

RT₂₁
ESE

**5TH INTERNATIONAL CONFERENCE OF RECENT
TRENDS IN ENVIRONMENTAL SCIENCE AND
ENGINEERING (RTESE'21)**

IC₂₁
CSTE

**6TH INTERNATIONAL CONFERENCE ON CIVIL,
STRUCTURAL AND TRANSPORTATION ENGINEERING
(ICCSTE'21)**

May 17, 2021 - May 19, 2021 | ~~Niagara Falls, Canada~~ | **Virtual Conference**

**RTESE'21 &
ICCSTE'21**

May 18

May 19

**OUR PROGRAM SCHEDULE IS BASED ON EASTERN TIME
(ET - OTTAWA TIME)**

RTESE'21 & ICCSTE'21

Registrants from the two conferences are permitted and encouraged to attend sessions from any of the two conferences.

10:00 AM – 12:00 PM Registrations

RTESE'21 Scientific Committee Chair



Dr. Mehrab Mehrvar

Ryerson University, Canada
Conference Chair

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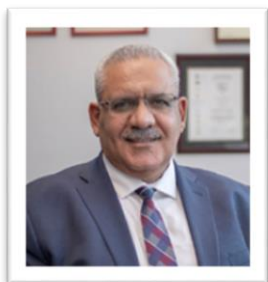


Dr. Zhi Chen

Concordia University, Canada
Conference Co-Chair

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ICCSTE'21 Scientific Committee Chair



Dr. Khaled Sennah

Ryerson University, Canada
Conference Chair

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MAY 18

7:30 AM - 8:30 AM	Registrations
8:30 AM - 8:40 AM	Official Opening
	Dr. Mehrab Mehrvar, Ryerson University, Canada and Dr. Khaled Sennah, Ryerson University, Canada
8:40 AM - 9:25 AM	ICCSTE'21 KEYNOTE LECTURE
	<u>Building Sustainability in New and Existing Concrete Structures with FRP</u> Dr. Shamim A. Sheikh, University of Toronto, Canada
9:25 AM - 10:10 AM	ICCSTE'21 KEYNOTE LECTURE
	<u>Utilizing Superelastic Shape Memory Alloys to Improve the Seismic Response of Bridges</u> Dr. Shahria Alam, The University of British Columbia, Canada
10:10 AM - 10:20 AM	Break
10:20 AM - 11:40 AM	Session <u>Earthquake and Structural Engineering I</u>
11:40 AM - 12:00 PM	Lunch Break

MAY 18

12:00 PM - 12:45 PM RTESE'21 KEYNOTE LECTURE

Value Added Utilization of Petroleum Sludge Waste

Dr. Jianbing Li, University of Northern British Columbia, Canada

12:45 PM - 01:30 PM RTESE'21 KEYNOTE LECTURE

Water-Energy-Food Nexus: Rethinking the Integrated Resources Management and Modeling

Dr. Amin Elshorbagy, University of Saskatchewan, Canada

1:30 PM - 1:40 PM Break

**01:40 PM - 02:55 PM Session
Water and Air Pollutions and Treatments I**

2:55 PM - 03:00 PM Break

**03:00 PM - 04:00 PM Session
Transportation Engineering I**

04:00 PM - 04:05 PM Break

**04:05 PM - 05:05 PM Session
Water and Air Pollutions and Treatments II**

05:05 PM - 05:10 PM Break

**05:10 PM - 06:10 PM Session
Transportation Engineering II**

ICCSTE'21 KEYNOTE LECTURE

MAY 18 | 08:40 AM - 9:25 AM | SESSION CHAIR: DR. KHALED SENNAH, RYERSON UNIVERSITY, CANADA



Titles: Building Sustainability in New and Existing Concrete Structures with FRP
[Dr. Shamim A. Sheikh, University of Toronto, Canada](#)

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Dr. Shamim A. Sheikh, is a Professor of Civil Engineering at the University of Toronto. He is a past Chair and member of Joint American Concrete Institute-American Society of Civil Engineers Committee 441, Reinforced Concrete Columns, and a member of ACI Committee 374, Performance-Based Seismic Design of Concrete Structures. He currently chairs Committee TSC16 on Structures with FRP for the Canadian Highway Bridge Code. His research interests include earthquake resistance and seismic upgrade of concrete structures, structural sustainability, use of fiber-reinforced polymers in concrete structures and the effects of climate change on structures. He is a recipient of several national and international awards including ACI Structural Research Award, CSCE Horst Leipholz Medal, Fellowship of Canadian Academy of Engineers and Sitarae-Imtiaz medal from the government of Pakistan.

