

CONFERENCE PROGRAM

ICAAI 2022

2022 The 6th International Conference on
Advances in Artificial Intelligence

Workshop

EAIT 2022

2022 The 3rd International Conference on
Education and Artificial Intelligence Technologies



October 21-23, 2022
Birmingham, UK

Co-organized by



BIRMINGHAM CITY
University



www.SCIEI.org



Technically Supported by



Middlesex
University
London



HOGHSCHULE
RHEIN-WAAL
Rhine-Waal University
of Applied Sciences



UNIVERSITÉ
TOULOUSE III
PAUL SABATIER
Université
de Toulouse

Table of Contents

Conference Venue	3
Welcome Address	4
Conference Committees	5
Guideline for Online Conference	7
Program Overview	8
Keynote Speeches	9
Industry Session	14
Onsite Session 1 @ Oct. 22	15
Onsite Session 2 @ Oct. 22	16
Online Session 1 @ Oct. 23	17
Online Session 2 @ Oct. 23	18
Online Session3 @ Oct. 23	19

Conference Venue



Conference Venue:

Millennium Point Building

Faculty of Computing, Engineering and the Built Environment
Birmingham City University
Birmingham
B4 7XG

Direction for registration and conference rooms:

When you enter the **Millennium Point Building**, you will see a lift in front of you. Take the lift to the 4th floor. The rooms (MP491 and MP492) are in front of you when get out of the lift. Just look at your right-hand side.

Onsite Registration (14:00-17:00) on Friday, the 21st of October
Room: **MP491** (on the 4th floor of the Millennium Point Building)

Onsite Registration and Conference on Saturday, the 22nd of October
Room: **MP492** (on the 4th floor of the Millennium Point Building)

Welcome Address

Welcome you all to 2022 The 6th International Conference on Advances in Artificial Intelligence (ICAAI 2022), with workshop of 2022 The 3rd International Conference on Education and Artificial Intelligence Technologies (EAIT 2022), which will be held in Birmingham, UK during October 21-23, 2022. These conferences are co-organized by Birmingham City University, UK, Science and Engineering Institute, USA and Bubo.AI, UK, technically supported by Staffordshire University, UK, QAHE at Northumbria University London Campus, UK, Middlesex University London, UK etc.

After several rounds of review procedure, the program committee accepted those papers to be published in ICAAI 2022 conference proceedings. We wish to express our sincere appreciation to all the individuals who have contributed to ICAAI 2022, EAIT 2022 conferences in various ways. Special thanks are extended to our colleagues in the program committees for their thorough review of all the submissions, which is vital to the success of the conference, and also to the members in the organizing committees who had devoted their time and efforts in planning, promoting, organizing and helping the conference.

This conference program is highlighted by Speakers: Prof. Marios M. Polycarpou (IEEE Fellow, IFAC Fellow), University of Cyprus, Cyprus; Prof. Alice E. Smith (IEEE Fellow), Auburn University, USA; Prof. Xin-She Yang, Middlesex University, UK; Prof. Ljiljana Trajkovic (IEEE Fellow), Simon Fraser University, Canada; Prof. Jianhua Zhang, Oslo Metropolitan University, Norway. They will deliver their speeches and share the latest research with the participants.

One best presentation will be selected from each session, evaluated from: originality; applicability; technical Merit; qualities of PPT; English. The best one will be announced at the end of each session, and we will e-mail you certificate after conference. Hope all of you can keep safe and sound and take care of yourself, we wish to see every one of you face to face in the next year.

