

### PROCEEDING OF THE 7TH WORLD CONGRESS ON ELECTRICAL ENGINEERING AND COMPUTER SYSTEMS AND SCIENCE (EECSS'21)

JULY 29 - 31, 2021 | -PRAGUE, CZECH REPUBLIC | VIRTUAL CONFERENCE

© COPYRIGHT 2021, INTERNATIONAL ASET INC. – ALL RIGHTS RESERVED. ISBN: 978-1-927877-92-0 | ISSN: 2371-5294

## **TABLE OF CONTENTS**

| Welcome Message from the Conference Chair |    |
|---|----|
| About EECSS'21                            | 4  |
| Scientific Committee                      | 5  |
| Keynote Speakers                          | 7  |
| List of Papers                            | 13 |
| Sponsors                                  | 18 |
| Journal Publication                       | 19 |
| EECSS'22                                  | 20 |
| Ethics & Malpractice                      | 21 |
| Contact Us                                |    |

## WELCOME MESSAGE FROM THE CONFERENCE CHAIR

On behalf of the International Academy of Science, Engineering and Technology (International ASET Inc.), the organizing committee would like to welcome you to the 7<sup>th</sup> World Congress on Electrical Engineering and Computer Systems and Science (EECSS'21).

Due to the evolving COVID-19 outbreak and corresponding issues in border entry in European countries, the 7<sup>th</sup> World Congress on Electrical Engineering and Computer Systems and Science (EECSS'21) which was supposed to be held in Prague, Czech Republic will be held **virtually** instead on **July 29 – 30, 2021**.

EECSS is aimed to become one of the leading international annual congresses in the fields of electrical engineering and computer systems and science. This congress will provide excellent opportunities to the scientists, researchers, industrial engineers, and university students to present their research achievements and to develop new collaborations and partnerships with experts in the field.

While each conference consists of an individual and separate theme, the 5 conferences share considerable overlap, which prompted the organization of this congress. The goal of this undertaking is to bring together experts in each of the specialized fields, and at the same time allow for cross pollinations and sharing of ideas from the other closely related research areas.

We thank you for your participation and contribution to the 7<sup>th</sup> World Congress on Electrical Engineering and Computer Systems and Science (EECSS'21). We wish you a very successful and enjoyable experience.

#### Dr. Luigi Benedicenti

*Congress Chair and Proceedings Editor EECSS*'21

**Dr. Zheng Liu** *Congress Co-Chair and Proceedings Editor EECSS'21* 

### **ABOUT EECSS'21**

**EECSS is aimed to become one of the leading international annual congresses in the fields of electrical engineering and computer systems and science.** This congress will provide excellent opportunities to the scientists, researchers, industrial engineers, and university students to present their research achievements and to develop new collaborations and partnerships with experts in the field.

There are 5 conferences included in the EECSS Congress:

<u>CIST'21</u> - 6<sup>th</sup> International Conference on Computer and Information Science and Technology <u>MHCI'21</u> - 8<sup>th</sup> International Conference on Computer and Information Science and Technology <u>MVML'21</u> - 7<sup>th</sup> International Conference on Machine Vision and Machine Learning <u>ICBES'21</u> - 8<sup>th</sup> International Conference on Biomedical Engineering and Systems <u>EEE'21</u> - 7<sup>th</sup> International Conference on Electrical Engineering and Electronics

While each conference consists of an individual and separate theme, the 5 conferences share considerable overlap, which prompted the organization of this congress. The goal of this undertaking is to bring together experts in each of the specialized fields, and at the same time allow for cross pollinations and sharing of ideas from the other closely related research areas.

EECSS is an acronym for Electrical, Engineering and Computer Systems and Science .

The proceedings is published in Ottawa, Canada.