ICCSTE'21 KEYNOTE LECTURE

MAY 18 | 9:25 AM - 10:10 AM | SESSION CHAIR: DR. KHALED SENNAH, RYERSON UNIVERSITY, CANADA



Titles: Utilizing Superelastic Shape Memory Alloys to Improve the Seismic Response of Bridges

Dr. Shahria Alam, The University of British Columbia, Canada

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Dr. Shahria Alam is a Professor of Civil Engineering in the School of Engineering and the Tier 1 Principal's Research Chair in Resilient & Green Infrastructure at The University of British Columbia (UBC)'s Okanagan campus. He is serving as the Director of the Green Construction Research & Training Center (GCRTC) at UBC. Dr. Alam is the Chair of the Engineering Mechanics and Materials Division of the Canadian Society for Civil Engineering (CSCE). He received his PhD in Civil Engineering from Western University in 2008. His research interests include smart and recycled materials and their structural engineering applications. He has published more than 300 peer-reviewed articles in these areas. He is the recipient of many national and international awards including CSCE Pratley Award 2015.

SESSION

EARTHQUAKE AND STRUCTURAL ENGINEERING I

MAY 18 | 10:20 AM - 11:40 AM | SESSION CHAIR: DR. SHAHRIA ALAM, THE UNIVERSITY OF BRITISH COLUMBIA, CANADA & DR. MAATOUK KHOUKHI, UNITED ARAB EMIRATES UNIVERSITY, U.A.E

Titles: Influence of Concrete Compressive Strength on Transfer Length in Pretensioned Concrete Members Using 3D Nonlinear FEM Analysis

ICCSTE 112

Time: 10:20 - 10:25

Presenter: Zaher Alkurdi, Budapest University of Technology and Economics, Hungary

Authors: Zaher Alkurdi

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Titles: CFRP Strengthening of Beams in Reinforced Concrete Frames with Openings in Shear Zone

ICCSTE 128

Time: 10:25 - 10:40

Presenter: Osama A. Mohamed, Abu Dhabi University, United Arab Emirates

Authors: Osama A. Mohamed, Rania M. Khattab

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Titles: Experience on Earthquake Safety of Large Embankment Dams constructed in Turkey

ICCSTE 137

Time: 10:40 - 10:55

Presenter: Hasan Tosun, Eskisehir Osmangazi University, Turkey

Authors: Hasan Tosun

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Titles: Total Risk and Seismic Stability of Existing Large CFRD's in Turkey

ICCSTE 138

Time: 10:55 - 11:10

Presenter: Hasan Tosun, Eskisehir Osmangazi University, Turkey

Authors: Hasan Tosun

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SESSION

EARTHQUAKE AND STRUCTURAL ENGINEERING I

MAY 18 | 10:20 AM - 11:40 AM | SESSION CHAIR: DR. SHAHRIA ALAM, THE UNIVERSITY OF BRITISH COLUMBIA, CANADA & DR. MAATOUK KHOUKHI, UNITED ARAB EMIRATES UNIVERSITY, U.A.E

Titles: A Study for immerge VR Applied in RC Building Earthquake Damage Assessment

ICCSTE 140

Time: 11:10 - 11:25

Presenter: Ren-Jwo Tsay, Vanung University, Taiwan

Authors: Ren-Jwo Tsay

[View Abstract](#)

Titles: Use of Non-Woven Polyethylene Terephthalate (PET) Tissue to improve Certain Properties of Concrete

ICCSTE 157

Time: 11:25 - 11:40

Presenter: Sifatullah BAHIJ, University of Strasbourg, France

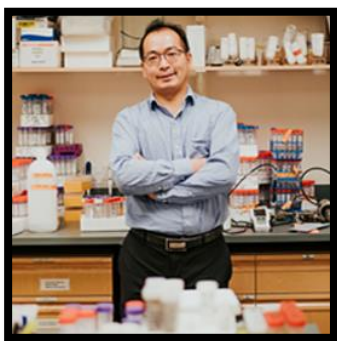
Authors: Sifatullah Bahij, Safiullah Omary, Francoise Feugeas, Amanullah Faqiri