Conference Chair
Huseyin Seker
Birmingham City University, UK

Conference Committees

Conference Chair

Huseyin Seker, Birmingham City University, UK

Conference Co-chairs

Jianhua Zhang, Oslo Metropolitan University, Norway

Arshad Jamal, Northumbria University London Campus, UK

Program Chairs

Xin-She Yang, Middlesex University, UK

Michael M. Bronstein, Israel Institute of Technology, Israel

Special Session Chairs

Mak Sharma, Birmingham City University, UK

Ferdi Sarac, Suleyman Demirel University, Turkey

Publicity Chair

Serkan Ayvaz, Bahcesehir University, Turkey

Local Chairs

Ahmet Orun, De Montfort University, UK

Kubra Seker, The Grammar School of King Edward VI at Stratford-upon-Avon, UK

International Technical Committee

Benhur Bakhtiari Bastaki, Staffordshire University, UK

Ryszard Tadeusiewicz, AGH University of Science and Technology, Poland

Adam Cholewa, Silesian University of Technology, Poland

Sarah Ibri, UHBC, Algeria

Mehdi Vafakhah, Tarbiat Modarres University, Iran

Jonah Lissner, Athens Institute for Education & Research

Bouabid El Ouahidi, University Mohammed V, Morocco

Elena-Niculina Dragoi, "Gh. Asachi" Technical University, Romania

Florin Leon, "Gh. Asachi" Technical University, Romania

Kaan UYAR, Near East University, Turkey

Gniewko Niedbała, Poznan University of Life Sciences, Poland

Rozniza Ali, Universiti Malaysia Terengganu, Malaysia

Heru Susanto, Indonesian Institute of Sciences, Indonesia

Mohd Khalid Awang, Universiti Sultan Zainal Abidin, Malaysia

Nouredine Elouazizi, University of British Columbia, Canada

Toshihiro Matsui, Nagoya Institute of Technology, Japan

Abel Angel Sullon Macalupu, Universidad Peruana Unión, Peru

Conference Committees

Nacer Eddine Zarour, University of Constantine 2 - Abdelhamid Mehri, Algeria
Mohammad Tariq Yaseen, University of Mosul, Iraq
Irina Ioniță, Petroleum-Gas University of Ploiesti, Romania
Lu Leng, Nanchang Hangkong University, China
Irene Moulitsas, Cranfield University, UK
Feng Jia, Chang'an University, China
Vaidyanathan Ganesa Sankara, Amazon Web Services, US
Hany Alashwal, United Arab Emirates University, United Arab Emirates
Karim Baina, Mohammed V University in Rabat, Morocco
Muhammad Akmal Remli, Universiti Malaysia Kelantan, Malaysia
Ayman Aljarbough, University of Central Asia, Kyrgyzstan
Naveen Aggarwal, Panjab University, India
Mohd Saberi Mohamad, United Arab Emirates University, United Arab Emirates
Muhammad Fayaz, University of Central Asia, Kyrgyzstan
Ibrahim Alreshidi, Cranfield University, UK
Hosein Naderpour, Semnan University, Iran
Milos Z. Jovanovic, University of Belgrade, Serbia
Gururaj H L, Vidyavardhaka College of Engineering, India
Tamer Rabie, University of Sharjah, UAE
Nafiz Arica, Bahcesehir University, Turkey
Mehmet Emin Aydin, The University of West of England, UK
Majdi Hatem Beseiso, Al-Balqa Applied University, Jordan
Viacheslav Pshikhopov-Southern Federal University, Russia

Guideline for Online Conference



Time Zone

The conference is arranged based on [London Time \(UTC/GMT +1\)](#).

Please carefully check your presentation time, and join the conference [15 minutes in advance](#).



Network

Stable WIFI or Wired network.

Equipment be with enough battery or connected with chargers.

If your network is not good, please send us presentation videos within 10 Minutes as a back-up.



Presentation

English only during the conference.

Stay online during Keynote & Invited speeches and your own sessions.

Certificates & receipts will be emailed to you after the conference.



Zoom Usage

Download the APP ZOOM on zoom.us or www.zoom.com.cn (China only). Turn on your Audio and start your Video.

Use headsets/earphones to enhance the audio effect and avoid the speaker echo or howling. Stay in a quiet place without noise.

