ICCEFA 2021

2nd INTERNATIONAL CONFERENCE ON CIVIL ENGINEERING FUNDAMENTALS AND APPLICATIONS (ICCEFA'21)

November 21 - 23, 2021 | Seoul, South Korea Virtual Conference

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On behalf of the International Academy of Science, Engineering and Technology (International ASET Inc.), the organizing committee would like to welcome you to The 2nd International Conference on Civil Engineering Fundamentals and Applications (ICCEFA'21).

The goal of ICCEFA'21 is to provide an online space for scholars from all over the world to present advances in the relevant fields and to foster a virtual environment conducive to exchanging ideas and information. This conference will also provide an ideal environment to develop new collaborations and meet experts on the fundamentals, applications, and products of the mentioned fields.

In the second meeting of this conference, two keynote speakers will share their expertise with the aim of exposing participants to a wide spectrum of applications, and to foster crosspollination of ideas and develop new research interests. In addition, approximately 15 papers will be presented from professors, students, and researchers across the world.

We thank you for your participation and contribution to The 2nd International Conference on Civil Engineering Fundamentals and Applications (ICCEFA'21). We wish you a very successful and enjoyable experience.

Dr. Zhi Chen
Concordia University, Canada
Conference Chair
ICCEFA'21

Dr. Charles Lee
The University of Newcastle, Singapore
Conference Chair
ICCEFA'21
ABOUT ICCEFA’21

The 2nd International Conference on Civil Engineering Fundamentals and Applications (ICCEFA’21) aims to become the leading virtual conference in fields related to Civil Engineering Fundamentals and Applications. The goal of ICCEFA’21 is to gather scholars from all over the world to present advances in the relevant fields and to foster an environment conducive to exchanging ideas and information. This conference will also provide an ideal environment to develop new collaborations and meet experts on the fundamentals, applications, and products of the mentioned fields.

ICCEFA is an international conference will be held yearly. This conference focus on all aspects Civil Engineering Fundamentals and Applications. ICCEFA Will be held this year in Virtual conference

**ICCEFA** is an acronym for International **Conference**, on **Civil Engineering Fundamentals and Applications**.

The proceedings are published in Ottawa, Canada.

- All papers were peer-reviewed
- The conference proceedings is published under an ISSN and ISBN number
- Each paper is assigned a unique DOI number by [Crossref](https://crossref.org)
- The conference proceedings is indexed by [Google Scholar](https://scholar.google.com)
- The proceedings is permanently archived in [Portico](https://www.portico.org) (one of the largest community-supported digital archives in the world)
We would like to thank the following for accepting to act as a member of the Scientific Committee for the ICCEFA’21 Conference:

Scientific Committee Members

- **Dr. Muntasir Billah**, Lakehead University, Canada
- **Dr. Ahmed Fahmy**, AECOM, NJ, USA
- **Dr. Muntasir Billah**, Lakehead University, Canada
- **Dr. Wei Gao**, University of New South Wales, Australia
- **Dr. Sean He**, Rensselaer Polytechnic Institute, USA
- **Dr. Mo Kim Hung**, University of Malaya, Malaysia
- **Dr. Roberto T. Leon**, Virginia Tech, USA
- **Dr. Kypros Pilakoutas**, University of Sheffield, UK
- **Dr. Saber Moradi**, Ryerson University, Canada
- **Dr. Abdollah Shafieezadeh**, Ohio State University, USA
- **Dr. Grzegorz Sierpiński**, Silesian University of Technology, Poland
- **Dr. Aleksandar Stevanovic**, University of Pittsburgh, USA
- **Dr. Di Wu**, University of Technology Sydney, Australia
- **Dr. Lei Xu**, University of Waterloo, Canada

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**Dr. Zhi Chen**  
Concordia University, Canada  
Conference Chair

**Dr. Charles Lee**  
The University of Newcastle, Singapore  
Conference Chair
The keynote information for the 2nd International Conference on Civil Engineering Fundamentals and Applications (ICCEFA’21) is as follows:

**Dr. Fuzhan Nasiri**  
Concordia University, Canada

**Dr. Dee Wu**  
University of Technology Sydney, Australia
Dr. Fuzhan Nasiri is an associate professor at the Department of Building, Civil, and Environmental Engineering (BCEE) at Concordia University. He is a systems engineer with deep interest in investigating the emerging challenges in the design and operation of complex (physical) systems (such as facilities, infrastructure, and buildings) and their interactions with and impact on the environment and society from risk, resilience, and reliability (3Rs) perspectives. Dr. Nasiri is directing the Infrastructure Systems Modeling & Simulation (SEISE) lab. Dr. Nasiri is also affiliated with Institut Nordique du Québec (INQ). His research has been funded by Natural Science & Engineering Research Council (NSERC) of Canada, MITACS, and several partnership projects with industry partners. He is currently collaborating with the International Energy Agency under Annex 37 (Smart Energy Storage Systems). Dr. Nasiri is serving as associate editor and member of editorial board for several scientific journals including Sustainable Cities and Society, Environmental Systems Research, Energy and Built Environment, and Pipeline Science & Engineering. Dr. Nasiri has been involved in organizing several conference streams with CSCE, INFORMS and CORS. Before joining Concordia, he worked at University College London (UCL) as a faculty member (2011-2014), at Yale University as a research scientist (2009-2011), and at GERAD research group as a postdoctoral fellow (2007-2009). Dr. Nasiri holds a PhD in Environmental Systems Engineering from the University of Regina, and MSc and BSc from Sharif University of Technology.
Dr Di Wu completed his PhD training at University of New South Wales Sydney in 2015. Since 2019, he has been appointed as a lecturer at School of Civil and Environmental Engineering, University of Technology Sydney (UTS). He has published 70 SCI journal papers. He works in research areas that bring together computational stochastic/nonstochastic mechanics, machine learning, and engineering design with implementation of new composite materials. Di has also developed frameworks for machine-learning-aided engineering safety assessment, nondeterministic methods for isogeometric analysis with polymorphic uncertainties, as well as approaches for designing composite material via AI techniques.
### LIST OF PAPERS