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RTESE'21 KEYNOTE LECTURE

MAY 18 | 12:00 PM - 12:45 PM | SESSION CHAIR: DR. AMIN ELSHORBAGY, UNIVERSITY OF SASKATCHEWAN, CANADA



Titles: Value Added Utilization of Petroleum Sludge Waste
[Dr. Jianbing Li, University of Northern British Columbia, Canada](#)

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Dr. Jianbing Li is a professor in the environmental engineering program at the University of Northern British Columbia (UNBC). He obtained his PhD degree in environmental systems engineering from the University of Regina in 2003. He has research interests in environmental pollution control, petroleum waste management, contaminated soil and groundwater remediation, environmental modeling and decision analysis, and environmental risk assessment. He has produced more than 230 publications in international journals and conferences, with a h-index of 39 (Google Scholar). His research has been supported by a number of federal, provincial and municipal funding organizations. He obtained the 2013 Northern BC Business and Technology Award, the 2010, 2014 and 2019 UNBC Research Excellence Award, and the 2013 UNBC Achievement Award in Professional Practice and Mentorship. He also received several best paper awards from international conferences and international journal. He has served as the co-director of the UNBC/UBC environmental engineering program for 4 years (2013-2017). He has also served as a member of NSERC's Research Tool and Instruments Selection Committee for Civil, Industrial and Systems Engineering, and the Board of Examiners with Engineers & Geoscientists BC (EGBC). He served as a guest editor for three international journals, and acted as a committee member for many international conferences. He regularly serves as a reviewer for many international journals and conferences as well as a variety of national and international research funding organizations.

RTESE'21 KEYNOTE LECTURE

MAY 18 | 12:45 PM - 01:30 PM | SESSION CHAIR: DR. AMIN ELSHORBAGY, UNIVERSITY OF SASKATCHEWAN, CANADA



Titles: Going Beyond the “Whole Wetland”: Small-Scale Within-Wetland Heterogeneity, Translates To Big Difference in Methane Flux Dynamics and Regulation
[Dr. Gil Bohrer, The Ohio State University, USA](#)

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Gil Bohrer received a PhD from the Department of Civil and Environmental Engineering at Duke University, in 2007. He was a Harvard University Center for the Environment Fellow 2007-2008. He is a professor at the Department of Civil, Environmental and Geodetic Engineering at the Ohio State University since 2008. Bohrer’s research centers on understanding the role and dynamics of the ecosystem in atmospheric exchange, at the resolution of individual plants. He developed a canopy large eddy simulation to study the role of canopy structure in transport and surface uptake of seed, pollen and atmospheric pollutants. He developed a plant hydrodynamic model to study the effects of the hydraulic traits and behavior of trees on transpiration dynamics during water stress. He is one of the national Ameriflux core site PIs, and contributes long-term observations of ecosystem carbon and methane fluxes from forest and wetland sites. His research in wetlands is combining observations and modeling to identify the role of small-scale within-wetland ecological and hydrological heterogeneity in regulating the fluxes of methane and CO₂.

SESSION

WATER AND AIR POLLUTIONS AND TREATMENTS I

MAY 18 | 01:40 PM - 02:55 PM | SESSION CHAIR: DR. JIANBING LI, UNIVERSITY OF NORTHERN BRITISH COLUMBIA, CANADA

Titles: Source Identification of Continuous Discharge Pollution in River Accidents Based On A DREAM Inverse Method

RTESE 120

Time: 01:40 - 01:55

Presenter: Yinying Zhu, Concordia University, Canada

Authors: Yinying Zhu, Zhi Chen

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Titles: Challenges and Critical Water Quality Issues in Micro Water Systems in British Columbia, Canada

RTESE 201

Time: 01:55 - 02:10

Presenter: Zawad Abedin, University of Northern British Columbia, Canada

Authors: Zawad Abedin, Jianbing Li, Guangji Hu

[View Abstract](#)

Titles: Particle Pollution and Urban Forests: An Estimation of Particle Density on Leaves of Urban Plants Using Scanning Electron Microscopy

