



The 15th International Conference on
**Sustainable Built
Environment -2024**



The Kandy Conference

PROGRAM BOOK



**15th International Conference on Sustainable Built Environment (ICSBE)
2024**

Vision

To drive innovative research for tomorrow's development

Mission

To meet colleagues, experts and friends in the field and to exchange ideas and those about research development work, concepts and practical ideas in structural, construction and management

20th - 22nd December 2024, Kandy, Sri Lanka

PREFACE

It is with great pleasure that we present the abstract book of the 15th International Conference on Sustainable Built Environment (ICSBE) 2024. This is the fifteenth consecutively organized conference following a series of international conferences since 2010, keeping its tradition of adhering to engineering excellence. Taking a step forward from the last fourteen events, the coverage of specialty areas in this conference has been diversified. This book contains the manuscripts of research work from many different sub specialties. We expect that all these manuscripts will be presented at parallel sessions from 20th to 22nd December 2024. We would like to express our appreciation to all keynote speakers for their invaluable contribution for the development of a sustainable world. We are also very grateful to the authors for contributing research papers of high quality. The manuscripts in this abstract book have been reviewed by a panel of academic and professional experts who have vast expertise in their respective fields. The enormous work carried out by these reviewers is gratefully appreciated as well. We are also pleased to acknowledge the advice and assistance provided by the members of the international advisory committee and members of the editorial committee along with many others who volunteered to assist to make this very significant event a success. Furthermore, we acknowledge the financial sponsorship provided by many organizations that has been extremely supportive towards the success of this international conference. It is the earnest wish of the editors that this proceeding book would be used by the research community and practicing engineers who are directly or indirectly involved in studies related to sustainable built environments.

Editors

Prof. Ranjith Dissanayake

Dr. Pradeep Gajanayake

The 15th International Conference on Sustainable Built Environment (ICSBE) 2024
20th to 22nd December 2024, Kandy, Sri Lanka

Message from the Conference Co-Chairs

It is a pleasure for us to welcome all the participants to the 15th International Conference on Sustainable Built Environment (ICSBE) 2024 in Kandy, Sri Lanka. We, the co-chairs would gratefully like to mention the previous successful conference, which was held for fourteen consecutive years in Kandy, Sri Lanka. The theme selected for the conference Sustainable Built Environment- is extremely relevant to today's world. With the vision of promoting innovative and sustainable research for tomorrow's development. We organize this conference as a meeting place of talents, knowledge, and dedication. Therefore, we trust that the conference will produce great ideas from a variety of research and exchange the knowledge of experts, colleagues, and friends who are working for the world's sustainable development. The conference focuses on the different sub-topics in the sustainable built environment: such as sustainable construction, sustainable infrastructure development & planning, urban green infrastructure & planning, sustainable cities and villages, waste & wastewater management for enhanced sustainability, advanced water & wastewater technology, rainwater harvesting, water conservation, solar energy, bio-energy, wind, and hydro-power energy, alternative clean energy, green advanced computations & communication, green energy economics, policy, financing & business practice, sustainable materials, material flows & industrial ecology, high-performance concrete, remove, recycle, repair of materials, building automation, indoor environmental quality, indoor plants, impacts of climate change, climate change & reducing greenhouse emissions, carbon footprint, impacts of sustainable bio-fuel, social impact & human behavior, climate risk management & mitigation, global climate model and landscaping. The best-selected papers will be published in Springer Nature as lecture notes in civil engineering. Other full papers (which are presented at the conference) are published as conference proceedings. The host city of the conference, Kandy, is a world heritage city famous for its unique architecture, culture, nature, beauty, and climate. We hope that you will enjoy your time in Kandy during the conference. We, the conference co-chairs express our sincere thanks to our guests, keynote speakers, authors, members of the international advisory committee, members of the editorial committee financial sponsors, and many others who volunteered to assist to make this very significant event a success.

Prof. Ranjith Dissanayka

Prof. Priyan Mendis

Prof. Chintha Jayasinghe

Prof. Sudhira De Silva

Prof. Upul Attanayake

Prof. Ayantha Gomes

Prof. Ajith Dolage

Prof. Chaminda Bandara

Dr. Ajith Thambo

Dr. Balasubramaniam Janarthanan

Dr. K.H.P Madusanka

Eng. Shiromal Fernando

The 15th International Conference on Sustainable Built Environment (ICSBE) 2024

MESSAGE FROM THE CHIEF GUEST

I am privileged to share this message as the Chief Guest on the occasion of the 15th International Conference on the Sustainable Built Environment (ICSBE 2024). This long-standing event has clearly become a globally recognized platform, showcasing Sri Lanka's contributions to sustainability research and innovation. Events like this serve as catalysts for fostering resilience and responsibility while driving impactful solutions that resonate both nationally and internationally.

The Kandy conference emphasizes the multidisciplinary nature of sustainable development, particularly by promoting academic and industrial collaborations. The technical sessions of the conference, centered around the theme "Building Sustainable Nations," aligns deeply with the United Nations' 17 Sustainable Development Goals. I believe this theme highlights the importance of sustainability not only as an environmental priority but also as an economic opportunity. Sri Lanka and many nations still have much to achieve regarding these SDGs, but conferences like this encourage the ethos and promote sustainable development.

I commend the organizing committee, led by Prof. Ranjith Dissanayake, for their outstanding efforts in sustaining this conference and ensuring its success. Reaching its fifteenth milestone is no small feat and reflects the dedication and vision of all involved. As an academic and a researcher, I deeply appreciate the commitment required to maintain such a vibrant conference series.

The knowledge shared here should not end within these walls but instead, inspire actionable outcomes in your respective fields. I trust that ICSBE 2024 will generate impactful insights and foster meaningful collaborations that extend beyond this event, shaping a more sustainable and resilient world.

Wishing the conference every success!

Thank You

Prof. Lalith Gamage
Vice Chancellor/ CEO of Sri Lanka Institute of Information Technology (SLIIT)

Date: 21st December 2024/ Time: 8.30-10.30 hrs

Room 1 (Hybrid)/ Session 01

Council on Tall Buildings and Urban Habitat

Join Meeting	Zoom	https://us06web.zoom.us/j/85665521903?pwd=9kiXxG0QvMmGAaFZ3KTcybrqpB2jY7.1	
		Meeting ID: 856 6552 1903	Meeting Passcode: 214250
Session Chair 1	Prof. Priyan Mendis University of Melbourne Australia	Session Chair 2	Eng. Shiromal Fernando Managing Director at Civil & Structural Engineering Consultants (Pvt) Limited Sri Lanka
8.30-8.40 hrs	Welcome and introduction to CTBUH		
8.40-8.55 hrs	AI in Design - CTBUH Vice President Sri Lanka Chapter		
8.55-9.15 hrs	Key Lecture	“150 MPA INNOVATIVE HIGH-STRENGTH CONCRETE FOR TALL BUILDINGS” Dr Kasun Shanaka	
9.15-9.30 hrs	IMPACT OF SOLAR HEAT GAIN AND VENTILATION DESIGN ON THERMAL COMFORT IN HOSPITALITY SPACES		
9.30-9.45 hrs	STRATEGIES AND INNOVATIONS IN GREEN RATINGS FOR TALL APARTMENT BUILDINGS		
9.45-10.00 hrs	ICSBE24_553	USE OF COMPUTATIONAL MODELING TO OPTIMIZE THE LAYOUT OF OUTDOOR A/C UNITS IN RE-ENTRANTS OF TROPICAL HIGH-RISE RESIDENTIAL BUILDINGS <i>V.M. Harithkhan, I. D. Nissanka, M.M.I.D. Manthilake</i>	
10.00-10.15 hrs	ICSBE24_313	SENSITIVITY ANALYSIS OF INTERFERENCE EFFECTS ON INPUT WIND VELOCITIES FOR DIFFERENT HIGH-DENSITY BUILDING ARRANGEMENTS	

		<i>P. M. T. N. Edirisinghe D. P. N. A. P. Gunadasa, J. A. S. C. Jayasinghe</i>	
10.15-10.30 hrs	ICSBE24_555	<p>LOW-CARBON SUSTAINABLE CONCRETE INCORPORATING GRAPHENE</p> <p><i>Danula Udumulla, Priyan Mendis, Thusitha Ginigaddara, Pasadi Devapura</i></p>	
Session Coordinator 1	Eng. Ravishka Iroshana +94 77 5405870	Session Coordinator 2	Eng. Isuru Jasin Arachchi +94 70 3047478

