [1570870776] Nadia I. Khalil (University of Technology, Iraq); Hadeel N. Abdullah (University of Technology, Iraq); Layth A. Hassnawi (Ministry of Science and Technology, Iraq) • Al-Based Portable Gesture Recognition System for Hearing Impaired People Using Wearable Sensors [1570839009] Noor E. Al-Qaisy (Al-Iraqia University & Sunni Endowment, Iraq); Bilal R. Al-Kaseem (AlShaab University & College of Engineering and Information Technology, Iraq); Yousif AL-Dunainawi (AlShaab University, United Kingdom (Great Britain)) • Proposed Deep Learning System for Arabic Text Detection and Recognition [1570870733] Ghufran Jafar Salman, kareem (University of Al Nahrain, Iraq); • Deep Learning Model for Binary Classification of COVID-19 Based on Chest X-Ray [1570844145] Reham Sabah Saeed (University of Technology, Iraq); • A Hybrid Digital and Optical Double Color Image Encryption Scheme Using a Nine[] Dimensional Chaotic System [1570855894] Rusul A Muttashar (Al-Nahrain University, Iraq);	11:45AM – 1:15PM (IRAQI TIME) 8:45AM – 10:15AM GMT TIME	
	Rusul A Multashar (Al-Nahrain Oniversity, Iraq), Raad Sami Sami Fyath (Al-Jadriya, Iraq & IEEE, USA		

ROOM 206	
SESSION C1 - VIRTUAL ESYSTEM ENGINEERING (MAIN TRACK) SESSION CHAIR: PROF. DR. ALI AL-OTAIBI SESSION CO-CHAIR: ASST. PROF. DR. ALAA ABDULHADY JABER HTTPS://ZOOM.US/J/97922014490	
Impact Analysis of Variation Orders on the Structural Works of a Vertical Structure: Designing a Process to Mitigate the Eventualities of Changes on the Procurement System in the Philippines	
<ul> <li>[1570795851]</li> <li>Keyn Vejerano (Mapua University, Philippines); Laurence Joy Retarino (Mapua University, Philippines); Marian</li> <li>Abergale Tan (Mapua University, Philippines)</li> <li>iCan: Psychological Look in Future Using Augmented Reality Technology [1570811182]</li> </ul>	
Hessam Rastegari (Liverpool John Moores University, United Kingdom (Great Britain)); Hoshang Kolivand (Dep CS LJMU, United Kingdom (Great Britain)); Peter Hawkins (Windmills, United Kingdom (Great Britain)) • Comparison of Machine Learning Algorithms for Classification of Late Onset Alzheimer's	
Disease [1570851788] Abbas Saad Alatrany (Liverpool John Moores University & University of Information Technology and Communications, United Kingdom (Great Britain)); Abir J Hussain (Liverpool John Moores	11:45AM – 1:15PM (IRAQI TIME) 8:45AM – 10:15AM GMT TIME
University, United Kingdom (Great Britain)); Saad S J Alatrany (Imam Ja'afar Al-Sadiq University, Iraq); Jamila Mustafina (Kazan Federal University, Russia); Dhiya Al-Jumeily (Liverpool John Moores University, United Kingdom (Great Britain)) • Advanced Optimization Techniques & Its Application in AI-Powered Breast Cancer	
Classification [1570853904] Surajit Das (LJMU, India); Subhodeep Mukherjee (Amazon Development Corporation, India) • An Efficient Approach for Resilience and Reliability Against Cascading Failure[1570855866] Daniel Vistro (Asia Pacific University, Malaysia); Attique Ur Rehman (University of Management and Technology, Pakistan); Zufishan Hameed (Lahore Garrison University, Pakistan)	
• Preliminary Study: Professional Collaboration Application With Project Management Tools [1570856149] Sathiapriya Ramiah (Asia Pacific University of Technology & Innovation, Malaysia)	
LUNCH BREAK	1:15 PM – 2:00PM (IRAQI TIME)



• FSK/PSK Combined Modulation Technique for Communication System [1570821462] Manar Al-Ubaidi (Al-Hikma University College, Iraq) • AD-Hoc Routing Protocols in WSN-WiFi Based IoT in Smart Home [1570856692] Shayma Wail Nourildean (University of Technology, Iraq); Mustafa Dhia Hassib (University of Technology, Iraq); Yousra Abd Mohammed (University of Technology - Iraq, Iraq) • Enhancing Intrusion Prevention in Snort System [1570861939] Sarah Abdulrezzak (University of Baghdad, Iraq); Firas Sabir (University of Baghdad, Iraq) • Inverse Kinematics Optimization for Humanoid Robotic Legs Based on Particle Swarm Optimization [1570861949] Hayder Saadi Radeaf (University of Baghdad, Iraq); Mohammed Zeki Al-Faiz (Al-Nahrain University, Iraq) • Deep Learning-Based Speech

Enhancement Algorithm Using Charlier Transform [1570870926]