RTESE 113

Time: 02:10 - 02:25

Presenter: Samira Muhammad, University of Antwerp, Belgium

Authors: Samira Muhammad, Karen Wuyts, Karolien De Wael, Roeland Samson

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SESSION

WATER AND AIR POLLUTIONS AND TREATMENTS

MAY 18 | 01:40 PM - 03:55 PM | SESSION CHAIR: DR. AMIN ELSHORBAGY, UNIVERSITY OF SASKATCHEWAN, CANADA

Titles: Contributions to Keep the Atmosphere Balanced: Application of Scientific Fundamentals to Design a Magnetic Efficient Minimizer of Emissions from Mobile sources

RTESE 121

Time: 02:25 - 02:40

Presenter: Raul Guerrero Torres, University of Cartagena, Colombia

Authors: Raul Guerrero Torres, Mehrab Mehrvar

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Titles: Contributions to Keep the Atmosphere Balanced: A Simple MEB Minimizer for Light Cars Cutting Emissions from Mobile Sources Controlling CO₂

RTESE 123

Time: 02:40 - 02:55

Presenter: Raul Guerrero Torres, University of Cartagena, Colombia

Authors: Raul Guerrero Torres, Mehrab Mehrvar

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SESSION

TRANSPORTATION ENGINEERING I

MAY 18 | 03:00 PM - 04:00 PM | SESSION CHAIR: DR. RAJESHWAR GOODARY, UNIVERSITÉ DES MASCAREIGNES, MAURITIUS

Titles: Analysis of the Variability of Parking Characteristics in A Weekly Distribution in the Conditions of PPZ and DPI Function

ICCSTE 122

Time: 03:00 - 03:15

Presenter: Agata Kurek, Silesian University of Technology, Poland

Authors: Agata Kurek, Elżbieta Macioszek

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Titles: A Methodology Proposal of an Accessible Design for an Urban Intersection to Improve Mobility of People with Physical Disabilities

ICCSTE 147

Time: 03:15 - 03:30

Presenter: Carlos Santisteban Soto, University of Johannesburg, South Africa

Authors: K Fernández, C Santisteban, A Sánchez

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Titles: Experimental Investigation on the Performance of Rail Fastening Systems

ICCSTE 162

Time: 03:30 - 03:45

Presenter: Mehmet Ali TOPRAK, Istanbul Technical University, Turkey

Authors: M. Ali Toprak, Furkan Calim, Emre Gonulcu, M. Fatih Sahin, Ahmet Gullu, Yavuz Durgun, Hakan Saruhan, Ercan Yuksel

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Titles: Evaluation of Precast/Prestressed Concrete Girder Transport Vehicle Stability

ICCSTE 136

Time: 03:45 - 04:00

Presenter: Iraj Mamaghani, University of North Dakota, USA

Authors: Iraj H.P. Mamaghani, Njiru, Mwaura, Alexander Hasbargen, Arya Alishahi, Barry McAndrews, and Eric Schneider

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SESSION

WATER AND AIR POLLUTIONS AND TREATMENTS II

MAY 18 | 04:05 PM - 05:05 PM | SESSION CHAIR: DR. JIANBING LI, UNIVERSITY OF NORTHERN BRITISH COLUMBIA, CANADA & DR. GIL BOHRER, THE OHIO STATE UNIVERSITY, USA

Titles: Quantifying Water Use, Conservation and Footprint in the Winery Industry
RTESE 301

Time: 04:05 - 04:20

Presenter: Melody Blythe Johnson, Ryerson University, Canada

Authors: Melody Blythe Johnson, Mehrab Mehrvar

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Titles: Adverse Effect of Direct Discharge of Hot Spring Tributaries into Rivers on Life Aquatic Ecosystems
RTESE 302

Time: 04:20 - 04:35

Presenter: Melody Blythe Johnson, Ryerson University, Canada

Authors: Yuly Sánchez1, Mehrab Mehrvar , Lynda McCarthy, Edgar Quiñones-Bolaños , Luis Cheu , Jairo Chacón

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Titles: ARX-PID/NARX-PID Modelling and Control of UV/H₂O₂ Tubular Photoreactor for PVA Degradation in Water
RTESE 303

Time: 04:35 - 04:50

Presenter: Yi Ping Lin, Ryerson University, Canada

Authors: Yi Ping Lin, Ramdhane Dhib, Mehrab Mehrvar

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Titles: Evaluation Of The Impact Of Pumped Groundwater On The Environment And The Socio Economic Benefits Thereof
ICCSTE 127