Date: 21st December 2024/ Time: 14.00-16.00 hrs

Room 1 (Hybrid)/ Session 03

Climate Risk Management & Mitigation

Join Zoom Meeting	https://us06web.zoom.us/j/85665521903?pwd=9kiXxG0QvMmGAaFZ3KTcybrqpB2jY7.1		
	Meeting ID: 856 6552 1903 Meeting Passcode: 214250		
Session Chair 1	Dr.Panduka Neluwala University of Peradeniya Sri Lanka	Session Chair 2	Prof. Ajith Dolage The Open University of Sri Lanka Sri Lanka
Time	Paper ID	Title	
14.00-14.15 hrs	ICSBE24_285	APPLICATION OF THE VEGETATION HEALTH INDEX (VHI) TO ASSESS THE DROUGHT CONDITIONS DURING DRY SEASON IN PADAVIYA DIVISIONAL SECRETARIATE DIVISION IN ANURADHAPURA DISTRICT <i>W.K. S. Prarthana , A. K. Wickramasooriya</i>	
14.15-14.30 hrs	ICSBE24_280	EFFECT OF URBAN PARK CHARACTERISTICS ON PARK COOL ISLAND INTENSITY IN COLOMBO URBAN AREA; OPTIMIZATION OF SUSTAINABLE URBAN PARK PLANNING <i>A. A. S. G. Wijesundara and B. G. N. Sewwandi</i>	
14.30-14.45 hrs	ICSBE24_470	ASSESSMENT ON CARBON SEQUESTRATION PERFORMANCE OF ROADSIDE TREES IN BATTICALOA REGION, SRI LANKA <i>S.M.M.Hazeema, B.G.N.Sewwandi</i>	
14.45-15.00 hrs	ICSBE24_799	LICHEN AS A BIOMONITOR TO MONITOR INDUSTRIAL POLLUTION IN TWO SELECTED INDUSTRIAL ZONES IN SRI LANKA <i>A.R.T.M.Gunarathna, A.D.S.N.P.Athukorala</i>	
15.15-15.30 hrs	ICSBE24_010	A REVIEW OF THE IMPACT, VULNERABILITY, AND ADAPTABILITY OF CLIMATE VARIABILITY <i>S.M.N.S. Senanayaka, E.M.S. Ranasinghe</i>	

15.30-15.45 hrs	ICSBE24_286	SPATIAL PATTERNS OF PM 2.5 AND PM 10 AIR POLLUTION IN COLOMBO MUNICIPAL COUNCIL AREA <i>O. K. T. N. Dananjana, B.L.W.K. Balasooriya, U.W.A. Vitharana</i>	
Session Coordinator 1	Eng. Ravishka Iroshana 077 5405870	Session Coordinator 2	Eng. Isuru Jasin Arachchi 070 3047478

Date: 21st December 2024/ Time: 16.30-18.30 hrs

Room 1 (Hybrid)/ Session 04

Sustainable Agriculture Practices

Join Zoom Meeting

<https://us06web.zoom.us/j/85665521903?pwd=9kiXxG0QvMmGAaFZ3KTcybrqpB2jY7.1>

Meeting ID: 856 6552 1903

Meeting Passcode: 214250

Session Chair 1

Dr. H.K.B.S. Chamara
University of Sri
Jayewardenepura
Sri Lanka

Session Chair 2

Dr.Priyanga Kariyawasam
University of Colombo
Sri Lanka

Time

Paper ID

Title

16.30-16.45 hrs

ICSBE24_116

COMPARATIVE ANALYSIS OF *Xanthosoma sagittifolium* CULTIVATION IN SRI LANKA: IMPLICATIONS FOR FOOD SECURITY AND SUSTAINABILITY

WPT Wijenayake, Sandun Bandara, NDAD Wijayagunawardhana, DA Carole

16.45-17.00 hrs

ICSBE24_091

ASSESSING PESTICIDE AND FERTILIZER USAGE IN RICE CULTIVATION: A SURVEY OF FARMERS AND RETAILERS IN THE POLONNARUWA DISTRICT, SRI LANKA

H.Y.K.S.De Silva, M. Makehelwala, A. Gamage

17.00-17.15 hrs

ICSBE24_798

IMPACT OF USING MICROALGAL CONSORTIUM FOR SEED GERMINATION IN RICE

H.A.D.R.P. Sirimanna A.D.S.N.P. Athukorala

17.15-17.30 hrs

ICSBE24_820

POTENTIAL USAGE OF LIQUID PHASE OF SEWAGE SLUDGE PRODUCED USING HYDROTHERMAL CARBONATION FOR AGRICULTURAL PURPOSES

Wathsala Sriyananda, S.Sajithan, Udara Welagedara, I.M.W.K. Illangasinghe, E.P. Rajapakse

17.30-17.45 hrs

ICSBE24_487

ARTIFICIAL INTELLIGENCE: A TECHNOLOGY FOR FRUIT QUALITY INSPECTION AND MONITORING IN SUSTAINABLE AGRICULTURE

		<i>J.A.T.N. Jayasooriya , M.G.G. Awanthi</i>	
17.45-18.00hrs	ICSBE24_670	KINETICS AND MATHEMATICAL MODELLING OF BLACK PEPPER DRYING IN A FLUIDIZED BED DRYER <i>G.K Jayatunga,D.Shyamalee , B.M.W.P.K Amarasinghle</i>	
18.00-18.15hrs	ICSBE24_655	EXAMINING THE DROUGHT ADAPTATION STRATEGIES: A CASE STUDY IN PADAVIYA DS DIVISION <i>R.A Dias , K.M.S.M. Bandara</i>	
Session Coordinator 1	Eng. Ravishka Iroshana 077 5405870	Session Coordinator 2	Eng. Isuru Jasin Arachchi 070 3047478