Sally Antoin Jerjees (University of Baghdad, Iraq); Hala Jassim Mohammed (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) Hybrid Zero-Knowledge Access Control System in e-Health [1570857076] Intan Farahana Kamsin (Asia Pacific University of Technology & Innovation (APU), Malaysia) • A Complete Log Files Security Solution Using Anomaly Detection and Blockchain Technology [1570857077] Intan Farahana Kamsin (Asia Pacific University of Technology & Innovation (APU), Malaysia) • The Wild Forest Adventure - Implementing Goal-Oriented Action Planning (GOAP) Artificial Intelligence (AI) Behaviour in Open World Game Prototype (TWFA) [1570858428] Siti Azreena Mubin (Asia Pacific University of Technology & Innovation (APU), Malaysia) An Intelligent Routing Approach for Multimedia Traffic Transmission Over SDN [1570860999] Mohammed Al Jameel (University of Northampton, United Kingdom (Great Britain)); Triantafyllos Kanakis (University of Northampton, United Kingdom (Great Britain)); Scott Turner (Canterbury Christ Church University, United Kingdom (Great Britain)); Ali Al-Sherbaz (The University of Gloucestershire & School of Computing and Engineering, United Kingdom (Great Britain)); Wesam S Bhaya (University of Babylon & IT College, Irag); Mohammed Al-khafajiy (University of Lincoln, United Kingdom (Great Britain)) • Dezvent - Digitalizing Attendance System With 2FA and Face Recognition Implementation [1570861760] Julia Juremi (Asia Pacific University of Technology & Innovation, Malaysia) • A Comparative Time Series Analysis of the Different Categories of Items Based on Holidays and Other Events [1570862074] Shatha Ghareeb (Liverpool John Moores University, United Kingdom (Great Britain)); Mohamed Mahyoub (Tutor Reach & Tutor Reach Ltd, United Kingdom (Great Britain)); Jamila Mustafina (Kazan Federal University, Russia)

ROOM 206			
SESSION F1 – VIRTUAL Sensor Technologies for Civil Engineering Applications Session Chair: Prof. Dr. Ahmed Kaki Session Co-Chair: Dr. Laith S. Sabri https://zoom.us/j/94962562632			
• Optimal Sensor Placement Strategy for Structural Health Monitoring With Application of the Aqueduct El Hnaya of Carthage [1570871510] Wael Doghri (CRNS, Tunisia); Ahlem Saddoud (Centre de Recherche en Numérique de Sfax, Tunisia); Lamia Chaari			
<ul> <li>(University of Computer Science and Multimedia of Sfax &amp; Laboratory of Technologies for Smart Systems at Digital</li> <li>Research Center of Sfax (CRNS), Tunisia)</li> <li>Recommendations for Developing an Affordable IoT Based Flood Monitoring and Early Warning System [1570871967]</li> <li>Krishan Sivasankaran Pillay (Asia Pacific University of Technology and Innovation, Malaysia); Kamalanathan Shanmugam (Asia Pacific University of Technology &amp; Innovation (APU), Malaysia); Muhammad Ehsan Rana (Asia</li> <li>Pacific University of Technology and Innovation, Malaysia)</li> <li>Smart and Secure Big Data Technologies With Apache Hadoop and Apache Spark [1570846398]</li> <li>Sundresan Peru Mal, dotor (Universiti Sains Islam Malaysia, Malaysia)</li> <li>Design and Implementation of Algorithmic Stock Trading [1570857409]</li> <li>Sahar Al-Sudani (Singapore Institute of Technology, Singapore); Dhiya Al-Jumeily (Liverpool John Moores University, United Kingdom (Great Britain))</li> </ul>			
COFFEE BREAK4:00 AM - 4:20ANTREAT YOURSELF WITH A LOVELY CUP OF TEA OR COFFEE(IRAQI TIME)			
ROOM 204	ROOM 205		
SESSION G1 - VIRTUAL eSystem Engineering (Main Track) Session Chair: Dr. Khawla Salah Khashan Session Co-Chair: Dr. Zeyad Qasim Habeeb https://us06web.zoom.us/j/81688613296	SESSION H1 - VIRTUAL Intelligent Engineering Applications and Applied Sciences Session Chair: Prof. Dr. Qusay F. Alsalhy Session Co-Chair: Dr. Thaer Al-Jadir https://zoom.us/j/99625289819		4:20 PM – 5:30PM (IRAQI TIME)

• Utility of GAN Synthetic Data for Class Balancing and Low Resource Setting on Highly Imbalanced Data [1570862468] Mohamed Mahyoub (Tutor Reach & Tutor Reach Ltd, United Kingdom (Great Britain)); Ali Al-Ataby (University of Liverpool, United Kingdom (Great Britain)); Manoj Jayabalan (Liverpool John Moores University, United Kingdom (Great Britain)); Jamila Mustafina (Kazan Federal University, Russia); Abir Hussain (University of Sharjah, United Arab Emirates)

• Automated Plant Disease Diagnosis in Apple Trees Based on Supervised Machine Learning Model [1570862833] Mohamed Mahyoub (Tutor Reach & Tutor Reach Ltd, United Kingdom (Great Britain)); Yog Upadhyay (Liverpool John Moores University, United Kingdom (Great Britain)); Ali Al-Ataby (University of Liverpool,

United Kingdom (Great Britain)); Jamila Mustafina (Kazan Federal University, Russia) • AIRBNB Price Prediction Using Machine

Learning [1570862838]

Mohamed Mahyoub (Tutor Reach & Tutor Reach Ltd, United Kingdom (Great Britain)); Ali Al-Ataby (University of Liverpool, United Kingdom (Great Britain)); Jamila Mustafina (Kazan Federal University, Russia); Yog Upadhyay (Liverpool John Moores University, United Kingdom (Great Britain)) • Abstract Pattern Image Generation Using Generative Adversarial Networks [1570862863]

Mohamed Mahyoub (Tutor Reach & Tutor Reach Ltd, United Kingdom (Great Britain)); Friska Natalia (Universitas Multimedia Nusantara, Indonesia); Sud Sudirman (Liverpool John Moores University, United Kingdom (Great Britain)); Sadiq H. Abdulhussain (University of Baghdad, Iraq); Basheera M. Mahmmod (University of Baghdad & College of Engineering, Iraq) • Analysis of Feature Selection and Phishing