Time: 04:50 - 05:05

Presenter: Armand Beukes, University of Johannesburg, South Africa

Authors: Armand J. Beukes, Jeffrey Mahachi, German K. Nkhonjera

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SESSION

TRANSPORTATION ENGINEERING II

MAY 18 | 05:10 PM - 06:10 PM | SESSION CHAIR: DR. RAJESHWAR GOODARY, UNIVERSITÉ DES MASCAREIGNES, MAURITIUS

Titles: Analysis of selected parking characteristics in the Paid Parking Zone - a Case Study Based on City in Poland

ICCSTE 118

Time: 05:10 - 05:25

Presenter: Agata Kurek, Silesian University of Technology, Poland

Authors: Agata Kurek, Elżbieta Macioszek

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Titles: Assessment of Railway Transport Safety in Bangladesh: A Before-After Study of COVID-19 Case

ICCSTE 163

Time: 05:25 - 05:40

Presenter: Armana Huq, Bangladesh University of Engineering and Technology, Bangladesh

Authors: Armana Huq, Hamim Tasin, Syeda Manila Jannat

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Titles: The Evidence of Critical Issues in Transportation Infrastructures of Bangladesh to Introduce Connected and Autonomous Vehicles

ICCSTE 164

Time: 05:40 - 05:55

Presenter: Armana Huq, Bangladesh University of Engineering and Technology, Bangladesh

Authors: Armana Huq, Kamol Debnath Dip, Nadia Binte Mohammad, Nazmus Sakib

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Titles: A Bayesian Structural Time Series Model for Assessing Road Traffic Accidents During COVID-19 Period

ICCSTE 166

Time: 05:55 - 06:10

Presenter: Armana Huq, Bangladesh University of Engineering and Technology, Bangladesh

Authors: Armana Huq, Shahrin Islam

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MAY 19

8:30 AM - 9:15 AM

RTESE'21 KEYNOTE LECTURE

The Profound but Often Forgotten Significance of Energy as a Measure of Change of State
Dr. Bryan Karney, University of Toronto, Canada

9:15 AM - 10:00 AM

RTESE'21 KEYNOTE LECTURE

Water-Energy-Food Nexus: Rethinking the Integrated Resources Management and Modeling
Dr. Amin Elshorbagy, University of Saskatchewan, Canada

10:00 AM - 10:10 AM

BREAK

10:10 AM - 10:35 AM

SESSION

Environmental Risk Assessments

10:35 AM - 10:40 AM

BREAK

10:40 AM - 11:40 PM

SESSION

Earthquake and Structural Engineering II

11:40 AM - 11:45 AM

BREAK

11:45 AM - 12:50 PM

SESSION

BUILDING MATERIALS

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MAY 19

12:50 PM - 1:10 PM **Lunch Break**

1:10 PM - 1:55 PM **ICCSTE'21 KEYNOTE LECTURE**

High Performance Asphalt Pavements

Dr. Peter E. Sebaaly, University of Nevada, USA

1:55 PM - 2:00 PM **Break**

02:00 PM - 02:45 PM **SESSION**

CONCRETE TECHNOLOGY

02:45 PM - 02:50 PM **BREAK**

02:50 PM - 03:05 PM **SESSION**

**NEW TECHNOLOGIES, METHODS AND
TECHNIQUES IN CIVIL ENGINEERING**

3:05 PM - 4:35 PM **SESSION**

STRUCTURAL MECHANICS

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RTESE'21 KEYNOTE LECTURE

MAY 19 | 8:30 AM - 9:15 AM | SESSION CHAIR: DR. MEHRAB MEHRVAR, RYERSON UNIVERSITY, CANADA



Titles: The Profound but Often Forgotten Significance of Energy as a Measure of Change of State

Dr. Bryan Karney, University of Toronto, Canada

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Bryan Karney graduated from the University of British Columbia with a B.A.Sc. degree in 1980 and a Ph.D. in Civil Engineering in 1984. His first academic appointment was at the University of Calgary in 1985 but he has been at the University of Toronto since 1987. Bryan is currently a professor of Civil Engineering and has been the Associate Dean of the Cross-Disciplinary Programs office in the Faculty of Applied Science and Engineering since 2006. Bryan is also a principal of HydraTek with more than 30-years experience in providing comprehensive hydraulic and hydraulic transient consulting services on a wide range of fluid systems, including water, wastewater, storm, oil, gas, and jet fuel. Bryan has spoken and written widely on subjects related to water resource systems, energy issues, hydrology, climate change, optimization, engineering education, and engineering ethics. He was Associate Editor for the ASCE's Journal of Hydraulic Engineering from 1993 to 2005 and has been an Associate Editor for IAHR's Journal of Hydraulic Research since 2016. He has written numerous papers and has been awarded a number of teaching and research awards.