Date: 21st December 2024/ Time: 8.30-10.30 hrs

Room 2 (Hybrid)/ Session 01

Concrete Technology and High-Performance Concrete

Join Zoom Meeting

<https://us06web.zoom.us/j/87319842721?pwd=I6fpbiK2bkJ7zFITOtZwYzabta1BD2.1>

Meeting ID: 873 1984 2721

Meeting Passcode: 314042

Session Chair 1

Prof. Hiran Yapa
University of
Peradeniya
Sri Lanka

Session
Chair 2

Dr. Thushara Priyadarshana
Open University of Sri Lanka
Sri Lanka

Time

Paper ID

Title

8.30 – 8.45 hrs

ICSBE24_684

DURABILITY CHARACTERISTICS OF CONCRETE WITH SURFACE-TREATED CALICUT TILE AGGREGATES

J. Johnkeshanth, H.M.C.C. Somarathna, S. Kishothara, M. M. M. Kaashif

8.45 – 9.00 hrs

ICSB24_086

INVESTIGATING EARLY-AGE STRENGTH OF HIGH-STRENGTH CONCRETE MADE OF HIGH-STRENGTH CEMENT PASTE AND HIGH-GRADE AGGREGATES

R. Anushan, K.M.C Konthesingha, I.R. Upasiri, A. Branava, P.M.W.P. Kumara, D.A.D.N. Dissanayake

9.00-9.15 hrs

ICSBE24_203

PREDICTING THE DURABILITY OF WALLING UNITS BY IDENTIFYING MOSS GROWTH THROUGH IMAGE PROCESSING

L.R. Irudhiyarajah, Akarshani Amarasinghe, I.R. Upasiri

9.15-9.30 hrs

ICSBE24_041

INVESTIGATING THE EFFECT OF DIFFERENT MIX PERCENTAGES OF GRAPHENE OXIDE ON THE ABRASION RESISTANCE OF CONCRETE

I.D.S.E.M. Dewage, Dr. T.M. Perera, Dr. I.S.K. Wijayawardane

9.30-9.45 hrs

ICSBE24_084

STRUCTURAL REHABILITATION USING ULTRA-HIGH-PERFORMANCE FIBER-REINFORCED CONCRETE (UHPRC) JACKETING

K.R.S Prabashwara, W.D.M Ruwansara, S Bandara

9.45-10.00 hrs	ICSBE24_805	EFFECT OF SEA SHELL CONTENT ON THE MECHANICAL PROPERTIES OF SEA SAND CONCRETE <i>Anuradha Koswaththa, Samith Buddika, Hiran Yapa</i>			
10.00-10.15 hrs	ICSBE24_793	EVALUATION OF MODULUS OF ELASTICITY PREDICTIONS FOR ULTRA- HIGH-PERFORMANCE FIBER-REINFORCED CONCRETE (UHPRFC) <i>Kalpa Gamage, Sandaru Wijesundara, Isuru Abeykoon, Sahan Bandara, Kushan Wijesundara</i>			
10.15-10.30 hrs	ICSBE24_901	INFLUENCE OF RUBBER PARTICLE SOURCE AND MORPHOLOGY ON THE MECHANICAL PROPERTIES OF AQUA-THERMALLY TREATED RUBBERIZED CONCRETE <i>B.G.V. Sanjaya, J.M.R.S. Appuhamy, W.M.K.R.T.W. Bandara, S. Venkatesan, R.J. Gravina</i>			
Session Coordinator 1	Eng. Chamath Dulanjana +94 77 8116448	Session Coordinator 2	Ms. Lakmi Perera +94763705037	Session Coordinator 3	Ms. Nipuni Sewwandi +94 701673177

Date: 21st December 2024/ Time: 14.00-16.00 hrs

Room 2 (Hybrid)/ Session 03

Bridge Design Construction and Maintenance

Join Zoom Meeting	https://us06web.zoom.us/j/87319842721?pwd=I6fpbiK2bkJ7zFITOtZwYzabta1BD2.1		
	Meeting ID: 873 1984 2721		Meeting Passcode: 314042
Session Chair 1	Prof. Upul Attanayake University of Western Michigan USA	Session Chair 2	Prof. Chaminda Bandara University of Peradeniya Sri Lanka
Time	Paper ID	Title	
14.00-14.20 hrs	Key Lecture	“VIBRATION MEASUREMENTS OF FOOT BRIDGES USING SMART PHONE DATA” <i>R. Purasinghe, E. Ozer, O. Marroquin</i>	
14.20-14.40 hrs	Key Lecture	“ADVANCING THE USE OF DIGITAL DATA FOR BRIDGE PROJECT DEVELOPMENT, CONSTRUCTION, AND MAINTENANCE AND OPERATION ACTIVITIES” Prof. Upul Attanayake University of Western Michigan USA	
14.15-14.30 hrs	ICSBE24_190	EXPLORING THE ROLE OF NONLINEAR DAMPING IN DAMAGE DETECTION OF BEAM-LIKE STRUCTURES: A MODAL RESPONSE ANALYSIS <i>G.B. Dissanayake, A.J. Dammika, C.S. Bandara, J.A.S.C. Jayasinghe, P.B.R. Dissanayake</i>	
14.30-14.45 hrs	ICSBE24_170	EXPERIMENTAL AND NUMARICAL STUDY ON T-SHAPED WELDED STEEL PLATES <i>T.Abivarna, S.Mathushan, C.S. Bandara, J.A.S.C. Jayasinghe</i>	
14.45-15.00 hrs	ICSBE24_202	NONLINEAR DAMPING BASED DIAGNOSTIC TECHNIQUE FOR PRESTRESSED CONCRETE GIRDER BRIDGES <i>G.B. Dissanayake, A.J. Dammika, C.S. Bandara, J.A.S.C. Jayasinghe, P.B.R. Dissanayake</i>	

Session Coordinator 1	Eng. Chamath Dulanjana +94 77 8116448	Session Coordinator 2	Ms. Lakmi Perera +94 763705037	Session Coordinator 3	Ms. Nipuni Sewwandi +94 70 1673177
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Date: 21st December 2024/ Time: 16.30-18.30 hrs

Room 2 (Hybrid)/ Session 04

Water Treatment Technologies

Join Meeting	Zoom	https://us06web.zoom.us/j/87319842721?pwd=I6fpbiK2bkJ7zFITOtZwYzabta1BD2.1			
		Meeting ID: 873 1984 2721	Meeting Passcode: 314042		
Session Chair 1	Prof. Ayantha Gomes Sri Lanka Institute of Information Technology Sri Lanka	Session Chair 2	Dr. Lahiru Lindamulla Sri Lanka Institute of Information Technology Sri Lanka	Session Chair 3	Dr. Jasintha Jayasanka University of Sri Jayewardenepura Sri Lanka
Time	Paper ID	Title			
16.30-16.45 hrs	ICSBE24_690	ELECTROLYSIS-INDUCED INSITU COAGULANT FOR TURBIDITY REMOVAL <i>W.A.M. Weerasinghe, N.A.P.M. Nishshanka, S.K. Weragoda, A.A.G.D. Amarasooriya</i>			
16.45-17.00 hrs	ICSBE24_241	GROWTH OF NOVEL NANOSIZED METATITANIC ACID: A VALUE ADDITION TO NATURAL ILMENITE <i>S.T. Jegapragashan, A. H. Janaka Sampath, K. M. Nalin de Silva, Rohini M. de Silva</i>			
17.00-17.15 hrs	ICSBE24_102	OPTIMIZING RESOURCE USE EFFICIENCY IN GREEN BUILDINGS: A SYSTEMATIC REVIEW OF SUSTAINABLE WATER MANAGEMENT, ENERGY EFFICIENCY, AND ENVIRONMENTAL IMPACT <i>R.H.N.S. Rathnapriya, H.A.T.N. Perera, G.Y. Jayasinghe</i>			
17.15-17.30 hrs	ICSBE24_107	SUSTAINABLE WATER MANAGEMENT IN GREEN ARCHITECTURE: A SYSTEMATIC REVIEW OF STRATEGIES, TECHNOLOGIES AND OUTCOMES <i>W.U.K. Perera, H.A.T.N. Perera, G.Y. Jayasinghe</i>			
17.30-17.45 hrs	ICSBE24_001	EFFECTIVE BIOMASS ADDITIVES FOR LOW-TEMPERATURE SLUDGE DRYING: A STUDY ON OPTIMAL RATIOS AND MATERIALS <i>W.A.D.H.P.Wijesooriya, C.S.Kalpage</i>			

17.45-18.00 hrs	ICSBE24_021	<p>AMOXICILLIN REMOVAL FROM WASTEWATER USING SRI LANKAN ACTIVATED CARBON</p> <p><i>M.D.A.S. Manchanayake, B.M.W.P.K. Amarasinghe, G.K. Jayatunga</i></p>			
18.00-18.15 hrs	ICSBE24_009	<p>ADVANCEMENTS IN SPIRAL PUMP TECHNOLOGY: FROM HISTORICAL ORIGINS TO MODERN INNOVATIONS</p> <p><i>M.Dhanushi Rashmika, Kasun Fernando, Ovin Lakpura Sriyarathna</i></p>			
18.15-18.30 hrs	ICSBE24_693	<p>APPLICATION OF A VISUAL COLOR CHART FOR DISCHARGE WASTEWATER COLOR MONITORING IN THE TEXTILE INDUSTRY</p> <p><i>K.M.S.T Maduranga, S.H.I.S Gunasiri, Pradeep Gajanayake</i></p>			
18.30-18.45 hrs	ICSBE24_921	<p>POTENTIAL USAGE OF LIQUID PHASE OF SEWAGE SLUDGE PRODUCED USING HYDROTHERMAL CARBONATION FOR AGRICULTURAL PURPOSES</p> <p>Wathsala Sriyananda , S.Sajitthan , Udara Welagedara , I.M.W.K. Illangasinghe , E.P.Rajapakse</p>			
18.45-19.00 hrs	ICSBE24_169	<p>ANALYSIS OF THE PATHOGENS TRANSPORT FROM ON-SITE WASTEWATER TREATMENT SYSTEM IN DIFFERENT TYPE OF SOIL</p> <p>T.H.F Aagani , G. G. T. Chaminda</p>			
Session Coordinator 1	Eng. Chamath Dulanjana +94 77 8116448	Session Coordinator 2	Ms. Lakmi Perera +94 76 3705037	Session Coordinator 3	Ms. Nipuni Sewwandi +94 70 1673177