• Analysis of Feature Selection and Phishing Website Classification Using Machine Learning [1570862400]

Shatha Ghareeb (Liverpool John Moores University, United Kingdom (Great Britain)); Mohamed Mahyoub (Tutor Reach & Tutor Reach Ltd, United Kingdom (Great Britain)); Jamila Mustafina (Kazan Federal University, Russia)

• Sign Language Recognition Using Deep Learning [1570862444] Mohamed Mahyoub (Tutor Reach & Tutor Reach

Ltd, United Kingdom (Great Britain)); Friska Natalia (Universitas Multimedia Nusantara, Indonesia); Sud Sudirman (Liverpool John Moores University, United Kingdom (Great Britain)); Jamila Mustafina (Kazan Federal University, Russia) SER - A Robotic Simulation Framework for Evolutionary Algorithms [1570856162] Kim Keong Lee (Asia Pacific University of Technology and Innovation, Malaysia)
The Acceptance and Readiness of Micro<sup>®</sup>Credentials and Its Barriers in the Tech<sup>®</sup>Related Job Market in Malaysia

#### [1570857069]

Intan Farahana Kamsin (Asia Pacific University of Technology and Innovation. Malaysia) Identifying a Student as a Subject of Educational Activity: Methodology and Web-Based Application [1570866998] Natalya Chernova (Kazan Federal University, Russia); Raisa Akhunzianova (Naberezhnye Chelny State Pedagogical University, Russia); Abbas Saad Alatrany (Liverpool John Moores University & University of Information Technology and Communications, United Kingdom (Great Britain)); Jamila Mustafina (Kazan Federal University, Russia) • Predicting the Effectiveness of 'stop and Search' Police Interventions Using Advanced Data Analytics [1570869456] Marimbire Bradley (Liverpool John Moores University, United Kingdom (Great Britain)); Dhiya Al-Jumeily (Liverpool John Moores University, United Kingdom (Great Britain)): Ala Al Kafri (Teesside University, United Kingdom (Great Britain)); Waris khan Ahmadzai (Pennington Choices, United Kingdom (Great Britain)); Wasiq Khan (Liverpool John Moores University, United Kingdom (Great Britain)) Study on Communicative Robots Assisting

• Study on Communicative Robots Assisting Elderly [1570871543] Samar Taleb (ISIMS, Tunisia); Lamia Chaari

(University of Computer Science and Multimedia of Sfax & Laboratory of Technologies for Smart Systems at Digital Research Center of Sfax (CRNS), Tunisia); Mohamed Fourati (Institut supérieur d'informatique et multimédia de sfax, Tunisia)

#### **SESSION I1 - VIRTUAL**

#### Recent Trends in IoT, AI and Multidisciplinary Applications Session Chair: Prof. Dr. Mohammed Yousif Fattah Session Co-Chair: Dr. Hasanain Adnan Abdul Wahhab https://zoom.us/j/99490574796

• A Case Study on Employee Attrition and Performance Using Automated Machine Learning [1570856153]

Hema Latha Krishna Nair (Asia Pacific University of Technology and Innovation, Malaysia)

• Architectural Design and Recommendations for a Smart Wearable Device for Women's Safety [1570856393]

Manahil Manahil (Asia Pacific University of Technology and Innovation, Malaysia); Raed Abdulla (Asia Pacific

University of Technology & Innovation, Malaysia); Muhammad Ehsan Rana (Asia Pacific University of Technology

and Innovation, Malaysia)

• Early Prediction of COVID-19 Infection With IoT and Machine Learning [1570856394] Chow Man Pan (Asia Pacific University of Technology and Innovation, Malaysia); Kamalanathan Shanmugam (Asia

Pacific University of Technology & Innovation (APU), Malaysia); Muhammad Ehsan Rana (Asia Pacific University of

Technology and Innovation, Malaysia); Manoj Jayabalan (Liverpool John Moores University, United Kingdom (Great

Britain))

• Smart Entrance in Public Places During COVID-19 [1570856402]

Moo Chi Yuen (Asia Pacific University of Technology and Innovation, Malaysia); Kamalanathan Shanmugam (Asia

Pacific University of Technology & Innovation (APU), Malaysia); Muhammad Ehsan Rana (Asia Pacific University of

Technology and Innovation, Malaysia); Raed Abdulla (Asia Pacific University of Technology & Innovation, Malaysia)

• Automated Face Mask Detection Using Artificial Intelligence and Video Management Systems [1570856405]

Muhammad Ehsan Rana (Asia Pacific University of Technology and Innovation, Malaysia)