RTESE'21 KEYNOTE LECTURE

MAY 19 | 09:15 PM - 10:00 PM | SESSION CHAIR: DR. MEHRAB MEHRVAR, RYERSON UNIVERSITY, CANADA



Titles: Water-Energy-Food Nexus:
Rethinking the Integrated Resources
Management and Modeling
Dr. Amin Elshorbagy, University of
Saskatchewan, Canada

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Dr. Amin Elshorbagy, a professor of hydrology and water resources engineering at the University of Saskatchewan, is a licensed professional engineer with the Association of Professional Engineers and Geoscientists (APEGS) of Saskatchewan. The research and expertise of Dr. Elshorbagy are focused on, and link, the areas of hydrologic and water resources systems modeling and decision analysis through synthesizing the results of various modeling tools and techniques to support the decision making process. Dr. Elshorbagy also works extensively on integrated water resources management of trans-boundary rivers, attempting to address the challenges of sustainable utilization of water resources in light of the past hydroclimatic conditions as well as possible future changes. Water-energy-food nexus is an emerging, central theme of Elshorbagy's current research as the second-generation approach of managing integrated resources, including water. The areas of expertise and interests of Dr. Elshorbagy include system dynamics and emulation of complex models, stochastic hydrology, data driven hydrology, watershed modeling, flood modeling in the Canadian prairies, uncertainty analysis, multicriterion decision and risk analysis, impact of climate change on water resources and urban systems, and use of proxy records (tree rings) for extending hydrological records. Amin's expertise led him to deliver invited talks in several places in Canada, Europe, and Australia. Professor Elshorbagy is currently an Associate Editor of the Journal of Water Resources Research and served as Editor of the Journal of Hydroinformatics.

For more information please visit:

<https://rtese.com/keynote-speakers>

SESSION

ENVIRONMENTAL RISK ASSESSMENTS

MAY 19 | 10:10 AM - 10:35 AM | SESSION CHAIR: DR. AMIN ELSHORBAGY, UNIVERSITY OF SASKATCHEWAN, CANADA

Titles: Identifying and Ranking Environmental Risks of Oil and Gas Projects Using the VIKOR Method for Multi-Criteria Decision Making

ICCSTE 113

Time: 10:10 - 10:15

Presenter: Sasan Aryaee, Islamic Azad University, Iran

Authors: Sasan Aryaee, Mahdi Ravanshadnia

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Titles: Ranking Environmental Risks for Promoting HSE Management, Case Study: Oil and Gas Projects

ICCSTE 114

Time: 10:15 - 10:20

Presenter: Sasan Aryaee, Islamic Azad University, Iran

Authors: Sasan Aryaee, Mahdi Ravanshadnia

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Titles: Georisks and Sustainability Resource of The Mascarene Islands Territories to External Impacts

ICCSTE 151

Time: 10:20 - 11:35

Presenter: Rajeshwar Goodary, Université des Mascareignes , Mauritius

Authors: Viacheslav legupov, Rajeshwar Goodary, Yeshvin Goodary

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SESSION

EARTHQUAKE AND STRUCTURAL ENGINEERING II

MAY 19 | 10:40 AM - 11:40 PM | SESSION CHAIR: DR. ALEXANDER BRAND, VIRGINIA TECH, USA

Titles: Seismic Response of LNG Storage Tanks under Earthquake Excitations

ICCSTE 141

Time: 10:40 - 10:55

Presenter: Iraj Mamaghani, University of North Dakota, USA

Authors: Iraj H.P. Mamaghani, Wiryachai RoopKumdee

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Titles: Seismic Resistance and Buckling Strength of Cylindrical Steel Liquid Storage Tanks