All papers were peer-reviewed

The congress proceedings is published under an ISSN and ISBN number

Each paper is assigned a unique DOI number by Crossref

The conference proceedings is indexed by Google Scholar

The proceedings is permanently archived in <u>Portico</u> (one of the largest community-supported digital archives in the world)



### **SCIENTIFIC COMMITTEE**

We would like to thank the following for accepting to act as a member of the Scientific Committee for the EECSS'21 Congress:



**Dr. Luigi Benedicenti** University of New Brunswick, Canada Congress Chair



**Dr. Zheng Liu** University of British Columbia, Canada Congress Co-Chair

### Scientific Committee Members for CIST'21

- Dr. Abdel Aziz Farrag, Dalhousie University, Canada
- Dr. Aparicio Carranza, New York City College of Technology, USA
- Dr. Neli Zlatareva, Central Connecticut State University, USA
- Dr. Kin K. Leung, Imperial College London, UK

### Scientific Committee Members for MHCI'21

- Dr. Miguel Ángel Sanz Bobi, Comillas Pontifical University, Spain
- Dr. Hosam El-Ocla, Lakehead University, Canada
- Dr. Marius Preda, Telecom SudParis, France
- Dr. Hai Long Tran, DePaul University, USA
- Dr. Stephan Weiss, University of Strathclyde, UK
- Dr. Kazuhisa Yanaka, Kanagawa Institute of Technology, Japan

### Scientific Committee Members for MVML'21

- Dr. Mu-Song Chen, Da-Yeh University, Taiwan
- Dr. Dalila B. Megherbi, University of Massachusetts Lowell, USA
- Dr. Christoph Schommer, University of Luxembourg, Luxembourg
- Dr. Wenwu Wang, University of Surrey, UK

### **SCIENTIFIC COMMITTEE**

# We would like to thank the following for accepting to act as a member of the Scientific Committee for the EECSS'21 Congress:

### **Scientific Committee Members for ICBES'21**

- Dr. Javad Alirezaie, Ryerson University, Canada
- Dr. Zhongping Chen, University of California, Irvine, USA
- Dr. Ivan T. Lima, Jr, North Dakota State University, USA
- Dr. Michele Oliver, University of Guelph, Canada
- Dr. Hai Xiao, Clemson University, USA
- Dr. Huang Zhiwei, National University of Singapore, Singapore

### **Scientific Committee Members for EEE'21**

- Dr. Nurul Chowdhury, University of Saskatchewan, Canada
- Dr. Valentina Ciriani, University of Milan, Italy
- Dr. Zhirun Hu, University of Manchester, UK
- Dr. Gary H. Bernstein, University of Notre Dame, USA
- Dr. Qing Zhang, Nanyang Technological University, Singapore
- Dr. Francesco D'Agostino, University of Salerno, Italy
- Dr. Yao-chun Shen, University of Liverpool, UK

### **PLENARY AND KEYNOTE SPEAKERS**

The keynote information for the 7th World Congress on Electrical Engineering and Computer Systems and Science (EECSS'21) is as follows:

### **Plenary Speakers**



Dr. Chris Williams University of Edinburgh, UK MVML'21 Plenary Speaker



Dr. Sepp Hochreiter Johannes Kepler University, Austria MVML'21 Plenary Speaker



Dr. Max Welling University of Amsterdam, Netherlands MVML'21 Plenary Speaker



Dr. Rashid Bashir University of Illinois, USA ICBES'21 Plenary Speaker



Dr. Dana Ballard University of Texas at Austin, USA MVML'21 Plenary Speaker



Dr. Ruslan Salakhutdinov Carnegie Mellon University, USA MVML'21 Plenary Speaker

### **Keynote Speakers**



Dr. Kin K. Leung Imperial College London, UK CIST'21 Keynote Speaker



Dr. Sophia Ananiadou

University of Manchester, UK CIST'21 Keynote Speaker



Dr. Yao-chun Shen University of Liverpool, UK EEE'21 Keynote Speaker

### **PLENARY SPEAKERS**



**Titles:** Towards Automating the Data Analytics Process <u>Dr. Chris Williams, University of Edinburgh, UK</u>

### **View Abstract**

### **Return to Top**

Chris Williams is Professor of Machine Learning and Director of Research in the School of Informatics, University of Edinburgh. His main areas of research are in visual object recognition and image understanding, models for understanding timeseries, AI for data analytics, unsupervised learning, and Gaussian processes. He obtained his MSc (1990) and PhD (1994) at the University of Toronto, under the supervision of Geoff Hinton. He was elected a Fellow of the Royal Society of Edinburgh in 2021, is a Fellow of the European Laboratory for Learning and Intelligent Systems (ELLIS), a Turing Fellow at the Alan Turing Institute (UK), and was program co-chair of the NeurIPS conference in 2009.