Authors please rename like [Session Number+Paper ID+Name](#) as you join the room. E.g.: S1+A1001+Lairyn.

For KN or SC, please rename like [KN/SC+ Name Join TEST DAY on Oct. 21](#).

ROOM A
ROOM B

Meeting ID: 88447460778
Meeting ID: 84259124495

<https://us02web.zoom.us/j/88447460778>
<https://us02web.zoom.us/j/84259124495>

Program Overview

Date	Time	Activities	Location / Zoom ID:
October 21, 2022 Friday	10:00-12:00	Online ZOOM Test (Keynote Speakers)	Zoom ID: 88447460778
	10:00-12:00	Online ZOOM Test (Authors & Presenters)	Zoom ID: 84259124495
	14:00-17:00	Onsite Delegates Registration	MP491 (on the 4th floor of the Millenium Point Building)
October 22, 2022 Saturday	08:30-08:55	Onsite Delegates Registration	MP492 (on the 4th floor of the Millenium Point Building) Zoom ID: 88447460778
	9:00-9:05	Opening Remarks <i>Prof. Huseyin Seker</i>	
	9:05-9:45	Keynote Speech I <i>Prof. Marios M. Polycarpou</i>	
	9:45-10:25	Keynote Speech II <i>Prof. Ljiljana Trajkovic</i>	
	10:25-11:05	Keynote Speech III <i>Prof. Xin-She Yang</i>	
	11:05-11:30	Group Photo & Break	Foyer
	11:30-12:10	Keynote Speech IV <i>Prof. Jianhua Zhang</i>	MP492 Zoom ID: 88447460778
	12:10-12:50	Keynote Speech V <i>Prof. Alice E. Smith</i>	
	12:50-14:00	Lunch	
	14:00-14:30	Industry Session by Bubo.AI <i>Prof. Alan Timothy, CEO, Bubo.AI</i>	MP492 Zoom ID: 88447460778
	14:30-16:00	Onsite Session 1	
	16:00-16:30	Break	Foyer
	16:30-18:30	Onsite Session 2	MP492 Zoom ID: 88447460778
	18:30-19:00	Certificate Presentations and Closing Remark	
19:00-20:30	Dinner		
October 23, 2022 Sunday	10:00-11:45	Online Session 1	Zoom ID: 88447460778
	11:45-13:30	Lunch	
	13:30-15:00	Online Session 2	Zoom ID: 88447460778
	13:30-15:15	Online Session 3	Zoom ID: 84259124495

1. Please join the keynote speeches on time, we will have a group photos together
2. First find your session and join the room without sign in
3. The language should be ENGLISH ONLY

Direction: When you enter the Millenium Point Building, you will see a lift in front of you. Take the lift to the 4th floor. These rooms (MP491 and MP492) are in front of you when get out of the lift. Just look at your right-hand side.

Keynote Speech I



Prof. Marios M. Polycarpou

(IEEE Fellow, IFAC Fellow)

University of Cyprus, Cyprus

Title: Distributed Fault Diagnosis of Interconnected Cyber-Physical Systems

Biography: Marios Polycarpou is a Professor of Electrical and Computer Engineering and the Director of the KIOS Research and Innovation Center of Excellence at the University of Cyprus. He is also a Member of the Cyprus Academy of Sciences, Letters, and Arts, and an Honorary Professor of Imperial College London. He received the B.A degree in Computer Science and the B.Sc. in Electrical Engineering, both from Rice University, USA in 1987, and the M.S. and Ph.D. degrees in Electrical Engineering from the University of Southern California, in 1989 and 1992 respectively. His teaching and research interests are in intelligent systems and networks, adaptive and learning control systems, fault diagnosis, machine learning, and critical infrastructure systems. Dr. Polycarpou has published more than 400 articles in refereed journals, edited books and refereed conference proceedings, and co-authored 7 books. He is also the holder of 6 patents. Prof. Polycarpou received the 2016 IEEE Neural Networks Pioneer Award. He is a Fellow of IEEE and IFAC and the recipient of the 2014 Best Paper Award for the journal Building and Environment (Elsevier). He served as the President of the IEEE Computational Intelligence Society (2012-2013), as the President of the European Control Association (2017-2019), and as the Editor-in-Chief of the IEEE Transactions on Neural Networks and Learning Systems (2004-2010). Prof. Polycarpou currently serves on the Editorial Boards of the Proceedings of the IEEE, the Annual Reviews in Control, and the Foundations and Trends in Systems and Control. His research work has been funded by several agencies and industry in Europe and the United States, including the prestigious European Research Council (ERC) Advanced Grant, the ERC Synergy Grant and the EU Teaming program.