#### END OF FIRST DAY

#### DeSE 2022 Programme DAY 2 – TUESDAY, 10TH JANUARY 2023

ROOM 100	
INVITED SPEAKER "AGRICULTURE & AI" DR MOHAMED MAHYOUB LIVERPOOL JOHN MOORES UNIVERSITY, UK	9:00 am – 10:30am (Iraqi Time)
INVITED INDUSTRIAL SPEAKER "HEPTRON INTERNATIONAL FLYWHEEL STORAGE TECHNOLOGY – THE SOLUTIONS TO ACCELERATE THE PATH TO NET ZERO ON A GLOBAL BASIS" MR TAWHID ISLAM MANAGING DIRECTOR & CO CHARTERED ACCOUNTANTS, UK (RECORDED VIDEO AND LINK) THIS WILL BE BROADCAST LIVE	
COFFEE BREAK& NETWORKING TREAT YOURSELF WITH A LOVELY CUP OF TEA OR COFFEE	10:30 am – 10:50am (Iraqi Time)
ROOM 100	
AI FOR EVERYTHING PROF. HAMED AL-RAWESHIDY, BRUNEL UNIVERSITY, UK	10:50 am – 12:50pm (Iraqi Time)
<ul> <li>PANEL MEMBERS:</li> <li>DR HAIDER QAYS SAEED AL-SHAMMARI, GLOBAL TEK, IRAQ</li> <li>DR OMAR Z. AKIF, BAGHDAD UNIVERSITY, IRAQ</li> <li>YOUSIF AL-DUNAINAWI, ALSHAAB UNIVERSITY, IRAQ</li> <li>HALAH MOHAMMED HUSSEIN AL-KADHIM, MINISTRY OF EDUCATION, IRAQ.</li> <li>PROF. DR. NADIA ADNAN SHILTAGH, BAGHDAD UNIVERSITY, IRAQ</li> <li>ASST. PROF. DR. BILAL RASHEED, COMPUTER ENGINEERING DEPARTMENT, IRAQ</li> <li>COLLEGE OF ENGINEERING / AL-IRAQIA UNIVERSITY, IRAQ.</li> <li>THIS PANEL WILL DISCUSS DIFFERENT APPLICATIONS USING AI, SUCH AS:</li> <li>THE ENHANCEMENT OF CYBER SECURITY THROUGH THE UTILISATION OF</li> </ul>	LUNCH BREAK 1:00 pm – 2:00pm (Iraqi Time)
ARTIFICIAL INTELLIGENCE TECHNIQUES. • IOT AND INTELLIGENT APPLICATIONS FOR A HYBRID WORKING WORLD. • ULTRA-SMART TRAFFIC FLOW CONTROL USING AI IN CLOUD BASED IOT. • AI TECHNOLOGIES FOR EDUCATION: RECENT APPLICATIONS. • ARTIFICIAL INTELLIGENCE, A CONTEMPORARY APPROACH. • RENEWABLE ENERGY USING AI.	END OF SECOND DAY

REGISTRATION COFFEE & NETWORKING (8:00AM-9:00AM)		
ROOI	м 100	
AI for Speech and Audio Professor & Cluster Director ICT Cluster, Singapore Institute of Techno Singapore Get in touch at ian.mcloughlin@singapore		9:00 am – 10:30am (Iraqi Time)
INVITED SPEAKER "THE FUTURE OF ARTIFICIAL INTELLIGE! DR MANOJ JAYABALAN LIVERPOOL JOHN MOORES UNIVERSITY		
COFFEE BREAK & NETWORKIN TREAT YOURSELF WITH A LOV	IG 'ELY CUP OF TEA OR COFFEE	10:30 am – 10:50am (Iraqi Time
ROOM 206		
SESSION A3 - VIRTUAL Emerging Technology Trends in Computing and Sustainable Engineering Session Chair: Prof. Dr. Khaled al-Khalidi Session Co-Chair: Asst. Prof. Dr. Ayad Mahmoud Al Jubori ZoomLink- https://us06web.zoom.us/j/88142145389 • CNN Aided Surface Inspection for SMT Manufacturing [1570856158] Mee Chun Loo (Asia Pacific University of Technology and Innovation, Malaysia); Rajasvaran Logeswaran (Asia Pacific University of Technology & Innovation (APU), Malaysia); Zailan Arabee Abdul Salam (Asia Pacific University of Technology & Innovation, Malaysia) • COVID QA Network: A Specific Case of Biomedical Question Answering [1570860616] Amar Kumar (Microsoft India & Liverpool John Moores University, India); Rupal Bhargava (UpGrad Education Pvt. Ltd., India); Manoj Jayabalan (Liverpool John Moores University, United Kingdom (Great Britain))	<ul> <li>Using Simulation for Investigating</li> <li>Emergency Traffic Situations</li> <li>[1570861628]</li> <li>Irina Makarova (Kazan Federal University,</li> <li>Russia); Gulnara Yakupova (Kazan Federal</li> <li>University, Russia); Polina Buyvol (Kazan</li> <li>Federal University, Russia); Eduard</li> <li>Mukhametdinov (Kazan Federal</li> <li>University, Russia); Albert Abashev (Kazan</li> <li>State Energy University, Russia); Jamila</li> <li>Mustafina (Kazan Federal University,</li> <li>Russia)</li> <li>Improvement of the Personnel</li> <li>Delivery System in the Mining</li> <li>Complex Using Simulation Models</li> <li>[1570866304]</li> <li>Irina Makarova (Kazan Federal University,</li> <li>Russia); Gulnaz Mavlyautdinova (Kazan</li> <li>Federal University, Russia); Vadim</li> <li>Mavrin (Kazan Federal University, Russia);</li> <li>Polina Buyvol (Kazan Federal University,</li> <li>Russia); Abbas Saad Alatrany (Liverpool</li> <li>John Moores University &amp; University of</li> <li>Information Technology and</li> <li>Communications, United Kingdom (Great</li> <li>Britain)); Jamila Mustafina (Kazan Federal</li> <li>University, Russia)</li> </ul>	10:50 am – 12:30pm (Iraqi Time)

**SESSION C3 - VIRTUAL** 

Medicine

Al-Khdheeawi

#### **ROOM 205**

#### **ROOM 204**

Advances in AI and ML for Healthcare and

Session Chair: Prof. Dr. Adawiya J.Haider

Session Co-Chair: Asst. Prof. Dr. Emad A.