Sepp Hochreiter is heading the Institute for Machine Learning, the LIT AI Lab and the AUDI.JKU deep learning center at the Johannes Kepler University of Linz and is director of the Institute of Advanced Research in Artificial Intelligence (IARAI). He is regarded as a pioneer of Deep Learning as he discovered the fundamental deep learning problem: deep neural networks are hard to train, because they suffer from the now famous problem of vanishing or exploding gradients. He is best known for inventing the long short-term memory (LSTM) in his diploma thesis 1991 which was later published in 1997. LSTMs have emerged into the best-performing techniques in speech and language processing and are used in Google's Android, in Apple's iOS, Google's translate, Amazon's Alexa, and Facebook's translation. Currently, Sepp Hochreiter is advancing the theoretical foundation of Deep Learning, investigates new algorithms for deep learning, and reinforcement learning. His current research projects include Deep Learning for climate change, smart cities, drug design, for text and language analysis, for vision, and in particular for autonomous driving.

### **PLENARY SPEAKERS**



**Titles:** How Can Machine Learning Help Computer Vision in the Next Decade? <u>Dr. Max Welling, University of Amsterdam,</u> <u>Netherlands</u>

### **View Abstract**

**View Abstract** 

### **Return to Top**

Prof. Dr. Max Welling is a research chair in Machine Learning at the University of Amsterdam (AMLAB) and a VP Technologies at Qualcomm. He is a fellow at the Canadian Institute for Advanced Research (CIFAR) and at the European Lab for Learning and Intelligent Systems (ELLIS). Max Welling has served as associate editor in chief of IEEE TPAMI from 2011-2015 and is on the board of the NeurIPS foundation since 2015 and has been program chair and general chair of NeurIPS in 2013 and 2014 respectively. He was also program chair of AISTATS in 2009 and ECCV in 2016 and general chair of MIDL 2018. He is recipient of the ECCV Koenderink Prize in 2010. Welling is co-founder and board member of the Innovation Center for AI (ICAI) and the European Lab for Learning and Intelligent Systems (ELLIS).



**Titles:** Modern Hopfield Networks Dr. Sepp Hochreiter, Johannes Kepler University, Austria

Return to Top

Rashid Bashir is currently the Dean of Grainger College of Engineering, the Grainger Distinguished Chair in Engineering, and Professor of Bioengineering at the University of Illinois at Urbana-Champaign. He was member of the core founding team and cochair of the inaugural curriculum committee for the Carle-Illinois College of Medicine, the world's first engineering based College of Medicine at the University of Illinois at Urbana-Champaign. He has previously been at Purdue University and at National Semiconductor Corporation. He has held a visiting Scientist position at Massachusetts General Hospital and Shriner's Hospital for Children, and was Visiting Professor of Surgery at Harvard Medical School, Cambridge, MA. He was the recipient of the Joel and Spira teaching Award, the NSF Faculty Early Career Award and the IEEE EMBS Technical Achievement award. In 2018, he received the Pritzker Distinguished Lectureship Award from BMES.

For More Information Please visit:

https://avestia.com/EECSS2021 Proceedings/files/speakers.html

### **PLENARY SPEAKERS**



**Titles:** The Use of Gaze in Human and Machine Vision <u>Dr. Dana Ballard, University of Texas at Austin,</u> <u>USA</u>

**View Abstract** 

**Return to Top** 

Dana Ballard received his PhD from the University of California, Irvine, in 1974. His main research interest is in computational theories of the brain with emphasis on human vision and motor control. Currently Ballard is interested in pursuing this research by using high DOF models of humans' natural behavior in virtual reality environments.



**Titles:** From Differentiable Reasoning to Self-supervised Embodied Active Learning <u>Dr. Ruslan Salakhutdinov, Carnegie Mellon</u> <u>University, USA</u>

View Abstract

**Return to Top** 

Russ Salakhutdinov is a UPMC Professor of Computer Science in the Department of Machine Learning at CMU. He received his PhD in computer science from the University of Toronto. After spending two post-doctoral years at MIT, he joined the University of Toronto and later moved to CMU. Russ's primary interests lie in deep learning, machine learning, and large-scale optimization. He is an action editor of the Journal of Machine Learning Research, served as a program co-chair for ICML2019, served on the senior programme committee of several top-tier learning conferences including NeurIPS and ICML. He is an Alfred P. Sloan Research Fellow, Microsoft Research Faculty Fellow, Canada Research Chair in Statistical Machine Learning, a recipient of the Early Researcher Award, Google Faculty Award, and Nvidia's Pioneers of AI award.