Abstract: The emergence of interconnected cyber-physical systems and sensor/actuator networks has given rise to advanced automation applications, where a large amount of sensor data is collected and processed in order to make suitable real-time decisions and to achieve the desired control objectives. However, in situations where some components behave abnormally or become faulty, this may lead to serious degradation in performance or even to catastrophic system failures, especially due to cascaded effects of the interconnected subsystems. Distributed fault diagnosis refers to monitoring architectures where the overall system is viewed as an interconnection of various subsystems, each of which is monitored by a dedicated fault diagnosis agent that communicates and exchanges information with other “neighboring” agents. The goal of this presentation is to provide insight into various aspects of the design and analysis of intelligent monitoring and control schemes and to discuss directions for future research.

Keynote Speech II



Prof. Ljiljana Trajkovic

(IEEE Fellow)

Simon Fraser University, Canada

Title: Machine Learning for Detecting Internet Traffic Anomalies

Biography: Ljiljana Trajkovic received the Dipl. Ing. degree from University of Pristina, Yugoslavia, the M.Sc. degrees in electrical engineering and computer engineering from Syracuse University, Syracuse, NY, and the Ph.D. degree in electrical engineering from University of California at Los Angeles. She is currently a professor in the School of Engineering Science, Simon Fraser University, Burnaby, British Columbia, Canada. Her research interests include communication networks and dynamical systems. She served as IEEE Division X Delegate/Director and President of the IEEE Systems, Man, and Cybernetics Society and the IEEE Circuits and Systems Society. Dr. Trajkovic serves as Editor-in-Chief of the IEEE Transactions on Human-Machine Systems and Associate Editor-in-Chief of the IEEE Open Journal of Systems Engineering. She is a Distinguished Lecturer of the IEEE Circuits and System Society, a Distinguished Lecturer of the IEEE Systems, Man, and Cybernetics Society, and a Fellow of the IEEE.

Abstract: Border Gateway Protocol (BGP) enables the Internet data routing. BGP anomalies may affect the Internet connectivity and cause routing disconnections, route flaps, and oscillations. Hence, detection of anomalous BGP routing dynamics is a topic of great interest in cybersecurity. Various anomaly and intrusion detection approaches based on machine learning have been employed to analyze BGP update messages collected from RIPE and Route Views collection sites. Survey of supervised and semi-supervised machine learning algorithms for detecting BGP anomalies and intrusions is presented. Deep learning, broad learning, and gradient boosting decision tree algorithms are evaluated by creating models using collected datasets that contain Internet worms, power outages, and ransomware events.

Keynote Speech III



Prof. Xin-She Yang

Middlesex University, UK

Title: Nature-Inspired Optimization Algorithms: Insights and Open Problem

Biography: Xin-She Yang obtained his DPhil in Applied Mathematics from the University of Oxford. He then worked at Cambridge University and National Physical Laboratory (UK) as a Senior Research Scientist. Now he is Reader at Middlesex University London, Fellow of the Institute of Mathematics and its Application (IMA) and a Book Series co-Editor of the Springer Tracts in Nature-Inspired Computing. He has published more than 25 books and more than 400 peer-reviewed research publications with over 71000 citations, and he has been on the prestigious list of highly-cited researchers (Clarivate Analytics/Web of Sciences) for seven consecutive years (2016-2022).