**SESSION B3 - VIRTUAL Disruptions in Computer Aided Diagnosis: A Deep Learning Perspective** Session Chair: Prof. Dr. Ahmed Sabah Al-Araji Session Co-Chair: Dr. Laith Ayad Salman https://zoom.us/j/96842544430 • Prediction of Component Level Degradation in a Hydraulic Rig Using Machine Learning Methods [1570837175] Shyamala Rajasekar (India) • Deep Audio Embeddings and Attention Based Music Emotion Recognition [1570844822] Sparsh Gupta (Liverpool John Moores University, India) • COVID-LiteNet: A Lightweight CNN Based Network for COVID[]19 Detection Using X-Ray Images [1570852300] Aditya Yadav (Liverpool John Moores University, India) • Transformer Based Approach for Depression Detection [1570869000] Anagha Khaparde (Liverpool John Moores University, India); Rik Das (Association of Computing Machinery, India); Rupal Bhargava (UpGrad Education Pvt. Ltd., India) • Vision-Based Fatigue Detection in Drivers Using Multi-Facial Feature Fusion [1570871041] Sancharee Das (Liverpool John Moores University, India); Rupal Bhargava (UpGrad Education Pvt. Ltd., India) • An Exploratory Study on the Impact of Hosting Blockchain Applications in Cloud Infrastructures [1570871983] Ter Hui Chee (Asia Pacific University of Technology and Innovation. Malavsia): Muhammad Ehsan Rana (Asia Pacific University of Technology and Innovation, Malaysia)

https://zoom.us/j/96757886865 • Identification of Authentic and Counterfeit Viagra Tablets Using Near-Infrared Spectroscopic Methods and Machine Learning Algorithms [1570862065] Sarah Rowlands (Liverpool John Moores University, United Kingdom (Great Britain)); Dhiya AllJumeily (Liverpool John Moores University, United Kingdom (Great Britain)); Sulaf Assi (Liverpool John Moores University, United Kingdom (Great Britain)) • Evaluation of Palm-Sized Near-Infrared Spectroscopy and Machine Learning Analytics for the Detection of Endogenous Constituents and Drugs in Human Fingernails [1570863306] Megan Wilson (Liverpool John Moores University, United Kingdom (Great Britain)); Dhiya AllJumeily 10:50 am – 12:30pm (Liverpool John Moores University, United Kingdom (Great Britain)); Ismail Abbas (Lebanese University, Lebanon); Jason Birkett (Liverpool John Moores University, United Kingdom (Great Britain)); Iftikhar Khan (Liverpool John Moores University, United Kingdom (Great Britain)); Leung Tang (Agilent Technology, United Kingdom (Great Britain)); Sulaf Assi (Liverpool John Moores University, United Kingdom (Great Britain)) • Exploring the Authentication of Covid-19 Vaccines Using Surface-Enhanced Handheld Raman Spectroscopy (SERS) Equipped With Orbital Raster Scattering and Machine Learning [1570863352] Megan Watson (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)); Sulaf Assi (Liverpool John Moores University, United Kingdom (Great Britain))

(Iraqi Time)

• Deep Learning-Based Skin Cancer Identification [1570863805] Abir Hussain (University of Sharjah, United Arab Emirates); Dhiya Al-Jumeily (Liverpool John Moores University, United Kingdom (Great Britain))

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F	OOM 206	
SESSION D3 – FACE TO FACE Workshop & Discussion Relationships Between Academia and Industr SESSION CHAIR: • DR. ZIAD CHAABAN, AUIB, IRAQ PANEL MEMBERS: • DR ALI ATLABY, LIVERPOOL UNIVERSITY, UK • DR EMAD TARIQ, LIVERPOOL HOPE UNIVERSITY, UK • DR MOHAMED MAHYOUB, UK • MR TAWHID ISLAM, LIVERPOOL, UK • MR. MAHMOOD HATEM (MSC), AUIB, IRAQ • MR. MOHANNED AL-KHAFAJI, UOT, IRAQ • DR. HEADER ADIL ABDULHAMEED, UOT, IRAQ	THIS PANEL WILL DISCUSS DIFFERENT ISSUES AND CHALLENGES, SUCH AS: • HOW DO YOU CONNECT INDUSTRY WITH ACADEMIA? • WHAT IS THE BENEFITS OF ACADEMIA AND INDUSTRIAL COLLABORATION? • WHAT IS THE DIFFERENCE BETWEEN ACADEMIA AND INDUSTRY? • WHY DO ACADEMICS ENGAGE WITH INDUSTRY?	10:50 am – 12:30pm (Iraqi Time)
LU	NCH BREAK	12:30 pm – 1:00pm (Iraqi Time)
THE AMERICAN UNIVERSITY IN BAGHDAD MAIN LECTURE THEATRE KEYNOTE SPEAKER (ONLINE) "5G AND BEYOND, GREEN COMMUNICATIONS, MACHINE LEARNING" PROFESSOR IR. DR. ADUWATI SALI, FACULTY OF ENGINEERING UNIVERSITI PUTRA MALAYSIA KEYNOTE SPEAKER (ONLINE) 6G COMMUNICATIONS AND ARTIFICIAL INTELL PROFESSOR DR. VÍCTOR P. GIL JIMÉNEZ, UNIVERSITY CARLOS III DE MADRID, SPAIN	MALAYSIA, UPM,	1:30 pm – 2:30pm (Iraqi Time)
COFFEE BRI	EAK & NETWORKING	2:30 pm – 2:50pm (Iraqi Time)

#### **ROOM 205**

SESSION E3 - VIRTUAL eBusiness, eAccounting and eFinance Session Chair: Prof. Dr. Evan Tareq Salim Session Co-Chair: Asst. Prof. Dr. Mohammed Muayad Taha https://zoom.us/j/93973995427