### **KEYNOTE SPEAKERS**



**Titles:** Reinforcement Learning for Large-Scale Communications and Computer Infrastructures **Dr. Kin K. Leung, Imperial College London, UK** 

**View Abstract** 

**Return to Top** 

Kin K. Leung received his B.S. degree from the Chinese University of Hong Kong in 1980, and his M.S. and Ph.D. degrees from University of California, Los Angeles, in 1982 and 1985, respectively. He joined AT&T Bell Labs in New Jersey in 1986 and worked at its successor companies until 2004. Since then, he has been the Tanaka Chair Professor in the Electrical and Electronic Engineering (EEE), and Computing Departments at Imperial College in London. He serves as the Head of Communications and Signal Processing Group in the EEE Department at Imperial. His current research focuses on optimization and machine-learning techniques for system design and control of large-scale communication networks and computer infrastructures. He also works on multi-antenna and cross-layer designs for wireless networks.

For More Information Please visit:

https://avestia.com/EECSS2021\_Proceedings/files/speakers.html



**Titles:** A Novel Optical Coherence Tomography for Non-Destructive Characterisation of Electrical-Thermal-Mechanical Deformation of Bonding Wires **Dr. Yao-chun Shen, University of Liverpool, UK** 

View Abstract

**Return to Top** 

Prof Yaochun Shen received his PhD degree from Nanjing University in 1992. After that he held various positions at Southeast University (China), Heidelberg University (Germany), Heriot-Watt University (UK), Cambridge University (UK) and TeraView Ltd (UK). Currently he is a Chair Professor at the Department of Electrical Engineering and Electronics, the University of Liverpool, UK. Professor Shen has many year's experiences in the development and application of novel cross-sectional imaging technologies based on terahertz imaging and optical coherence tomography. He has been awarded 7 patents and published 5 book chapters and over 200 conference & journal papers with over 6845 citations and an h-index of 45 (Google Scholar). His current research interests include the development of innovative THz and optical imaging technologies with a focus on the exploitation of their practical real-world applications in industry and healthcare.

### **KEYNOTE SPEAKERS**



Titles: Natural Language Processing for Biomedicine Dr. Sophia Ananiadou, University of Manchester, UK



**Return to Top** 

Sophia Ananiadou is Professor of Computer Science at The University of Manchester. Her main research areas of research are Natural Language Processing and Text Mining applied in Biomedicine. She is the Director of the UK National Centre for Text Mining, a Turing Fellow, ELLIS member and Distinguished research fellow at the AI research centre (AIST Japan). Her research has covered: information extraction, scientific discourse analysis, emotion detection, automatic extraction of terminology for applications such as systematic reviews , semantic search, knowledge graph construction, pathway curation.

The following papers were presented at the 6th World Congress on Civil, Structural, and Environmental Engineering.

### **Biomedical Science and Engineering**

**Title:** Simple Pin-Plate Electrode Configuration for Targeted Electroporation

Authors: Ayoola Brimmo, Mohammad Qasaimeh, Anoop Menachery

### View Paper

**Title**: Naturally Occurring Polyhydroxyalkanoate (PHA)- Based Scaffolds Used For In Vitro Tissue Engineering Applications **Authors:** Eleni Chatzilakou, Olga Tsave, Christos Chatzidoukas

**View Paper** 

**Title**: Rapid Detection of Wound Pathogen Proteus mirabilis Using Disposable Electrochemical Sensors **Authors:** Aiden J Hannah, Andrew C Ward, Patricia Connolly

View Paper

**Title**: Model of Magnetic Spherical Micro-Robot Motion in Soft Media **Authors:** Yulia Malkova, Sijie, Ran, Gary Friedman

View Paper

**Title**: Using Deep Learning for Efficient Diagnoses of COVID-19, Viral Illnesses (Other than COVID-19), and Bacterial Illnesses **Authors:** Vibha Addala

View Paper

### **Biomedical Science and Engineering**

**Title:** Investigation of Two Double Throws and Three Single Throws Square Surgical Knots – A Preliminary Experimental & Computational Study on Knot Integrity