Date: 21st December 2024/ Time: 8.30 -10.30 hrs

Room 3 (Physical)/ Session 01

Seismic Resilience and Infrastructure Safety in Sri Lanka

Session Chair 1	Prof. Kushan Wijesundara University of Peradeniya Sri Lanka	Session Chair 2	Dr Srikanth Venkatesan Royal Melbourne Institute of Technology, Melbourne, Australia
Time		Topic	Person
8.30 – 8.40 hrs	Opening Remarks		Prof. Sujeeva Setunge Associate Deputy Vice Chancellor RMIT University
8.45 – 9.05 hrs	Keynote 1	Modelling Resilience	Dr. Srikanth Venkatesan Senior Lecturer RMIT University
9.05 - 9.25 hrs	ICSBE24_442	Flood Impacts Due to Cascade Dam Failures	Mrs. Oshini Peramuna PhD Candidate
9.25 - 9.40 hrs	Presentation 2	Impact of Climate Change	Dr. Panduka Neluwala Senior Lecturer University of Peradeniya
9.40 - 10.00 hrs	Invited Speech 1	Dam Safety Management	Mr. Sam Banzi Director- ANCOLD/ Founder and Director of Banzi Consulting Services
10.00 - 10.15 hrs	ICSBE24_060	Seepage study in Thissa Dam, Sri Lanka	Eng. Janaka Priyantha

10.15 – 10.30 hrs	ICSBE24_675	Dam Breach Analysis of Tabowa Reservoir Sri Lanka	Mr. Ravindu Daranagama
Date: 21st December 2024/ Time: 11.00 -12.30 hrs			
Room 2 (Physical)/ Session 02			
Seismic Resilience and Infrastructure Safety in Sri Lanka			
Tea Break			
11.00 - 11.05 hrs	Introduction		Prof. Ranjith Dissanayake Conference General Chair
11.05 - 11.30 hrs	Keynote- 2	Local Seismicity and Impact on Dam Structures	Prof. Kushan Wijesundara Professor at University of Peradeniya
11.30 - 11.50 hrs	ICSBE24_441	Seismic Analysis on CFR Dams Including Material Parameter Optimization	Mr. Sachintha Tennekoon (PhD Candidate)
11.50 - 12.10 hrs	Invited Speech 2	Seismic hazard Modelling for Dams and Integrated Risk Assessment	Prof. P. Anbazhagan
12.10 - 13.00 hrs	Panel discussion		Dr. Srikanth Venkatesan- Chair Personals from government institutes in Sri Lanka and SLNCOLD

Date: 21st December 2024/ Time: 11.00-12.50 hrs

Room 3 (Physical)/ Session 02

Construction Management

Session Chair 1	Dr. Kasun Nandapala - University of Vocational Technology Sri Lanka	Session Chair 2	Dr. Manori Perera University of Sri Jayawardenepura Sri Lanka
Time	Paper ID	Title	
11.00-11.20	Key Lecture	Enhancing Construction Productivity: Innovations and Insights Professor Janaka Ruwanpura, P.Eng., PQS, FCAE, FEIC, FCSCE, NAC Professor of Civil Engineering and Project Management, Former Vice-Provost and Associate Vice-President Research (International) University of Calgary	
11.20-11.35 hrs	ICSBE24_334	TYRE-WASTE DERIVED GRAPHENE OXIDE IMPACT ON CEMENT MORTAR: A STUDY OF MECHANICAL AND MICROSTRUCTURAL CHARACTERISTICS <i>W. C. H. Silva, M. A. Zafar, M. V. Jacob, R. Tuladhar</i>	
11.35-11.50 hrs	ICSBE24_171	IMPACT OF JOB LOSSES ON LARGE SCALE CONTRACTORS IN 2022-2023 ECONOMIC CRISIS IN SRI LANKA <i>DAR Dolage, K. Thranga</i>	
11.50-12.05 hrs	ICSBE24_071	IMPACT OF HEALTH AND SAFETY COST ON BUILDING CONSTRUCTION COST IN SRI LANKA <i>H R Induja Gunathilake, Chamari Allis, Kavini Guruge</i>	
12.05-12.20 hrs	ICSBE24_082	EXPERIMENTAL STUDY ON THE SWELLING CHARACTERISTICS OF RECYCLED CONSTRUCTION SLUDGE IN SULFATE-RICH ENVIRONMENTS <i>K. R. Withanage, K. Hayano</i>	
12.20-12.35 hrs	ICSBE24_122	INVESTIGATE THE PERFORMANCE OF PAD FOOTING WITH USE OF CONTROLLED MODULUS COLUMN (CMC) AS A GROUND IMPROVEMENT TECHNIQUE	

		<i>D.C. Hondamuni, H.G.H. Damruwan, L.I.N. de Silva</i>	
12.35-12.50hrs	ICSBE24_037	SUGARCANE BAGASSE ASH AS A PARTIAL REPLACEMENT OF CEMENT IN MASONRY BLOCK PRODUCTION <i>T.A.H.N. Piyarathna , I.S.K. Wijayawardane , T.M. Pallewatta</i>	
Session Coordinator 1	Ms. Madhushani Gunawardana +94 71 6240453	Session Coordinator 2	Ms. Sajani Kolambage +94 71 5642762

Date: 21st December 2024/ Time: 14.00-16.00 hrs

Room 3 (Physical)/ Session 03

Sustainable Construction

Session Chair 1	Dr.I.S.K.Wijayawardane The Open University of Sri Lanka Sri Lanka	Session Chair 2	Dr. Supun Jayasinghe University of Peradeniya Sri Lanka
Time	Paper ID	Title	
14.00 – 14.15 hrs	ICSBE24_025	BUILDING A GREENER FUTURE: SYSTEMATIC REVIEW OF SUSTAINABLE CONSTRUCTION MATERIALS AND TECHNOLOGIES FOR EMISSION REDUCTION <i>M.A.D.K. Jayathilaka, H.A.T.N. Perera, G.Y. Jayasinghe</i>	
14.15 – 14.30 hrs	ICSBE24_032	APPLICATION POTENTIAL OF COTTON TEXTILE ASH WASTES FROM BIOMASS BOILERS AS AN ALTERNATIVE RAW MATERIAL TO DEVELOP BRICKS <i>W.M.C.S.Wijesingha, A.K.Jeewandara , T.T.Chitrananda</i>	
14.30-14.45 hrs	ICSBE24_067	INVESTIGATION OF BOND STRENGTH BETWEEN CONCRETE AND KITHUL TIMBER REBAR USING PULL OUT TEST <i>K.I.S. Kodithuwakku, I.S.K. Wijayawardane</i>	
14.45-15.00 hrs	ICSBE24_094	IMPROVING THE PERFORMANCE OF EXISTING COMMERCIAL BUILDINGS ACCORDING TO THE GREEN BUILDING GUIDELINES IN SRI LANKA <i>H.H.A, Vithanage, M.A. Wijewardane</i>	
15.00-15.15 hrs	ICSBE24_090	MITIGATING EMBODIED CARBON: CARBON ASSESSMENT CHALLENGES AND METHODS IN SMART BUILDING CONSTRUCTION IN THE UK. <i>Harshi Bamunuachchige, Min An</i>	
15.15-15.30hrs	ICSBE24_111	A COMPARATIVE ANALYSIS OF ENERGY EFFICIENCY OF MODULAR HOUSES IN SRI LANKA <i>T. I. Munmulla, S. S. Bandaranayake, S. Navaratnam, H. D. Hidallana-Gamage, M.T.R. Jayasinghe, G. Zhang</i>	

15.30 – 15.45 hrs	ICSBE24_115	<p>DEVELOPMENT OF A MOBILE AUGMENTED REALITY APPLICATION TO ENHANCE YOUTH ENGAGEMENT IN PLACEMAKING</p> <p><i>R. A. D. M. Ranasinghe, M. R. Mahamood, M. C. K. De Silva, H. K. R. N. Kankanamge, N. Kangana</i></p>	
15.45-16.00 hrs	ICSBE24_201	<p>A COMPREHENSIVE STUDY ON THE DRAWBACKS IN THE OPERATIONS AND MAINTENANCE PROCESSES OF SCHOOL BUILDINGS IN SRI LANKA</p> <p><i>B.R.W.M.D. Thoradeniya, C. Jayasinghe, I.E. Ariyaratne</i></p>	
16.00-16.15 hrs	ICSBE24_205	<p>GREEN BUILDING RATING SYSTEMS: INSIGHTS FOR IMPLEMENTING SUSTAINABLE BUILDING PRACTICES IN SRI LANKA</p> <p><i>S.D.S.A. Wijerathna, H.K.G. Punchihewa, M.M.I.D. Manthilake, H.P. Karunathilake</i></p>	
Session Coordinator 1	Ms. Madhushani Gunawardana +94 71 6240453	Session Coordinator 2	Ms. Sajani Kolambage +94 71 5642762