• Multi-UAVs-Based SDN, IoT, and Cloud Architecture for Hostile Areas Supervision [1570871419] Aicha Idriss Hentati (National Engineering School, University of sfax & Digital Research Center of SFAX (CRNS), TUNISIE, Tunisia); Lamia Chaari (University of Computer Science and Multimedia of Sfax & Laboratory of Technologies for Smart Systems at Digital Research Center of Sfax (CRNS), Tunisia); Lobna Krichen (National School of Engineers of Sfax & Laboratory of Smart Systems Technologies LT2S, Digital Research Center of SFAX, Tunisia) • The Impact of the COVID-19 Pandemic on Retrenchment, Vaccinations, and Global Happiness [1570872004] Sahar Al-Sudani (Singapore Institute of Technology, Singapore); Zhengkui Wang (Singapore Institute of Technology, Singapore) • A Genetic Algorithm Framework to Extract Hidden Trends and Patterns From Financial Data [1570856164] Kim Keong Lee (Asia Pacific University of Technology and Innovation, Malaysia) • A System Implementation: Point[]Of-Sales (POS) System Integrated With Business Intelligence (BI) Capability Focused on SME in Indonesia [1570858433] Khalida Shajaratuddur Harun (Asia Pacific University of Technology & Innovation, Malaysia); Mohammad Namazee Mohd Nizam (Asia Pacific University of Technology & Innovation, Malaysia) • The Role and Potential Applications of Cloud Computing in the Banking Industry [1570871972] Lai Zhen Ji (Asia Pacific University of Technology and Innovation, Malaysia); Muhammad Ehsan Rana (Asia Pacific University of Technology and Innovation, Malaysia)

#### **ROOM 206**

**SESSION F3 - VIRTUAL** Internet of smart things and Big Data managements and mining Session Chair: Prof. Miqdam Tariq Chaichan Session Co-Chair: Dr. Venus Suleiman Akef https://zoom.us/j/93996218462 Improved Traditional Fitness Model by Applying Big Data Analysis [1570856400] Muhammad Ehsan Rana (Asia Pacific University of Technology and Innovation, Malaysia); Lin Yanyu (Asia Pacific University of Technology and Innovation, Malaysia); Nowshath Kadhar Batcha (Taylors University, Malaysia) • Camel Detection and Monitoring Using Image Processing and IoT [1570858758] Dhiya Al-Jumeily (Liverpool John Moores University, United Kingdom (Great Britain)); Abir Hussain (University of Sharjah, United Arab Emirates) • BEsafe - Validating URLs and Domains With the Aid of Indicator of Compromise [1570861750] Julia Juremi (Asia Pacific University of Technology & Innovation, Malaysia) • Towards Building a System for Predicting Diabetes and Related Conditions Using Machine Learning [1570861757] Sahar Al-Sudani (Singapore Institute of Technology, Singapore); Umesha Selv (Technology Analyst, United Kingdom (Great Britain)) • Low-Distortion MMSE Estimator for Speech Enhancement Based on Hahn Moments [1570862809] Ammar Al-Zubaidi (University of Baghdad, Iraq); Basheera M. Mahmmod (University of Baghdad & College of Engineering, Iraq); Sadiq H. Abdulhussain (University of Baghdad, Iraq); Marwah Abdulrazzaq Alkhafaji (University of Baghdad, Iraq); Abir Hussain (University of Sharjah, United Arab Emirates)

2:50 pm – 4:00pm (Iraqi Time)

### DeSE 2022 Programme DAY 4 – THURSDAY, 12TH JANUARY 2023

REGISTRATION COFFEE & NETWORKING (8:00AM-9:00AM)		
ROC	DM 100	
What the Energy and Aviation industry r (Aviation 4.0 and Renewable Energy) Professor Talal Yusaf Executive Dean – Higher Education and Queensland, Australia and Professor at	Emerging Technologies,	9:00 am – 10:30am (Iraqi Time)
The Role of Artificial Intelligence in Ster Professor Mohammed Al-Jumaily Consultant Neurosurgeon – Spinal Surge Expert in Regenerative Medicine, Cellula for the Spine and the Nervous System.	eon	
	K & NETWORKING OVELY CUP OF TEA OR COFFEE	10:30 am – 10:50am (Iraqi Time
SESSION A4 - ONSITE Intelligent Engineering Applications and Applied Sciences Session Chair – To be confirmed Session Co-Chair – To be confirmed https://us06web.zoom.us/j/86127299390 • Estimation the Design Paramters of Surface Course Asphalt Concrete by Cyclic and Static Loading [1570842217] Hanan Salih (University Of Anbar, Iraq); Talal H. Fadhil (University of Anbar, Iraq); Talal H. Fadhil (University of Anbar, Iraq); Akram S. Mahmoud (University of Anbar & Engineering College, Iraq) • Predicting Strength Criteria of Hardened Concrete Containing Waste Glass Powder [1570842833] Shahad Mahmoud (University Of Anbar, Iraq); Sheelan Hama (University of Anbar, Iraq); Akram S. Mahmoud (University of Anbar, Engineering College, Iraq)	<ul> <li>Data Analytics to Examine the Use of Waste Glass as Coarse Aggregate in Production of Foamed Concrete by Using Image J Software [1570844106] Mayada A. Kareem (University Of Anbar, Iraq)</li> <li>Evaluating Shrinkage and Cracking Behaviour of Recycled Concrete Aggregate Self[]Compacting Concrete Using Image Processing Technique [1570845252] Ghassan A. Hammadi (University of Anbar, Iraq)</li> <li>Optimal Stability of Brushless DC Motor System Based on Multilevel Inverter [1570850050] Yousif Ismail Al Mashhadany (University of Anbar, Iraq); Moneer Lilo (MU, Iraq)</li> <li>Implement of Intelligent Controller for 6DOF Robot Based on a Virtual Reality Model [1570856478] Yousif Ismail Al Mashhadany (University of Anbar, Iraq); Ali Ahmed Alrawi (University of Anbar, Iraq); Ali Ahmed Alrawi (University of Anbar, Iraq, Iraq)</li> </ul>	10:50 am – 12:30pm (Iraqi Time)