ICCSTE 134

Time: 10:55 - 11:10

Presenter: Iraj Mamaghani, University of North Dakota, USA

Authors: Mohammed Wiryachai Roopkumdee, Iraj H.P. Mamaghani

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Titles: Investigation on Teardrop Connection of Rack Clad Building

ICCSTE 161

Time: 11:10 - 11:25

Presenter: Radin Md Mahirul Hoque, Bangladesh

Authors: Radin Md Mahirul Hoque, Peng Zhang, M. Shahria Alam, Robert Tremblay

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Titles: Dynamic Stability of Large Embankment Dams and a Case Study

ICCSTE 139

Time: 11:25 - 11:40

Presenter: Hasan Tosun, Eskisehir Osmangazi University, Turkey

Authors: Hasan Tosun

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SESSION

BUILDING MATERIALS

MAY 19 | 11:45 PM - 12:50 PM | SESSION CHAIR: DR. ZHI CHEN, CONCORDIA UNIVERSITY, CANADA & DR. IRAJ MAMAGHANI, UNIVERSITY OF NORTH DAKOTA, USA

Titles: Aggregate Moisture Content and Fresh Property Control Measures in Cementitious Mortars

ICCSTE 130

Time: 11:45 - 11:50

Presenter: Alexander S. Brand, Virginia Tech, USA

Authors: Morgan C. Jenkins, Alexander S. Brand

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Titles: A Preliminary Digital Image Correlation Study of the Anisotropic Mechanical Properties of a 3D-Printed Mortar

ICCSTE 146

Time: 11:50 - 12:05

Presenter: Alexander S. Brand, Virginia Tech, USA

Authors: Morgan C. Jenkins, Alexander S. Brand, T. Trevor Painter, Samuel T. Sherry

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Titles: Impact of Dynamic Thermal Conductivity Change of EPS Insulation on Temperature Variation through a Wall Assembly

ICCSTE 144

Time: 12:05 - 12:20

Presenter: Maatouk Khoukhi, United Arab Emirates University, UAE

Authors: Maatouk Khoukhi

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Titles: Interaction between Internal and External Shear Reinforcement for Strengthened RC Deep Beams

ICCSTE 168

Time: 12:20 - 12:35

Presenter: Mohamed Ibrahim, Qatar University, Qatar

Authors: Mohamed Ibrahim, Qusai Aborahmeh, Usama Ebead

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SESSION

BUILDING MATERIALS

MAY 19 | 11:45 PM - 12:50 PM | SESSION CHAIR: DR. ZHI CHEN, CONCORDIA UNIVERSITY, CANADA & DR. IRAJ MAMAGHANI, UNIVERSITY OF NORTH DAKOTA, USA

Titles: A Reliability-Based Comparison of EC3 & SANS 10162-1
ICCSTE 131

Time: 12:35 - 12:50

Presenter: Gerald Nkosi, University of Johannesburg, South Africa

Authors: Gerald Musa Nkosi, Jeffery Mahachi, Stephen Adeyemi Alabi

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ICCSTE'21 KEYNOTE LECTURE

MAY 19 | 1:10 PM - 01:55 PM | SESSION CHAIR: SESSION CHAIR: DR. ZHI CHEN, CONCORDIA UNIVERSITY, CANADA



Titles: High Performance Asphalt Pavements

Dr. Peter E. Sebaaly, University of Nevada, USA

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Dr. Peter E. Sebaaly is a Professor of Civil Engineering and Director of the Western Regional Superpave Center (WRSC) and the Pavement Engineering & Science (PES) Program at the University of Nevada, Reno (UNR). He is a registered Professional Engineer in the states of Nevada & Arizona, USA. He earned his B.S.C.E. (1982) and M.S.C.E. (1983) from the State University of New York at Buffalo and his Ph.D. (1987) from Arizona State University, specializing in pavements/materials engineering. In 1990, Dr. Sebaaly joined the faculty of the University of Nevada, Reno (UNR). Dr. Sebaaly is currently working on several research projects on the development of new engineered materials to enhance the durability and sustainability of asphalt pavements and the incorporation of these materials into design methods and specifications for maintenance, rehabilitation, and construction of pavements.