Authors: Amery Chow, Kyrin Liong, Shujin Lee

View Paper

**Title**: Sensitivity Analysis of Heart Rate Variability Analysis Algorithms **Authors:** Amanda Pérez-Porro, María Palacios, Constantino Antonio García, Gabriel Caffarena, Abraham Otero

View Paper

**Title**: Magnetic Resonance Spectroscopy Signal Analysis Based on Fingerprinting Dictionary Approaches **Authors:** Iurii Venglovskyi

View Paper

**Title**: Electrophoretic Deposition of Chitosan/Eudragit E 100/Agnps Coatings for Controlled Release of Antibacterial Substance **Authors**: Łukasz Pawłowski, Andrzej Zieliński

View Paper

**Title**: Investigation on Hemodialysis Membranes Morphology and Human Serum Proteins Depositions Using Synchrotron-based Imaging **Authors**: Amira Abdelrasoul

View Paper

### **Artificial Intelligence**

**Title:** Detection of Adversarial DDoS Attacks Using Generative Adversarial Networks with Dual Discriminators **Authors:** Chin-Shiuh Shieh, Wan-Wei Lin, Thanh-Tuan Nguyen, Yong-Lin Huang, Mong-Fong Horng, Chun-Chih Lo, and Kun-Mu Tu

View Paper

**Title**: Processing Natural Language Queries in Semantic Web Applications **Authors:** Neli Zlatareva, Devansh Amin

View Paper

**Title**: Short-Term Traffic Forecasting Using Deep Learning **Authors**: Iren Valova, Natacha Gueorguieva, Sandeep Smudidonga

View Paper

**Title**: Analysing the Sentiments in a Hybrid FLOSS Community based on Commits

Authors: Luigi Benedicenti, Tommi Mikkonen, Jurka Rahikkala

View Paper

**Title**: Detecting Emotional Contagion in OSS Projects **Authors:** Rashmi Dhakad, Luigi Benedicenti

View Paper

### **Electrical Engineering and Electronics**

**Title:** Modified Parareal Algorithm for Solving Time-Dependent Differential Equations **Authors:** Sumathi Lakshmiranganatha, Suresh S. Muknahallipatna

View Paper

**Title**: Integration of Renewable Energy Systems to Reduce Greenhouse Gas Emission **Authors:** Asim Chaulagain, Muhammad Ahsan Khalil, Raynier Leyeza, Ramakrishna Gokaraju, Nurul Chowdhury, Chris James

View Paper

**Title**: Effects of Charging Lithium-Ion Cells with Zero Termination Current on the State of Health (SoH) for Energy Storage Systems **Authors:** Ali Eren KOK , Ibrahim DEVELI

View Paper

**Title**: Design of low impedance standard defined in a four-terminal-pair configuration **Authors:** Mohamed OUAMEUR, François ZIADÉ

**View Paper** 

### **Machine Learning and Human Computer Interaction**

**Title:** Reinforcement Learning for Production Planning with Demand Sensitive to Delivery Lead Time **Authors:** Chi-Yang Tsai, Erickson Liang

View Paper

**Title**: New Object Tracker Based On Adaptive Intensity Models of Object and Its Surroundings **Authors:** Dorothy Gors, Robbert Hofman, Merwan Birem, Steven Kauffmann

View Paper

**Title**: Aerial Display Using Lenticular Lenses **Authors**: Kazuhisa Yanaka, Kouki Shibata, Toshiaki Yamanouchi

View Paper

**Title**: Cloud Computing based Real Time Monitored Supply Chain System **Authors**: Usama Zafar Ansari, Zheng Liu

View Paper

**Title**: Deep Learning-based Electric Appliances Identification from their Switching-On Current Waveforms

Authors: Yassine Chemingui, Adel Gastli, Mahdi Houchati

View Paper



International ASET Inc. would like to thank the following sponsors for their support of CSEE 2021:











### **JOURNAL PUBLICATION**

Selected articles from the congress will be published in one of the following journal after a secondary review process:

**JBEB** - Journal of Biomedical Engineering and Biosciences

**JMIDS** - Journal of Machine Intelligence and Data Science

### The publication fee will be waived for papers that win the Best Paper Award. Other attendees will receive a 25% discount towards the publication fee of the journal.