#### DeSE 2022 Programme DAY 4 – THURSDAY, 12TH JANUARY 2023

**SESSION C4 - VIRTUAL** 

Session Chair – TBC

eSystem Engineering (Main Track)

SESSION B4 - ONSITE Recent Trends in IoT, AI and Multidisciplinary Applications Session Chair – To be confirmed Session Co-Chair – To be confirmed https://zoom.us/j/92562836447

The Probability of Connectivity in the 2 Way / 2 Lane Platoon-Based V2I Communication Network [1570848674] Ahmed Waleed Khalil Al-Nasir (University of Anbar, Iraq); Foad Salem Mubarek (University of Anbar, Iraq) • Double Dual Convolutional Neural Network (D2CNN) for Copy-Move Forgery Detection [1570854099] Mahmoud H Farhan (University of Anbar, Irag); Khalid Shaker (Anbar University & Collage of Computer Science and IT, Irag); Sufyan Al Janabi (University of Anbar, Irad) • Intelligent Detection System for a Distributed Denial-Of-Service (DDoS) Attack Based on Time Series [1570856965] Mustafa Al-janabi (University of Anba, Iraq); Khattab M. Ali Alheeti (University of Anbar, Iraq); Abdulkareem Alaloosy (University of Anbar, Iraq) • Improving Prediction for Taxi Demand by Using Machine Learning [1570857683] Mustafa Mahmoud Ibrahim (University of Al Anbar, Iraq); Foad Salem Mubarek (University of Anbar, Iraq) • Sentiment Classification of Drug **Reviews Using Machine Learning** Techniques [1570858263] Mohammad Al-Ameen Abdul-Sattar Hameed (University of Anbar, Iraq); Khalid Shaker (Anbar University & Collage of Computer Science and IT, Iraq); Haitham Abbas Khalaf (University of Anbar, Iraq) Design and Implementation a Low-Cost Smart House Automation System Using Bluetooth and Sensor Technology [1570858914] Wasan AbdAlMajeed Alani (University of Anbar, Iraq); Salah A. Aliesawi (University Of Anbar, Iraq)

Session Co-Chair - TBC https://zoom.us/j/93960267811 • Semantic Segmentation and Depth Estimation of Urban Road Scene Images Using Multi-Task Networks [1570863199] Mohamed Mahyoub (Tutor Reach & Tutor Reach Ltd, United Kingdom (Great Britain)); Friska Natalia (Universitas Multimedia Nusantara, Indonesia); Sud Sudirman (Liverpool John Moores University, United Kingdom (Great Britain)); Abdulmajeed Hammadi Jasim Al-Jumaily (Universiti Putra Malaysia UPM & Universidad Carlos III de Madrid, Spain); Panos Liatsis (Khalifa University, United Arab Emirates) • Identify Type of Lung Infection From Lung Patients X-RAY Image LIVERAGING Computer Vision [1570863374] Mohamed Mahyoub (Tutor Reach & Tutor Reach Ltd, United Kingdom (Great Britain)); Thomas Coombs (University Hospital Dorset, United Kingdom (Great Britain)); Sulaf Assi (Liverpool John Moores University, United Kingdom (Great Britain)); Jamila Mustafina (Kazan Federal University, Russia); Panos Liatsis (Khalifa University, United Arab Emirates) • Data Augmentation Using Generative Adversarial Networks to Reduce Data Imbalance With Application in Car Damage Detection [1570863771] Mohamed Mahyoub (Tutor Reach & Tutor Reach Ltd, United Kingdom (Great Britain)); Friska Natalia (Universitas Multimedia Nusantara, Indonesia): Sud Sudirman (Liverpool John Moores University, United Kingdom (Great Britain)); Panos Liatsis (Khalifa University, United Arab Emirates); Abdulmajeed Hammadi Jasim Al-Jumaily (Universiti Putra Malaysia UPM & Universidad Carlos III de Madrid, Spain) Summarization, Segmentation and Authentication of Political News Articles Using Machine Learning [1570863784] Mohamed Mahyoub (Tutor Reach & Tutor Reach Ltd, United Kingdom (Great Britain)); Ali AllAtaby (University of Liverpool, United Kingdom (Great Britain)); Panos Liatsis (Khalifa University, United Arab Emirates) • Brain Tumor Segmentation in Fluid-Attenuated Inversion Recovery Brain MRI Using Residual Network Deep Learning Architectures [1570866193] Mohamed Mahyoub (Tutor Reach & Tutor Reach Ltd, United Kingdom (Great Britain)); Friska Natalia (Universitas Multimedia Nusantara, Indonesia); Sud Sudirman (Liverpool John Moores University, United Kingdom (Great Britain)); Abdulmajeed Hammadi Jasim Al-Jumaily (Universiti Putra Malaysia UPM & Universidad Carlos III de Madrid, Spain); Panos Liatsis (Khalifa University, United Arab Emirates) • A Novel Predictive Model for Housing Loan Default Using Feature Generation and Explainable AI [1570869133] Mohamed Mahyoub (Tutor Reach & Tutor Reach Ltd, United Kingdom (Great Britain)); Shatha Ghareeb (Liverpool John Moores University, United Kingdom (Great Britain)); Jamila Mustafina (Kazan Federal University, Russia)