Date: 21st December 2024/ Time: 16.30-18.30 hrs

Room 3 (Physical)/ Session 04

Climate Risk Management & Mitigation

Session Chair 1	Prof. Y.N.S. Wijewardana Uwa Wellassa University of Sri Lanka	Session Chair 2	Dr. Udayagee Kumarasinghe University of Sri Jayewardenepura Sri Lanka
Time	Paper ID	Title	
16.30-16.45 hrs	Key Lecture	“EMPOWERING COMMUNITIES FOR A SAFER TOMORROW” Prof. Y.N.S. Wijewardana Uwa Wellassa University of Sri Lanka	
16.45-17.00 hrs	ICSBE24_020	URBAN GROWTH MODELLING AND CLIMATE VULNERABILITY IN COLOMBO METROPOLITAN AREA <i>H.P.U. Fonseka, S.P. Chaminda, H. Zhang and R Premasiri</i>	
17.00-17.15 hrs	ICSBE24_100	USE OF GAMIFICATION AND SERIOUS GAMES FOR DISASTER EDUCATION; PRACTICES, TRENDS AND WAY FORWARD <i>Rifat Mahamood, Chathura De Silva, Nayomi Kankanamge, Daneesha Ranasinghe, Nuwani Kangana</i>	
17.15-17.30 hrs	ICSBE24_095	REMOTE SENSING ANALYSIS OF FOREST FIRE DYNAMICS: A CASE STUDY OF THE HANTHANA MOUNTAIN RANGE, KANDY, SRI LANKA <i>W.M.S.S. Dias, W.B.M.R.S. Basnayaka</i>	
17.30-17.45 hrs	ICSBE24_088	WATER MANAGEMENT ADVISORIES TO IMPROVE WATER USE EFFICIENCY IN THE VILLAGE IRRIGATION TANKS IN SRI LANKA <i>Warnakulasooriya W.I.U, Sulochana E.I.E and Liyanage M.M</i>	
17.45-18.00 hrs	ICSBE24_144	THERMO MECHANICAL ANALYSIS OF ANCIENT STUPAS IN SRI LANKA <i>D.D.H.K.Kulasiri, K.A.T.D.Perera, I.U.K.Silva & P.A.K. Karunananda</i>	

18.00-18.15 hrs	ICSBE24_281	INTEGRATING CLOUD TECHNOLOGY AND REMOTE SENSING FOR SPATIAL FLOOD ANALYSIS IN MATARA DISTRICT, SRI LANKA <i>M.M.A.D. Munasinghe, H.A.C. Priyankara, G.Y. Jayasinghe</i>	
Session Coordinator 1	Ms. Madhushani Gunawardana +94 71 6240453	Session Coordinator 2	Ms. Sajani Kolambage +94 71 5642762

Date: 21st December 2024/ Time: 8.30-10.30 hrs

Room 4 (Hybrid)/ Session 01

Sustainable Transport

Join Zoom Meeting

<https://us06web.zoom.us/j/82855673242?pwd=IF4bqwRRuQhLi5DVOCySXcVbRbt4y8.1>

Meeting ID: 828 5567 3242

Meeting Passcode: 773277

Session Chair 1

Prof. Amal S.
Kumarage
University of
Moratuwa
Sri Lanka

Session Chair
2

Dr. W.M.V.S.K.
Wickramasinghe
University of
Peradeniya
Sri Lanka

Session
Chair 3

Dr. Tissa Liyanage
President
SLSTL/Chairman
& CEO
Sri Lanka

Time

Paper ID

Title

8.30 – 8.45 hrs

ICSBE24_310

ASSESSING BUS ROUTE EFFICIENCY USING THE DATA ENVELOPMENT APPROACH: A CASE STUDY IN KANDY DISTRICT

T.G.D.T. Gunasekera, K.V. Madusanka, W.R.S.S. Dharmarathna, P.M.G.D.M. Herath

8.45 – 9.00 hrs

ICSBE24_163

ASSESSING TRAFFIC CONDITION DYNAMICS AND THEIR DETERMINANTS: A SPATIAL-TEMPORAL STUDY ALONG THE A04 ROAD, SRI LANKA

G.S.N.Aponsu, R.M.K.Kumarihamy

9.00-9.15 hrs

ICSBE24_822

A LAND USE CLASSIFICATION METHOD FOR A CELLULAR AUTOMATA BASED LAND USE PREDICTION MODEL

KD Herath, PCP De Silva , PKS Mahanama

9.15 - 9.30 hrs

ICSBE24_063

A SYSTEMATIC REVIEW OF ECONOMICAL VISION BASED MODELS FOR TRANSPORTATION SURVEYS IN DEVELOPING COUNTRIES

Kulaxia M, N. K. Jayasoorya, A. H. T. Shyam Kularathna

9.30 - 9.45 hrs

ICSBE24_399

OPTIONS FOR E-MOBILITY IN SRI LANKA

W. N. S. Fernando, A. S. Kumarage

9.45 - 10.00 hrs

ICSBE24_308

TRAVEL BEHAVIOUR ANALYSIS OF UNIVERSITY STUDENTS: A CASE STUDY AT UNIVERSITY OF PERADENIYA

P. Tharsika, W.R.S.S. Dharmarathna

10.05 - 10.15 hrs	ICSBE24_309	TRAVEL BEHAVIOR CHANGES UNDER FUEL PRICE FLUCTUATIONS: A CASE STUDY IN SRI LANKA <i>R.K.K.M. Bandara, K.A.B.P. Rathnaweera, W.R.S.S. Dharmarathna</i>	
10.15 – 10.30 hrs	ICSBE24_300	GREENHOUSE GAS EMISSION OF ASPHALT PAVEMENT CONSTRUCTION IN SRI LANKA <i>B.K.D. Balasuriya</i>	
10.30 - 10.45 hrs	ICSBE24_301	ESTIMATION OF PASSENGER CAR EQUIVALENT FOR SELECTED EXPRESSWAYS IN SRI LANKA <i>K.V.D. Perera, W.R.S.S. Dharmarathna</i>	
10.45-11.00 hrs	ICSBE24_017	URBAN TRANSPORT FOR ACHIEVING HUMAN SATISFACTION AND HOLISTIC SUSTAINABLE DEVELOPMENT IN SRI LANKA <i>J.A.D.C.Jayalath,J.A.G.R.Jayalath,J.A.S.K.Jayalath</i>	
Session Coordinator 1	Eng. Hashan Thilakarathne +94 71 5174147	Session Coordinator 2	Eng. Dilan Danushka +94 76 5336754

Date: 21st December 2024/ Time: 14.00-15.35 hrs

Room 4 (Hybrid)/ Session 03

Global Food Safety and Sustainability

Join Zoom Meeting

<https://us06web.zoom.us/j/82855673242?pwd=IF4bqwRRuQhLi5DV0cySXcVbRbt4y8.1>

Meeting ID: 828 5567 3242

Meeting Passcode: 773277

Session Chair 1

Prof. Jayani Chandrapala
RMIT University
Australia

Session Chair 2

Dr. Chathuri Senanayake
University of Sri
Jayewardenepura
Sri Lanka

Time

Paper ID

Title

14.00-14.20 hrs

Key Lecture

**“TRANSFORMING DAILY DIETS:
INTEGRATION OF FUNCTIONAL
INGREDIENTS INTO COMMON FOODS”**

**Dr. Amali Alahakoon
University of Sri Jayewardenepura
Sri Lanka**

14.20-14.35 hrs

ICSBE24_304

EFFECT OF PACKAGING MATERIALS ON THE
QUALITY OF SULPHUR FUMIGATED CEYLON
CINNAMON (*Cinnamomum zeylanicum* Blume)