Abstract: Nature-inspired algorithms such as the particle swarm optimization, bat algorithm and firefly algorithm have been widely used to solve problems in complex optimization, data mining and computational intelligence. The number of nature-inspired algorithms has increased significantly in recent years. However, it lacks some in-depth mathematical analysis of these algorithms. This talk summarizes the latest developments, and provide some analysis of these algorithms. In addition, some challenges and open problems will also be highlighted.

Keynote Speech V



Prof. Jianhua Zhang

Oslo Metropolitan University, Norway

Title: Energy Consumption Forecasting based on Deep Neuroevolution Model

Biography: Jianhua Zhang has been a Full Professor of Artificial Intelligence at Department of Computer Science, Oslo Metropolitan University, Norway, since 2018. From 2007-2017 he was a Full Professor with School of Information Science and Engineering, East China University of Science and Technology, Shanghai, China. From 2017 to 2018 he was Scientific Director at Vekia (a machine learning driven IT company), Lille, France. He received his PhD in electrical engineering and computer science from Ruhr University Bochum, Germany, in 2005 and did postdoctoral research at Intelligent Systems Research Lab, University of Sheffield, UK, from 2005 to 2006. He was a Guest Scientist at TU Dresden, Germany, from 2002 to 2003 and Visiting Professor at TU Berlin, Germany, between 2008 and 2015.

His current research interests encompass computational intelligence, machine learning, intelligent systems and control, human-machine systems, brain signal processing, and neurocomputing. In those areas he has published 4 books, 11 book chapters, and over 150 journal and conference proceedings papers.

He serves as Chair of IFAC (International Federation of Automatic Control) Technical Committee on Human-Machine Systems, Vice Chair of IEEE Norway Section, and Vice Chair of IEEE CIS (Computational Intelligence Society) Norway Chapter. He is on editorial board of four international scientific journals, including *Frontiers in Neuroscience*, *Cognitive Neurodynamics* (Springer), and *Cognition, Technology & Work* (Springer). He served as IPC Co-Chair for IFAC LSS'13 (Shanghai) and HMS'16 (Kyoto), IPC Chair for IFAC HMS'19 (Tallinn), and Technical Associate Editor for 19th and 20th IFAC World Congress. He was also keynote speaker or IPC member for a number of international scientific conferences.

Abstract: Accurate energy consumption prediction can provide insights to make better informed decisions on energy purchase and generation. It can also prevent overloading and make it possible to store energy more efficiently. In this work, we propose a new deep learning model to predict the household energy consumption. In the new model, we employ differential evolution (DE) algorithm to automatically determine the optimal architecture of the deep neural network. The energy use prediction results are presented and analyzed to show the effectiveness of the deep neuroevolution model constructed.

Keynote Speech V



Prof. Alice E. Smith

(IEEE Fellow)

Auburn University, USA

Title: Innovative Uses of Drones for Last Mile Delivery with a Focus on

Healthcare

Biography: ALICE E. SMITH is the Joe W. Forehand/Accenture Distinguished Professor of the Industrial and Systems Engineering Department at Auburn University, where she served as Department Chair from 1999-2011. She also has a joint appointment with the Department of Computer Science and Software Engineering. Previously, she was on the faculty of the Department of Industrial Engineering at the University of Pittsburgh from 1991-99, which she joined after industrial experience with Southwestern Bell Corporation. Dr. Smith has degrees from Rice University, Saint Louis University, and Missouri University of Science and Technology.