These journals have adopted to the open-access model, meaning all free access to the journals' articles and content with no need for subscription. This ensures larger audience and therefore higher citations.

Users are allowed to read, download, copy, distribute, print, search, or link to the full texts of the articles in this journal without asking prior permission from the publisher or the author. This is in accordance with the BOAI definition of open access.

All published papers for JBEB and JMIDS will be submitted to Google Scholar. Additionally, they will be permanently archived in Portico (one of the largest community-supported digital archives in the world) and will be assigned unique DOIs. These journals are approved by the Committee on Publication Ethics (COPE).

### **CSEE'22**

The 8th World Congress on Electrical Engineering and Computer Systems and Science (EECSS'22)



For inquiries and to obtain further information on the congress, please visit the <u>website</u>

You can also email info@eecss.org or call us

at: +1-613-834-9999

### **Publication Ethics and Publication Malpractice Statement**

The following statement is mainly based on the <u>Code of Conduct and Best-</u> <u>Practice Guidelines for Journal Editors</u> (Committee on Publication Ethics, 2011).

**Scientific Committee** 

#### Scientific Committee

Scientific committees consisting of experts in the fields are established. The committees oversee the peer-review and publication process. To see the scientific committee members, please follow the link below. Scientific Committee

#### **Equality and Decisions**

One or more reviewer, scientific committee member, or chair, (internal or external), are responsible for evaluating the relevance of the submitted manuscripts to the proceedings, technical and scientific merit, originally, and impact. These evaluations are to be carried out regardless of ethnicity, religion, gender, sexual orientation, political beliefs, and institutions. Successive to peer-review, the Chair has full authority and is solely responsible for the published content and the process thereof.

### Confidentiality

Scientific committee member(s) and publishing staff may not disclose manuscripts or their content, directly or indirectly, to anyone other than individuals invited to review the manuscript (whether they accept or not), other reviewers of the same publications, and publishing staff.

#### **Conflicts of Interest**

Scientific committee member(s) and publishing staff may not utilize the contents of submitted manuscripts whether accepted or rejected, directly or indirectly for their own research purposes without prior written consent by the authors.

#### **Reviewers**

#### **Contribution to Decisions**

In order for final decisions to be made regarding acceptance or rejection of papers, we rely on peer-review. Peer-review is the process of experts in the field reading, understanding, and objectively commenting on submitted papers. Through peer-review, scholars give back to the academic and scientific community by helping the chair(s) make decisions regarding manuscripts.

#### Promptness

Reviewers should promptly notify the chair(s) if they are unable or unqualified to carry out their reviewing duties. Reviewers should do their best to provide the reviews to the chair(s) as promptly as possible, and within the designated time-frame.

### Confidentiality

Reviewers must not share the contents of the manuscripts they receive for review, regardless of their decision to review or contents of the review, directly or indirectly, with anyone other than the person who has assigned the review.

#### Fairness

Reviewers should review manuscripts fairly and objectively, with supporting evidence or arguments, regardless of personal feelings or biases.

### Thoroughness

Reviewers should thoroughly read, understand, and provide constructive feedback with the aim of improving the manuscript. Reviewers should aim to identify and report technical issues, irregularities, mistakes, missing citations, and similarity to other published work.

### **Conflicts of Interest**

Invited reviewers should immediately inform the chair(s) in case of a conflict of interest based on competitive, collaborative, personal, family, and other relationships with the authors or people involved in the work.

#### **Authors**

### Authorship

Only persons who have significantly contributed to the work and the manuscript can be named authors on a paper. These contributions include the idea/concept, design, experiments, evaluation, analysis, drafting or revision of the manuscript, and others. Authors must all have agreed to be named as such and for the manuscript to be submitted. Anyone who has contributed based on the above, but the level of contribution is not significant, may appear in the acknowledgement section of the manuscript.

### Accuracy, Originality, and Plagiarism

Authors should describe their work and the results of their work accurately and in full. The level of provided accuracy and detail should be such that a reader can replicate the work independently. Inaccurate, incomplete, fraudulent, and misleading statements are considered unacceptable and unethical. Direct or indirect use of other people's work is not allowed, unless properly cited. Previous works that have influenced the current work should also be cited. Presenting someone else's work as one's own is strictly prohibited and is considered plagiarism.