S. P. Kodi Pili, C. U. Widanapathirana, Mapa S. T. Mapa

14.35-14.50 hrs

ICSBE24_273

A PARTICIPATORY COMMUNITY APPROACH
FOR SUSTAINABLE BEEKEEPING PRACTICES
AMONG MARGINALISED SCHOOL STUDENTS
IN UP-COUNTRY SRI LANKA

*Ashen Epa Arachchi, Hasitha Prashanth, Shi Shanthi
Jayarathna, Vidanarachchi J.K. Edirisinghe M.N,
Jayasinghe W.H, Vimukthi G.G.R.*

14.50-15.05 hrs

ICSBE24_136

IDENTIFICATION OF MARKET POTENTIAL FOR
CARBONATED DRINKS WITH NUTRITIOUS
LOCAL GRAINS

*K.S. Nawagomuwege, M.L.P. Thathsarani, U.A.S.K.
Edirisinghe, Methmini Tharanga*

15.05 -15.20 hrs	ICSBE24_ 305	DEVELOPMENT OF CUCUMBER BASED VALUE ADDED READY TO SERVE BEVERAGE (RTS) ENRICHED WITH NATURAL COLORS <i>R.M.N.A. Wijewardena, H.P.N.M.A. Herath, P.K.J De Mel</i>	
Session Coordinator 1	Eng. Hashan Thilakarathne 071 5174147	Session coordinator 2	Mr. Kokila Arandala 077 3521929

Date: 21st December 2024/ Time: 16.00-18.30 hrs

Room 4 (Hybrid)/ Session 04

Fire Safety Engineering

Join Zoom Meeting

<https://us06web.zoom.us/j/82855673242?pwd=IF4bqwRRuQhLi5DV0cySXcVbRbt4y8.1>

Meeting ID: 828 5567 3242

Meeting Passcode: 773277

Session Chair 1

Prof. Priyan Mendis
University of Melbourne
Australia

Session Chair 2

Dr. Pasindu Wickramasinghe
University of Moratuwa
Sri Lanka

Time

Paper ID

Title

16.00-16.20 hrs

Key Lecture

16.20-16.40 hrs

Key Presentation

16.40- 16.55 hrs

ICSBE24_065

EXPERIMENTAL INVESTIGATION ON FIRE
ENDURANCE OF AUTOCLAVED AERATED
CONCRETE BLOCKS

P.W.A.S Dasanayaka, I.S.K Wijayawardane

16.55-17.10 hrs

ICSBE24_314

EVALUATION OF SEISMIC PERFORMANCE IN
STEEL MOMENT RESISTING FRAMES UNDER
COMBINED FIRE AND CYCLIC LOADS:
A NUMERICAL APPROACH

*B. V. D. D. Tharaka, A. S. Gampalage, Y. P. K. M. W. N.
Kanakarathna, J. A. S. C. Jayasinghe, S. Bandara*

Session
Coordinator 1

Eng. Hashan Thilakarathne
+94 71 5174147

Session
Coordinator 2

Eng. Dilan Danushka
+94 76 5336754

Date: 21st December 2024/ Time: 8.30-10.30 hrs

Room 5 (Hybrid)/ Session 01

Alternative & Clean Energy

Join Zoom Meeting

<https://us06web.zoom.us/j/86576920548?pwd=00bKILX2aKjujVgcXKVPgJPv9NhM76.1>

Meeting ID: 865 7692 0548

Meeting Passcode: 880657

Session Chair 1

Mrs.Lekha Bakmeedeniya
University of Peradeniya
Sri Lanka

Session Chair 2

Prof. Sudhira De Silva
University of Ruhuna
Sri Lanka

Time

Paper ID

Title

08.30-08.45 hrs

ICSBE24_123

EVALUATING THE VIABILITY OF
RENEWABLE ENERGY SOURCES IN SRI
LANKA: IMPLICATIONS AND
OPPORTUNITIES

Kankanamge ISM, Pathmadewa AHKK

08.45-09.00 hrs

ICSBE24_140

HYDRAULIC LOSS ANALYSIS OF PUMP
TURBINE ACCORDING TO THE SPECIFIC
SPEED IN TURBINE MODE

*Ujjwal Shrestha, Prasanna Gunawardane, Young-Do
Choi*

09.00-09..15 hrs

ICSBE24_022

CONVERTING EXISTING DIESEL ENGINE
INTO BIODIESEL ENGINE

*W.D.L. Thissera, M.M.D.J Paris, R.M.C.S Rathnayake,
Madhushan.V, Madusanka.Y.V, Wijesekara.V.K.D*

09.15-09.30 hrs

ICSBE24_096

IMPACTS OF WEATHER CONDITIONS IN PV
SOLAR ENERGY PRODUCTION – AN IOT
BASED MONITORING AND FORECASTING
SYSTEM

*A.A.S. Suja, A.L.F. Sasna, M.N.M. Aashiq, A.M.A. Saja,
W.G.C.W. Kumara*

09.30-09.45 hrs

ICSBE24_139

METHODOLOGICAL FRAMEWORK FOR
DEPLOYMENT OF HYDRO TURBINES TO
RECOVER EXCESS ENERGY FROM
PIPE-BORNE WATER SUPPLY SYSTEMS IN SRI
LANKA

M. A. I. A. Moragoda, S. B. Weerakoon

Session Coordinator 1	Ms. Nayanathara Jayasinghe +94 76 7311951	Session Coordinator 2	Ms. Yashoda Kodagoda +94 70 1506141
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Date: 21st December 2024/ Time: 11.00-12.30 hrs

Room 5 (Hybrid)/ Session 02

Advancing Partnerships through Emerging Technologies for Sustainable Water and Wastewater Management

Join Zoom Meeting

<https://us06web.zoom.us/j/86576920548?pwd=00bKILX2aKjujVgcXKVPgJPv9NhM76.1>

Meeting ID: 865 7692 0548

Meeting Passcode: 880657

Session Chair 1

Dr. Madhubhashini
Makehelwala
China Sri Lanka Joint
Research and Demonstration
Center
Sri Lanka

Session Chair 2

Prof. Yawei Wang
Chinese Academy of Sciences
China

Time

Paper ID

Title

11.00 – 11.15 hrs

ICSBE24_850

ANTIBIOTIC RESISTANCE SPECTRA OF *E. coli* ALONG THE UPPER MAHAWELI RIVER SEGMENT OF SRI LANKA

F. Fareed, P.T.A. Thilakarathna, R. Jinadasa, F. Noordeen, S.K. Weragoda, Yawei Wang, uansong Wei, Zhang Yu, Min Yang and S.H.P.P. Karunaratne

11.15 – 11.30 hrs

ICSBE24_851

ENHANCED CONFIRMATION OF ENVIRONMENTAL CONTAMINANTS: SUGGESTED A NOVEL METHOD TO DETECT MCPA IN WATER BY UV/ FLUORESCENCE HPLC WITH SPE EXTRACTION

K.T. Nawarathne, P.M.C.J. Bandara, M.S.P.P.R. Priyadarshana, Y. Jayawardhana, D.R.Samarajeewa

11.30-11.45 hrs

ICSBE24_852

INDUSTRIAL WET DYE WASTEWATER TREATMENT BY ELECTROLYSIS

U.S. Liyanarachchi, A.A.G.D. Amarasooriya, S.K Weragoda, Harshi Jayasingha

11.45-12.00 hrs

ICSBE24_401

NAVIGATING THE GLOBAL WATER CRISIS: SUSTAINABLE WASTE WATER TREATMENT AS A PATHWAY TO RESILIENT URBAN INFRASTRUCTURES

K.P.T.Malshani

12.00-12.15 hrs	ICSBE24_099	<p>RUBBER INDUSTRY WASTEWATER PRE-TREATMENT USING MAGNETIC SEED COAGULATION METHOD</p> <p><i>S.A.T.U. Senevirathna, W.D.I.M. Somathilake, K.B.S.N. Jinadasa, K.G.N. Nanayakkara</i></p>	
12.15-12.30 hrs	ICSBE24_691	<p>ECO-CONSCIOUS GROWING MEDIA PELLETS FOR URBAN GARDENS MADE FROM RECYCLED WATER TREATMENT SLUDGE</p> <p><i>H. H. S. Kawshalya, Pradeep Gajanayeke, Dasuni T. Bandaranayakab, Y.G.D.P. Wijewardana</i></p>	
12.30 – 12.45 hrs	ICSBE24_501	<p>OVERCOMING LIMITATIONS OF DIRECT CURRENT ELECTROCOAGULATION THROUGH APPLICATION OF ALTERNATING CURRENT</p> <p><i>R.D.P Nadun. Ranepura, Ajith C. Herath</i></p>	
12.45-13.00 hrs	ICSBE24_050	<p>DETERMINATION OF WATER QUALITY VARIATION IN TEMPORAL AND SPATIAL DISTRIBUTION IN NILWALA RIVER, MATARA, SRI LANKA</p> <p><i>I R.V.P.C.Jayani, T.D. Denagama</i></p>	
Session Coordinator 1	Ms. Nayanathara Jayasinghe +94 76 7311951	Session Coordinator 2	Ms. Yashoda Kodagoda +94 70 1506141