Dr. Smith's research focus is analysis, modeling, and optimization of complex systems with emphasis on computation inspired by natural systems. She holds one U.S. patent and several international patents and has authored more than 200 publications which have garnered over 14,500 citations and an H Index of 47 (Google Scholar). She is the editor of the recent book *Women in Industrial and Systems Engineering: Key Advances and Perspectives on Emerging Topics* (<https://www.springer.com/us/book/9783030118655#aboutBook>). Several of her papers are among the most highly cited in their respective journals including the most cited paper of *Reliability Engineering & System Safety* and the 3rd most cited paper of *IEEE Transactions on Reliability*. She won the E. L. Grant Best Paper Awards in 1999 and in 2006, and the William A. J. Golomski Best Paper Award in 2002. Dr. Smith is the Editor in Chief of *INFORMS Journal on Computing* and an Area Editor of *Computers & Operations Research*.

Abstract: This seminar discusses a novel strategy for employing a combination of drones and delivery vehicles, such as trucks, for last mile delivery to homes and businesses. The work is general, but we aim for a healthcare application. This strategy uses drones to resupply trucks during the day for same day delivery, as orders are made available at a central depot. The trucks deliver the orders to the customers but do not have to return to the depot during the day since they are being supplied by the drones for new orders. A mathematical model is formulated and solved for this strategy. Both deterministic demand and stochastic demand scenarios are considered. We show that this strategy offers benefits in customer service and cost of delivery compared to traditional truck delivery only. We focus our work on healthcare and specifically the delivery of medical supplies and tests (such as COVID tests) in challenged, rural environments. We are complementing our algorithmic and computational work with animations and a limited physical field trial.

Industry Session



Industry Session by Bubo.AI (<https://www.bubo.ai/>)

Prof. Alan Timothy

CEO, Bubo.AI

Title: Industrial Application of Artificial Intelligence in Business Context: Price

Optimisation as a Case Study

Biography: Alan Timothy is CEO and founder of Bubo.AI (<https://www.bubo.ai/>) , providing the growth strategy and leadership of our UK and European operations and planning further expansion of the business to the U.S.

Since 1997, Alan has founded and sold three technology/data businesses, achieved ISO 9001 and 27001 accreditations and established distribution businesses in the USA, Europe, Africa and the Middle East. Alan has degrees in Microbiology, Medical Statistics and an MBA in International Business. He has been awarded Fellowships from Teesside University and National Innovation Centre for Data (Newcastle University).

Abstract: This talk will include the development and use of artificial intelligence concept and methods within the context of business and industry-linked growth with a specific and successful applications and examples in pricing of products and services and price optimisation.

Onsite Session 1

Digital Image Analysis and Application 14:30-16:00, Oct. 22 MP492 ZOOM ID: 88447460778 Chair: Prof. Ali Bou Nassif, University of Sharjah, United Arab Emirates		
14:30-14:45	AC1003	AutoMID : A Novel Framework For Automated Computer Aided Diagnosis Of Medical Images <i>Ayeshmantha Madara Wijegunathileke</i> Informatics Institute of Technology, Sri Lanka
14:45-15:00	AC1013	Miscellaneous EEG Preprocessing and Machine Learning for Pilots' Mental States Classification: Implications <i>Ibrahim Alreshidi</i> Cranfield University, United Kingdom
15:00-15:15	AC1017	MixUp based Cross-Consistency Training for Named Entity Recognition <i>Geonsik Youn</i> Dongguk University, Republic of Korea
15:15-15:30	AC1030	Machine Learning for the Posture Evaluation of Women Snatch Barbell Trajectory <i>Ching-Ting Hsu</i> University of Taipei, Taiwan
15:30-15:45	AC1029	Proxy-based Metric Learning for Emotion Recognition <i>Junhyeong Park</i> Dongguk University, Republic of Korea
15:45-16:00	AC1004	A Comprehensive Study on Machine Learning in Breast Cancer Detection and Classification <i>Ali Bou Nassif</i> University of Sharjah, United Arab Emirates