### Data and Material

Authors are encouraged to share their data, software, or other sharable material online, provided copyright and ownership laws surrounding that particular project permit. Authors may also be asked to share such material with the chair(s), and/or reviewers, and must be willing to do so if asked.

### **Dual Submissions**

Submitting a manuscript to more than one venue (conference, journal, etc) simultaneously is not allowed. Presenting previously published work to be considered as a new submission, without a significant new interpretation or analysis, is prohibited.

### **Conflicts of Interest**

Authors must notify the chair(s) at the time of submission, if any factor outside the scope of the research has influenced any step of the work and manuscript writing. Examples of such factors include but are not limited to funding, grants, advisory and consultancy, stock ownership, current or past employment, and memberships, among others. All funding sources should be disclosed in the manuscript.

#### Animal and Human Subjects

Works involving human and/or animal subjects must ensure that the work has abided by institutional guidelines, and pre-approved by required bodies. Moreover, consent must be acquired from participants, and privacy of subjects must be ensured. All of the above must be specified with clear statements in the manuscript.

#### Hazardous Material

It should clearly be identified in the manuscripts if the works have involved hazardous chemicals and material, or devices that can be harmful.

### Reporting of Mistakes, Errata, and Retractions

If an author identifies a major error in a published paper, he/she must immediately identify the publisher. Regardless of whether a significant error is reported by the authors of the work or other readers, authors are obligated to take the necessary steps to correct the issue. It is decided on a case-by-case basis whether an erratum will be submitted to notify future readers of the error and correction, or whether the paper will be retracted.

Unethical/plagiarism issues mostly result in a retraction, while unintended mistakes will mostly result in the publication of an erratum.

#### **Publisher**

#### Errata and Retractions

The publisher takes the necessary steps to prevent mistakes, academic and scientific misconduct, and unethical behavior, both intended and unintended. When mistakes are reported, the publisher works with chair(s) and authors to publish an erratum clarifying the issue. In cases where the mistakes are severe and significant, the paper might be retracted. If unethical behavior, plagiarism, academic and scientific misconduct, or other such activities are proven to have taken place by an author or authors, the publisher will retract the paper.

#### **Content and Archiving**

The publisher preserves and stores all content digitally on their own servers, as well as through partnering with Portico (Digital Preservation and Electronic Archiving Service).

#### **Copyright and Access**

The proceedings and related papers are all based on the open-access model, which means interested individuals and institutions can access the material for free.

Users are allowed to read, download, copy, distribute, print, search, or link to the full texts of the articles in this proceedings without asking prior permission from the publisher or the author. This is in accordance with the BOAI definition of open access.

#### **Ownership and Management**

This conference-proceedings is managed and operated by the International ASET (International Academy of Science, Engineering, and Technology) and Avestia Publishing (the publishing arm of ASET).

#### Schedule

This conference proceeding accompanies the conference, meaning a new proceedings will be published every year for the corresponding annual conference of this series.

## **CONTACT US**

The 7<sup>th</sup> World Congress on Electrical Engineering and Computer Systems and Science (EECSS'22) consist of 5 conferences. You can contact each conference using the information below.

| CIST  | 6th International Conference on Computer and<br>Information Science and Technology (CIST'21)<br>Email: <u>info@cistseries.com</u><br>Website: <u>https://2021.cistseries.com/</u>     |
|-------|---|
| MHCI  | 8th International Conference on Multimedia and<br>Human-Computer Interaction (MHCI'21)<br>Email: <u>info@mhciconference.com</u>  <br>Website: <u>https://2021.mhciconference.com/</u> |
| MVML  | 7th International Conference on Machine Vision and<br>Machine Learning (MVML'21)<br>Email: <u>info@mvml.org</u>  <br>Website: <u>https://2021.mvml.com/</u>                           |
| ICBES | 8th International Conference on Biomedical Engineering<br>and Systems (ICBES'21)<br>Email: <u>info@icbes.net</u>  <br>Website: <u>https://2021.icbes.net/</u>                         |
| EEE   | 7th International Conference on Electrical Engineering<br>and Electronics (EEE'21)<br>Email: <u>info@eeeconference.com</u><br>Website: <u>https://eeeconference.com</u>               |

For inquiries and to obtain further information on the congress, please visit the **website** 

You can also email info@cseecongress.com or call us

at: +1-613-834-9999