SESSION

CONCRETE TECHNOLOGY

MAY 19 | 02:00 PM - 02:45 PM | SESSION CHAIR: DR. PETER E. SEBAALY, UNIVERSITY OF NEVADA, USA

Titles: Testing Post Tensioned Slabs with Bonded and Unbonded Tendons
ICCSTE 117

Time: 02:00 - 02:15

Presenter: Jasmin Osama Abdelhalim, The American University in Cairo, Egypt

Authors: Jasmin Osama Abdelhalim, Ezzeldin Yazeed Sayed-Ahmed

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Titles: Utilization of Sewage Sludge Ash in Self-Compacted Concrete
ICCSTE 126

Time: 02:15 - 02:30

Presenter: Siham AlShanti, United Arab Emirates University, UAE

Authors: Siham Al Shanti1 Amr El-Dieb, Munjed A. Maraqa

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Titles: Experimental Investigations of Eccentrically Loaded Circular Concrete Filled
Double Steel Tubular Short Columns

ICCSTE 158

Time: 02:30 - 02:45

Presenter: Ahmed Hamoda, Kafrelsheikh University, Egypt

Authors: Junchang Ci, Mizan Ahmed, Shicai Chen, Ahmed Hamoda, Khaled Sennah

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SESSION

NEW TECHNOLOGIES, METHODS AND TECHNIQUES IN CIVIL ENGINEERING

MAY 19 | 02:50 PM - 03:05 PM | SESSION CHAIR: DR. KHALED SENNAH, RYERSON UNIVERSITY, CANADA

Titles: Assessment of Civil Engineering Students' Exposure Levels to Active Learning Strategies in the UAE

ICCSTE 153

Time: 02:50 - 03:05

Presenter: Francisco D. B. Albuquerque, United Arab Emirates University, UAE

Authors: Melinda J. B. Albuquerque, Francisco Daniel B. Albuquerque

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SESSION

STRUCTURAL MECHANICS

MAY 19 | 03:05 PM - 04:35 PM | SESSION CHAIR: DR. KHALED SENNAH, RYERSON UNIVERSITY, CANADA & DR. RAJESHWAR GOODARY, UNIVERSITÉ DES MASCAREIGNES, MAURITIUS

Titles: Strength Properties of Hardwood Timber Species Exposed to Decay and Marine Borer Attack in Tidal Zones

ICCSTE 145

Time: 03:05 - 03:20

Presenter: Iraj Mamaghani, University of North Dakota, USA

Authors: Jeffrey Lynes, Iraj H.P. Mamaghani

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Titles: Glass as a Structural Material: Post-tensioned Glass T-Beam

ICCSTE 301

Time: 03:20 - 03:35

Presenter: Emrullah Koca, Middle East Technical University, Turkey

Authors: Emrullah Koca, Ahmet Türer

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Titles: Analytical and Experimental Investigation of Post-tensioned Tempered Glass T-Beams

ICCSTE 303

Time: 03:35 - 03:50

Presenter: Ahmet Türer, Middle East Technical University, Turkey

Authors: Ahmet Turer, Emrullah Koca

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SESSION

STRUCTURAL MECHANICS

MAY 19 | 03:05 PM - 04:35 PM | SESSION CHAIR: DR. KHALED SENNAH, RYERSON UNIVERSITY, CANADA & DR. RAJESHWAR GOODARY, UNIVERSITÉ DES MASCAREIGNES, MAURITIUS

Titles: A Comparison Investigation into Analysis Methods to Determine the Buckling Capacity of South African Cold-Formed Steel Lipped Channel Sections

ICCSTE 133

Time: 03:50 - 4:05

Presenter: Johan van Vuuren, University of Johannesburg, Ireland

Authors: Johan van Vuuren, Jeffrey Mahachi

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Titles: Performance of Roof Anchor Systems for Low-Income Housing in South Africa

ICCSTE 119

Time: 04:05 - 04:20

Presenter: Ruben van der Merwe, University of Johannesburg, South Africa

Authors: Ruben van der Merwe, Jeffrey Mahachi

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Titles: Conceptual Framework for a Decision-Making Model to Select the Public-Private Partnership (PPP) Structure for Urban Rail Transit in Jakarta

ICCSTE 160

Time: 04:20 - 04:35

Presenter: Retno Ambarsari, University of Indonesia, Indonesia

Authors: Retno Ambarsari, Sutanto Soehodho, R Jachrizal Sumabrata

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