Onsite Session 2

Artificial Intelligence and Education Management 16:30-18:30, Oct. 22 MP492g ZOOM ID: 88447460778 Chair: Prof. Alan Timothy, Bubo.AI, UK		
16:30-16:45	AC1002	Measuring Airport Service Quality Using Machine Learning Algorithms Mohammed Salih Homai Cranfield University, United Kingdom
16:45-17:00	AC1015	Optimizing Ethanol Production in Escherichia Coli Using a Hybrid of Particle Swarm Optimization and Artificial Bee Colony Hany Alashwal United Arab Emirates University, United Arab Emirates
17:00-17:15	AC1014	A Systematic Literature Review of Airport Service Quality and Travellers' Satisfaction Mohammed saad Alanazi Cranfield University, United Kingdom
17:15-17:30	AC1028	Online Psychological Counseling Chatbot for Seniors Byeonghun Kim Dongguk University, Republic of Korea
17:30-17:45	AC1033	Multistage Particle Swarm Optimization for the Design of Direct Drive Permanent Magnet Synchronous Generators for Megawatt Wind Turbines Salem M Alshibani The Public Authority for Applied Education and Training, Kuwait
17:45-18:00	E002-A	Explainable Neural Networks for Panel Data Studying Educational Transitions Dennis Oliver Kubitz Federal Institute for Vocational Education and Training (BIBB), Germany
18:00-18:15	E003	Survey for Smart and Adaptive Education Dalila Durães Centre Algoritmi, University of Minho, Portugal
18:15-18:30	E016	Employability of University Leavers Using a Descriptive Analytics Case Study Subeksha Shrestha London Metropolitan University, United Kingdom

Online Session 1

Education Technology and Learning Mode		
10:00-12:00, Oct. 23 ZOOM ID: 88447460778		
Chair:		
10:00-10:15	E009	Students' Perceptions towards the Use of Games in the Classroom: A Study in A Vocational College in Vietnam <i>Thuy Thi Nguyen</i> FPT University - FPT Polytechnic, Vietnam
10:15-10:30	E004-A	SPACe-L: A Semantic Platform for Adaptive and Collaborative E-learning <i>Massra SABEIMA</i> Laboratory of Advanced Computer Science of Saint Denis (LIASD), University of Paris8, France
10:30-10:45	E006	A Semantic Real-time Activity Recognition System for Sequential Procedures in Vocational Learning <i>Jeanpaul Magro</i> Malta College of Arts, Science and Technology (MCAST), Malta
10:45-11:00	E007	An Evaluation of the Soft Skills Syllabus Implemented in a Vocational College <i>Thao Thi Thu Vu</i> FPT University - FPT Polytechnic, Vietnam
11:00-11:15	E008	Using Collaborative Activities to Improve Student Engagement in Speaking Skills <i>Ngoc Thi Nguyen</i> FPT University - FPT Polytechnic, Vietnam
11:15-11:30	E015	Student Learning Support Service in Economics Courses at a Vocational College <i>Thuy Thi Nguyen</i> FPT University - FPT Polytechnic, Vietnam
11:30-11:45	E017	An Investigation into Teachers' Perceptions towards Digital Transformation in Teaching and Learning <i>Thuy Thi Thanh Vu</i> FPT Polytechnic, Vietnam
11:45-12:00	E020	Learning Sense Embeddings from Dictionary Definition <i>Kai-Wen Tuan</i> National Tsing Hua University, Taiwan