Date: 21st December 2024/ Time: 14.00-16.00 hrs

Room 5 (Hybrid)/ Session 03

Renewable Solutions with Nanotechnology

Join Zoom Meeting

<https://us06web.zoom.us/j/86576920548?pwd=00bKILX2aKjujVgcXKVPgJPv9NhM76.1>

Meeting ID: 865 7692 0548

Meeting Passcode: 880657

Session Chair 1

Prof. K.M. Nalin de Silva
University of Colombo
Sri Lanka

Session Chair 2

Prof. Rohini M de Silva
University of Colombo
Sri Lanka

Session Chair 3

Dr. Dhanushika Manatunga
University of Sri Jayewardenepura
Sri Lanka

Time

Paper ID

Title

14.00-14.15 hrs

ICSBE24_256

DRUG-LOADED MESOPOROUS SILICA NANOPARTICLES DERIVED FROM RICE HUSK FOR ANTI-BACTERIAL WOUND FORMULATIONS

S. Dharshika, D.C. Manatunga, M.M.M.G. Prasanga Gayanath Mantilaka, V.G.C. Samanmali

14.15-14.30 hrs

ICSBE24_257

ENHANCING CADMIUM ION ADSORPTION CAPACITY USING HIGH-PERFORMANCE GRAPHENE OXIDE-COATED BANANA FIBERS

H.M.S.S. Samarajeewa, D.C. Manatunga, M.M.M.G.P.G. Mantilaka

14.30-14.45 hrs

ICSBE24_255

ANTIBACTERIAL AND ANTIFUNGAL EFFECT OF ARROW ROOT - ZINC OXIDE NANOCOMPOSITE

R.G.B.M. Ranatunga, K.C.U Perera, O.K.D.U.P Nishshanka

14.45-15.00 hrs

ICSBE24_318

NANOTECHNOLOGY-ENHANCED CRISPR-CAS9 EPIGENOME EDITING FOR CANCER THERAPY: INNOVATIONS IN DELIVERY, TARGETING AND SAFETY

W.G. Dinushi

15.00-15.15 hrs

ICSBE24_601

PHYSIOCHEMICAL, THERMAL, AND ANTIMICROBIAL PROPERTIES OF CHITIN NANOFIBER-BASED FORMULATIONS FOR DERMAL APPLICATIONS

N.L. Rathnasinghe, B.P.S. Rajapakshe, R.A. Jayasinghe, A.H.L.R. Nilmini, N.D. Tissera, R.N. Wijesena, G. Priyadarshana

15.15-15.30 hrs	ICSBE24_014	<p>WATER HYACINTH (<i>Eichhornia crassipes</i>) AS AN AQUATIC CELLULOSE NANOFIBER SOURCE; EXTRACTION, UTILIZATION AND THE SUSTAINABILITY- A REVIEW</p> <p><i>B.P.S. Rajapakshe, N.L. Rathnasinghe, R.A. Jayasinghe, A.H.L.R. Nilmini, V. Karunaratne, R.N. Wijesena, G. Priyadarshana</i></p>	
Session Coordinator 1	Ms. Nayanathara Jayasinghe +94 76 7311951	Session Coordinator 2	Ms. Yashoda Kodagoda +94 70 1506141

Date: 21st December 2024/ Time: 8.30-10.30 hrs

Room 6 (Hybrid)/ Session 01

Nature-Inspired Solutions For A Sustainable Future (Biomimicry)

Join Zoom Meeting

<https://us06web.zoom.us/j/81256687978?pwd=Sf4aXGndtJDx58V7ipceYHPLEDzyTx.1>

Meeting ID: 812 5668 7978

Meeting Passcode: 122923

Session Chair 1

Dr. Nafissa Insebayeva
United Nations University
Japan

Session Chair 2

Dr. Chethika Abeynayake
University of Moratuwa
Sri Lanka

Time

Paper ID

Title

8.30 – 8.45 hrs

ICSBE24_678

BIOMIMICRY INSPIRED TOURISM: A
PATHWAY TO DEVELOPING SRI LANKAN
TOURISM INDUSTRY: A SYSTEMATIC
REVIEW

*K. Hemachandra, U.T.G.Perera, W.P.I.N. Weerasinghe,
R. Dissanayake, M. Senanayaka*

8.45 – 9.00 hrs

ICSBE24_997

A COMPREHENSIVE REVIEW OF
NATURE-INSPIRED SOLUTIONS FOR
ENHANCING BUILT RESILIENCE IN
DISASTER RISK REDUCTION

*P.L.C Perera, A. De Silva, N. Dias, R. Dissanayake, C.
Abeynayake, D. Amaratunga, R. Haigh*

9.00-9.15 hrs

ICSBE24_167

TACKLING THE GLOBAL THREAT OF
MICROPLASTIC POLLUTION: A CRITICAL
REVIEW OF PROMISING GREEN
ALTERNATIVES AND THEIR
ENVIRONMENTAL IMPACT

K.A.D.P.K.Gunathilaka, B.G.N.P.Jayasooriya

9.15-9.30 hrs

ICSBE24_004

SUSTAINABLE DEVELOPMENT RESEARCH
TRENDS: A BIBLIOMETRIC ANALYSIS FROM
2000-2023

*T Wickramasinghe, S.M.R.N.S.K. Asmadala, D.N.
Jayawardhana, M.D.G. Sansala*

9.30-9.45 hrs

ICSBE24_662

IDENTIFYING AND IMPLEMENTING
SUSTAINABLE DEVELOPMENT APPROACHES
FOR THE SOCIO-ECONOMIC GROWTH OF
THE MILLAVITIYA GRAMA NILADHARI
DIVISION: AN ANALYSIS ON POTENTIAL
PRACTICES AND STRATEGIES

Isuru Udakara Yakandawala

9.45-10.00 hrs	ICSBE24_061	EVALUATING THE EFFECTIVENESS OF BIOMIMETIC APPROACHES IN URBAN BUILDING CONSTRUCTION FOR CLIMATE CHANGE MITIGATION <i>R.V.A.D Rahubadda, U. Kulathunga</i>
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Date: 21st December 2024/ Time: 11.00-12.30 hrs

Room 7 (Online)/ Session 02

Construction Management

Join Zoom Meeting

<https://learn.zoom.us/j/91461153424?pwd=9zh2WUMQ3LU0wfdPDbVcOZjYfKXUsO1>

Meeting ID: 914 6115 3424

Meeting Passcode: Abc@1234

Session Chair 1

Dr. P. A. K. Karunananda
The Open University
Sri Lanka

Session Chair 2

Mr. Malith Senevirathne
University of Huddersfield
UK

Time

Paper ID

Title

11.00-11.15 hrs

ICSBE24_132

ENTERPRISE RESOURCE PLANNING SYSTEM
FOR ROAD CONSTRUCTION PROJECTS IN SRI
LANKA

V. Lingasabesan, M.D.T.E. Abeynayake, L. Shadurshaan

11.15-11.30 hrs

ICSBE24_127

THE FUTURE OF FACILITIES MANAGEMENT
IN THE CONTEXT OF INDUSTRIAL
REVOLUTION 4.0

E.D.M.E.M Dhanapala, P. Sridarran, S. Thirumal

11.30-11.45 hrs

ICSBE24_200

EPITOMIZE THE RELATIONSHIP BETWEEN
BOND PARAMETERS AND SHEAR STRENGTH
OF CFRP/CONCRETE COMPOSITES

*S.M.A.L.K. Sammandapperuma, E.R.K. Chandrathilaka,
H.H.S. Gayan, Kumari Gamage*

11.45-12.00 hrs

ICSBE24_066

STRATEGIES TO IMPROVE HOUSEHOLD
WASTE PAPER RECYCLING IN SRI LANKA

*M.H.S. Priyalal, A.S.W. Karunarathna, R.M.N.U
Rathnayake*

12.00-12.15 hrs

ICSBE24_154

ASSESSING HAZARDOUS WASTE
MANAGEMENT PRACTICES IN
KATUNAYEKE, BIYAGAMA, AND
SEETHAWAKA EXPORT PROCESSING ZONES
IN SRI LANKA

