



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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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 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.

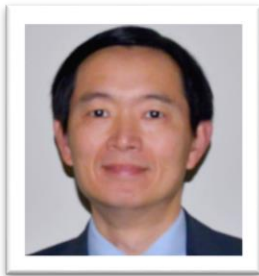
- All papers were peer-reviewed
- The conference proceedings is published under an ISSN and ISBN number
- Each paper is assigned a unique DOI number by [Crossref](#)
- The conference proceedings is indexed by [Google Scholar](#)
- The proceedings is permanently archived in [Portico](#) (one of the largest community-supported digital archives in the world)



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SCIENTIFIC COMMITTEE

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



Dr. Zhi Chen

Concordia University,
Canada
Conference Chair



Dr. Charles Lee

The University of
Newcastle, Singapore
Conference Chair

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

KEYNOTE SPEAKERS

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

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KEYNOTE LECTURE



Title: Infrastructure Asset Management – A Systems Engineering Perspective

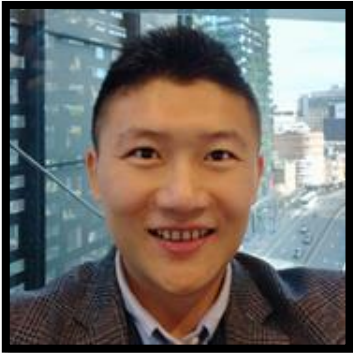
[Dr. Fuzhan Nasiri, Concordia University, Canada](#)

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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.

KEYNOTE LECTURE



Title: Development of Virtual Modelling Techniques in Civil Engineering

Dr. Dee Wu, University of Technology Sydney, Australia

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Dr Di Wu completed his PhD training at University of New South Wales Sydney in 2015. Since 2019, he has 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-learningaided 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 2nd International Conference On Civil Engineering Fundamentals And Applications (ICCEFA'21) :

Civil Engineering

Title: Seismic Assessment and Retrofitting Of Damaged Quarry Stone Buildings in Nepal

Authors: Simon Mühlbauer, Dimitris Diamantidis, Josef Schneider

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Title: Investigation of the Turbulent Schmidt Number Effects On Numerical Modelling Of Vortex-Type Stormwater Retention Ponds

Authors: S. M. Yamini; H. Shamloo; S. H. Ghafari

[View Paper](#)

Title: A Decision Support System for Estimating Allowable Soil Bearing Capacity for Mobile Crane Work

Authors: Ghulam Muhammad Ali, Asif Mansoor, Shuai Liu, Ahmed Bouferguene, and Mohamed Al-Hussein

[View Paper](#)

Title: A Simplified Hybrid Model For Cyclic Loaded Strip Footing On The Granular Materials

Authors: Nehal Elshaboury, Ghasan Alfalah, Abobakr Al-Sakkaf, Eslam Mohammed Abdelkader

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LIST OF PAPERS

The Following Papers Were Presented At The 2nd 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 Algadwi, 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

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LIST OF PAPERS

The Following Papers Were Presented At The 2nd 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

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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

[View Paper](#)

Title: Classification of Barriers to Implementing the Car-Sharing System. Case study for Tehran

Authors: Siamak Ahmadian, Grzegorz Sierpiński

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Title: Generalised Cost Function of Integrated Multimodal Transport

Authors: Paritosh Nandi, Grzegorz Sierpiński

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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

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LIST OF PAPERS

The Following Papers Were Presented At The 2nd 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

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SPONSORS

International ASET Inc. would like to thank the following sponsors for their support of ICCEFA'21:



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ICCEFA'22

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.



**3rd International Conference on Civil
Engineering Fundamentals and Applications
(ICCEFA'22)**

**October 24, 2022 – October 26, 2022 | Seoul,
South Korea.**

<https://2022.iccefa.com>

**For inquiries and to obtain further information on the congress,
please visit the [website](https://2022.iccefa.com)**

You can also email info@iccefa.com or call us at: +1-613-834-9999

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ETHICS & MALPRACTICE

Publication Ethics and Publication Malpractice Statement

The following statement is mainly based on the Code of Conduct and Best-Practice Guidelines for Journal Editors (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, originality, 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.

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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.

ETHICS & MALPRACTICE

Reviewers

Contribution to Decisions

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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

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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.

ETHICS & MALPRACTICE

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.

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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.

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

ETHICS & MALPRACTICE

Publisher

Errata and Retractions

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Schedule

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

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