Online Session 2

Soft Computing and Intelligent Algorithm 13:30-15:00, Oct. 23 ZOOM ID: 88447460778 Chair: Prof. Xin-She Yang, Middlesex University, UK		
13:30-13:45	AC1001	Prospects for the Use of Algebraic Rings to Describe the Operation of Convolutional Neural Networks Yelizaveta S Vitulyova National Engineering Academy of The Republic of Kazakhstan, Kazakhstan
13:45-14:00	AC1005	Depthwise Convolutions using Physicochemical Features of DNA for Transcription Factor Binding Site Classification Gergely Pap University of Szeged, Hungary
14:00-14:15	AC1024	An Effective Implementation of Detection and Retrieval Property of Episodic Memory Aniket Sharma ABV-Indian Institute of Information Technology and Management Gwalior, India
14:15-14:30	AC1025	Batch Layer Normalization, A New Normalization Layer for CNNs and RNNs Amir Ziaee TU Wien, Austria
14:30-14:45	AC1039	Carbon-Fiber-Reinforced Polymer as Confinement Reinforcement to Maximize Compressive Strength of Engineered Philippine Bamboo as Short Column: A Physico-Numerical Study and Artificial Neural Network Model Wilbert John Estrada Silva Mapua University, Philippines
14:45-15:00	AC1042	GLAF: Global-and-Local Attention Flow Model for Question Answering Shaoshi Sun Cardiff University, United Kingdom

Online Session 3

Machine Vision and Intelligent System		
13:30-15:30, Oct. 23 Meeting ID: Zoom ID: 84259124495		
Chair: Prof. Jianhua Zhang, Oslo Metropolitan University, Norway		
13:30-13:45	AC1006	Deep-learning Based Heterogeneous Robot Grasping System <i>Weijun Guan</i> Sun Yat-Sen University, China
13:45-14:00	AC1011-A	A Deep Neural Network for Few-shot Fault Diagnosis of Machinery Using Local Descriptors <i>Feng Jia</i> Chang'an University, China
14:00-14:15	AC1012	Design for the Elderly: the Acceptance of Smart Vests in the Senior Population <i>Zhuozhen Xie</i> Northeastern University, United States
14:15-14:30	AC1016	Comparative Analysis of the Light-CNN and FaceNet Methods for Identifying and Maintaining Human Faces <i>Mahmood HB Alhlffee</i> Chung Hua University, Taiwan
14:30-14:45	AC1020	Anti-Collision System for Accident Prevention in Underground Mines using Computer Vision <i>Mohamed Imam</i> Mohammed V University in Rabat, Morocco
14:45-15:00	AC1021	Spatial-temporal Transformers for EEG Emotion Recognition <i>Jiyao Liu</i> Northwestern Polytechnical University, China
15:00-15:15	AC1037	Incremental Learning of Classification models in Deep Learning <i>Atharv Nagarikar</i> Centre for Development of Advanced Computing (C-DAC) Pune, India
15:15-15:30	AC1010	Deep Ternary Hashing Code for Palmprint Retrieval and Recognition <i>Qizhou Lin</i> Nanchang Hangkong University, China

About Birmingham



Birmingham, second largest city of the United Kingdom and a metropolitan borough in the West Midlands metropolitan county. It lies near the geographic centre of England, at the crossing points of the national railway and motorway systems. Birmingham is the largest city of the West Midlands conurbation-one of England's principal industrial and commercial areas-for which it acts as an administrative, recreational, and cultural centre. The city lies approximately 110 miles (177 km) northwest of London.

Here are a few lesser-known things that make local Brummies proud. Hopefully, you'll have some fun reading all about England's second city, and it might add some cultural relevance to your trip.

1. Birmingham has more greenspace than Paris (and more canals than Venice)
2. Birmingham Museum and Art Gallery (Home to the world's largest collection of Pre-Raphaelite art)
3. It's the most inland major city in the UK (But you can still get to the coast in less than 2 hours)
4. JRR Tolkien lived in Birmingham (You can explore several supposed influences from The Lord of The Rings)
5. It has a proud industrial heritage (The Industrial Revolution started 30 miles away in Ironbridge)
6. Birmingham knows its silver and gold (The Jewelry Quarter is the biggest producer of jewelry in the UK)
7. The largest St Patrick's Day celebration in England (And third largest in the world behind Dublin and New York)
8. Birmingham is soccer mad (The English Soccer League started here)
9. Birmingham Library is the largest in England (With plenty to do for visitors besides reading)
10. The Christmas Market is the largest in Europe... (... outside Germany)