10:50 am – 12:30pm (Iraqi Time)

LUNCH BREAK

12:30 pm – 1:30pm (Iraqi Time)

#### DeSE 2022 Programme DAY 4 – THURSDAY, 12TH JANUARY 2023

SESSION D4 - ONSITE Recent Trends in IoT, AI and Multidisciplinary Applications Session Chair – To be confirmed Session Co-Chair – To be confirmed https://us06web.zoom.us/j/88059658687

• Intracranial Hemorrhage **Detection and Classification From** CT Images Based on Multiple Features and Machine Learning Approaches [1570859129] Mohamed Abdel Hamed Abdul Majeed (University of Anbar, Irag); Omar Al Okashi (University Of Anbar, Iraq) Enhancing TEEN Protocol Using the Particle Swarm Optimization and BAT Algorithms in Underwater Wireless Sensor Network [1570859311] Ruqayyah D. Jalal (University of Anbar, Iraq); Salah A. Aliesawi (University Of Anbar, Iraq) • Intelligent Detection System for Multi-Step Cyber-Attack Based [1570860953] Khattab M. Ali Alheeti (University of Anbar, Iraq); Abdulkareem Alzahrani (Al Baha University, Saudi Arabia); Omar Hammad Jasim (University of Anbar, Iraq); Duaa Al-Dosary (University of Anbar, Iraq); Hamsa Mohammed Ahmed (University of Anbar, Iraq); Muzhir Al-Ani (University of Human Development, Iraq) • Real-Time Healthcare Monitoring and Treatment System Based Microcontroller With IoT [1570870627] Yousif Ismail Al Mashhadany (University of Anbar, Iraq); Mahmood K. Awsaj (University of Sfax, Tunisia); Lamia Chaari (University of Computer Science and Multimedia of Sfax & Laboratory of Technologies for Smart Systems at Digital Research Center of Sfax (CRNS), Tunisia) • A Tri-Classes Method for Studying the Impact of Nodes and Sinks Number on Received Packets Ratio of MANETs Routing Protocols [1570870925] Hamid Alasadi (IRAQ- BASRA & basra UNIV., Iraq); Huda A. Ahmed (College of Computer Science and Information Technology, Iraq) K-Nearest Neighbor Algorithm for Efficient Heart Disease Classification System [1570871409] Ahmed Subhi Abdalkafor (University of Anbar, Iraq); Khattab M. Ali Alheeti (University of Anbar, Iraq)

#### **SESSION E4 - VIRTUAL**

eSystem Engineering (Main Track) Session Chair – To be confirmed Session Co-Chair – To be confirmed https://zoom.us/j/98051787380

• Lung Infection Identification From Patient's X-Ray Images Using Deep Learning [1570869230] Mohamed Mahyoub (Tutor Reach & Tutor Reach Ltd, United Kingdom (Great Britain)); Ali Al-Ataby (University of Liverpool, United Kingdom (Great Britain)); Sulaf Assi (Liverpool John Moores University, United Kingdom (Great Britain)); Dhiya Al-Jumeily (Liverpool John Moores University, United Kingdom (Great Britain)) Transmission Line Fault Detection by Using Multi-Layer Perceptron [1570870255] Ålrawi Alrawi (eSystem Engineering Society, United Kingdom (Great Britain)); Waris khan Ahmadzai (Pennington Choices, United Kingdom (Great Britain)); Faisal Nawaz (COMSATS University Islamabad, Attock Campus, Pakistan); Mohamed Mahyoub (Tutor Reach & Tutor Reach Ltd, United Kingdom (Great Britain)); Panos Liatsis (Khalifa University, United Arab Emirates) • Audio Abuse Analysis and Prediction Using Artificial Intelligence [1570870256] Alrawi Alrawi (eSystem Engineering Society, United Kingdom (Great Britain)); Waris khan Ahmadzai (Pennington Choices, United Kingdom (Great Britain)); Faisal Nawaz (COMSATS University Islamabad, Attock Campus, Pakistan); Mohamed Mahyoub (Tutor Reach & Tutor Reach Ltd, United Kingdom (Great Britain)); Panos Liatsis (Khalifa University, United Arab Emirates) Arthropods Taxonomy Orders Identification Using Deep Learning Algorithms [1570870257] Alrawi Alrawi (eSystem Engineering Society, United Kingdom (Great Britain)); Parvez K Ahmadzai (Swansea University, United Kingdom (Great Britain)); Mahnoor Khan (Islamic International Medical College Rawalpindi Pakistan, Pakistan); Mohamed Mahyoub (Tutor Reach & Tutor Reach Ltd, United Kingdom (Great Britain)); Panos Liatsis (Khalifa University, United Arab Emirates) A Transfer Learning Based Intrusion Detection System for Internet of Vehicles [1570871265] Achref Haddaji (Digital Research Center of Sfax (CRNS)., Tunisia); Samiha Ayed (Université Technologique de Troyes, France); Lamia Chaari (University of Computer Science and Multimedia of Sfax & Laboratory of Technologies for Smart Systems at Digital Research Center of Sfax (CRNS), Tunisia) BrandTrend: Understanding the Trending Games and Gaming Influencers for Better Gaming Peripheral Promotion [1570872485] Sahar Al-Sudani (Singapore Institute of Technology, Singapore); Ashley Tan Wen Zheng (Singapore Institute of Technology, Singapore)

1:30 pm – 3:30pm (Iraqi Time)

END OF THE CONFERENCE