The Following Papers Were Presented At The 2\textsuperscript{nd} International Conference On Civil Engineering Fundamentals And Applications (ICCEFA'21):

#### Civil Engineering

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<td>Investigation of the Turbulent Schmidt Number Effects On Numerical Modelling Of Vortex-Type Stormwater Retention Ponds</td>
<td>S. M. Yamini; H. Shamloo; S. H. Ghafari</td>
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<td>A Simplified Hybrid Model For Cyclic Loaded Strip Footing On The Granular Materials</td>
<td>Nehal Elshaboory, Ghasan Alfalah, Abobakr Al-Sakkaf, Eslam Mohammed Abdelkader</td>
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## LIST OF PAPERS

The Following Papers Were Presented At The 2\textsuperscript{nd} International Conference On Civil Engineering Fundamentals And Applications (ICCEFA'21):

### Civil Engineering

**Title:** Pedestrian Induced Vibration Control of Bridges Based on MTMD  
**Authors:** Kenknan Talant, Kun xu  
[View Paper](#)

**Title:** Erosion Protection by Polymer Additive  
**Authors:** Mohamed Bader Al gadwi, Emmanouil Spyropoulos, Bassim A. Nawaz  
[View Paper](#)

**Title:** Benefits and Limitations of the Built Environment’s Work Integrated Learning in Undergraduate Education  
**Authors:** J. Neoh, C.C. Lee  
[View Paper](#)
## LIST OF PAPERS

The Following Papers Were Presented At The 2\textsuperscript{nd} International Conference On Civil Engineering Fundamentals And Applications (ICCEFA'21):

### Traffic Engineering

**Title:** Application of Local and Global Eigenface Decompositions for Vehicular Detection during the COVID-19 Health Pandemic: Preliminary Results  
**Authors:** Nicholas V. Scott, Linnette M. Martinez Torney

**Title:** Application of Tiny YOLOv2 Car Detection for Traffic Flow Quantification during the COVID Health Pandemic: Preliminary Results  
**Authors:** Linnette M. Martinez, Joseph P. Salisbury, and Nicholas V. Scott

**Title:** Classification of Barriers to Implementing the Car-Sharing System. Case study for Tehran  
**Authors:** Siamak Ahmadian, Grzegorz Sierpiński

**Title:** Generalised Cost Function of Integrated Multimodal Transport  
**Authors:** Paritosh Nandi, Grzegorz Sierpiński
LIST OF PAPERS

The Following Papers Were Presented At The 2nd International Conference On Civil Engineering Fundamentals And Applications (ICCEFA'21) :

Traffic Engineering

**Title:** Evaluating Potential Customers’ Perspectives for Success of Electric Vehicles in Poland: Fuzzy Multi-Criteria Decision Making Model

**Authors:** Shohreh Moradi, Grzegorz Sierpiński

[View Paper]

**Title:** Modelling of Delay for Protected/Permitted Left Turning Vehicles using Multigene Genetic Programming

**Authors:** Nemanja Dobrota, Aleksandar Stevanovic

[View Paper]
LIST OF PAPERS

The Following Papers Were Presented At The 2\textsuperscript{nd} International Conference On Civil Engineering Fundamentals And Applications (ICCEFA'21):

Environmental Pollution and Treatment

**Title:** Use of Frozen Silt Mat, an Alternative to Crane Timber Mat to Minimize Energy as Ninth Waste and to Reduce CO2 Emissions  
**Authors:** Ghulam Muhammad Ali, Habiba Zahir Imam, Sahar Rana, Rafiq Ahmad, Ahmed Bouferguene, and Mohamed Al-Hussein

[View Paper]
International ASET Inc. would like to thank the following sponsors for their support of ICCEFA'21:
3rd International Conference on Civil Engineering Fundamentals and Applications (ICCEFA’22) will be held on October 24, 2022 - October 26, 2022 in Seoul, South Korea.

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

You can also email info@iccefa.com or call us at: +1-613-834-9999
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The following statement is mainly based on the Code of Conduct and Best-Practice Guidelines for Journal Editors (Committee on Publication Ethics, 2011).

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**Scientific Committee**

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**Scientific Committee**

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Ethics & Malpractice

Authors

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