M.K.D.K.C. Madapatha, S. Herat

Session Coordinator 1	Eng. Ravindra Ekanayake +94 77 8638848
--------------------------	---

Date: 21st December 2024/ Time: 16.00-18.30 hrs

Room 7 (Online) / Session 04

Global Food Safety and Sustainability

Join Zoom Meeting

<https://learn.zoom.us/j/91461153424?pwd=9zh2WUMQ3LU0wfdPDbVcOZjYfKXUsO.1>

Meeting ID: 914 6115 3424

Meeting Passcode: Abc@1234

Session Chair 1

Prof. S.B. Navarathne
University of Sri
Jayewardenepura
Sri Lanka

Session Chair 2

Dr. Rumesh Liyanage
University of Sri
Jayewardenepura
Sri Lanka

Time

Paper ID

Title

16.00-16.20 hrs

Key Lecture

**“THE MULTISENSORY REVOLUTION:
HARNESSING SOUND AND COLOR TO
ENHANCE FOOD EXPERIENCES AND
PROMOTE SUSTAINABLE CHOICES”**

**Dr. Rumesh Liyanage
University of Sri Jayewardenepura
Sri Lanka**

16.20-16.35 hrs

ICSBE24_ 270

EVALUATION OF PHYSICOCHEMICAL
PROPERTIES OF MONARAKUDUMBIYA
(Vernonia cinerea) AND CURRY LEAVES (Murraya
koenigii) MIXED HERBAL PORRIDGE POWDER

Maduwanthi P.I, Karunaratna K.H.T, Kannangara D.N.

16.35-16.50 hrs

ICSBE24_ 271

DEVELOPMENT OF VALUE-ADDED
MUSHROOM SOUP CUBE ENRICHED MORINGA
LEAF POWDER AND PUMPKIN POWDER

*Bandara R.A.D.M.M.M.H, Rajawatta K.M.W, Tissa
Karunaratna*

16.50-17.05 hrs

ICSBE24_275

THE IMPACT OF LACTIC ACID FERMENTATION
ON THE PHYSICOCHEMICAL AND
FUNCTIONAL PROPERTIES OF CASSAVA
STARCH FROM SELECTED SRI LANKAN
VARIETIES

D.M.P.G.I.S. Bandara, W.D.S.S. Pemasinghe, S.P. Rebeira

17.05-15.20 hrs	ICSBE24_306	A PATH TO SUSTAINABLE WASTE MANAGEMENT: COMPOSTING PRACTICES AND THEIR SOCIO-ECONOMIC IMPACTS ON FARMERS AND CONSUMERS IN BATTICALOA <i>A.S. S. Jahan, P. Vinobaba A.J.M. Harris</i>
17.20 -17.35 hrs	ICSBE24_677	DETERMINATION OF SUITABILITY OF AN ABANDONED PADDY LAND FOR RE-CULTIVATION IN TERMS OF SOIL & WATER QUALITY IN HODARAWAALADENIYA YAYA HOMAGAMA, SRI LANKA <i>M. Thushara Ravinath, T.D. Denagama</i>
17.35-17.50 hrs	ICSBE24_667	DEVELOPMENT OF CHOCOLATE ALTERNATIVE USING AVOCADO SEED (PERSEA AMERICANA) A.D.M.P. Dissanayake , U.A.S.K. Edirisinghe , E.C. Jayawardena
Session coordinator 1	Eng. Ravindra Ekanayake +94 77 8638848	

Date: 22nd December 2024/ Time: 8.30-10.30 hrs

Room 1 (Hybrid)/ Session 01

Protective Structure Design

Join Zoom Meeting

<https://us06web.zoom.us/j/85665521903?pwd=9kiXxG0QvMmGAaFZ3KTcybrqpB2jY7.1>

Meeting ID: 856 6552 1903

Meeting Passcode: 214250

Session Chair 1

Dr. Damith Mohotti
UNSW Canberra
Australia

Session Chair 2

Dr. Lakshitha Fernando
University of Moratuwa
Sri Lanka

Time

Paper ID

Title

8.50- 9.05 hrs

ICSBE24_062

NUMERICAL SIMULATION OF PROGRESSIVE COLLAPSE OF STRUCTURES UNDER BLAST LOADS

N.T. Vandabona, P.L.N. Fernando

9.05- 9.20 hrs

ICSBE24_158

LAMINATED GLASS IN SUSTAINABLE CONSTRUCTION: RESPONSE OF LAMINATED GLASS PANELS UNDER IMPACT LOADS

T. W. M. C. Wanigasooriya, H. G. H. Damruwan, K. Baskaran

9.20-9.35 hrs

ICSBE24_191

ASSESSMENT OF CORROSION-RELATED DAMAGES IN LOW-RISE REINFORCED CONCRETE BUILDINGS – A CASE STUDY-BASED APPROACH

Wickramathilake G.G.T.D, Jayasinghe C, Ariyaratne I.E

9.35-9.50 hrs

ICSBE24_103

NUMERICAL INVESTIGATION OF THE EFFECTS OF BOUNDARY WALLS ON THE WIND LOADING OF A GABLE ROOF, LOW-RISE BUILDING

M.K.D. Kavishka, A.U. Weerasuriya, C.S. Lewangamage

Session Coordinator 1

Eng. Ravishka Iroshana
077 5405870

Session Coordinator 2

Eng. Isuru Jasin Arachchi
070 3047478

Date: 22nd December 2024/ Time: 14.00-16.35 hrs

Room 1 (Hybrid)/ Session 3

FOUNTAIN - Sustainable University-industry Collaborations

Join Zoom Meeting	https://us06web.zoom.us/j/85665521903?pwd=9kiXxG0QvMmGAaFZ3KTcybrqpB2jY7.1				
	Meeting ID : 856 6552 1903		Meeting Passcode : 214250		
Session Chair 1	Emirates Prof. K.D.N. Weerasinghe Head of the Bio-Systems Technology Faculty of Technology Horizon campus	Session Chair 3	Professor E.P.N. Udayakumara Dean Faculty of Applied Sciences Sabaragamuwa University of Sri Lanka	Session Chair 2	Assistant Professor Dr. Sorraya Khiewnavawongsa Division of Food Engineering Faculty of Agro-Industry Chiang Mai University
Time	Paper ID	Title			
14.00-14.45 hrs	Key lecture	Prof. Jörgen Sparf, Associate Professor of Sociology, Mid Sweden University			
14.45-14.50 hrs	Newsletter Launching	Launching of the FOUNTAIN e-newsletter (December) Volume 2 Issue 2			
14.50-15.05 hrs	ICSBE24_776	ENHANCING THERMAL COMFORT IN THE CONSTRUCTION INDUSTRY USING DIGITAL TWIN TECHNOLOGY: A SYSTEMATIC REVIEW <i>K. Keerthana, W.A.D.C.S. Perera, T.A.N.T. Perera, G.Y. Jayasinghe</i>			
15.05-15.20 hrs	ICSBE24_775	INTEGRATED GEOTECHNICAL AND GEOPHYSICAL APPROACHES FOR LANDSLIDE RISK ASSESSMENT IN TROPICAL REGIONS <i>V. Nirthani, A.H Weerakoon, T.A.N.T. Perera, C.S. Bandara, G.Y. Jayasinghe</i>			
15.20 – 15.35 hrs	ICSBE24_772	SMART PARTNERSHIPS: INNOVATING INDUSTRIAL TRAINING THROUGH ENHANCED UNIVERSITY-INDUSTRY COLLABORATION IN SRI LANKA <i>M.M.S.T. Jayamali, W.G.M. Randika, K.M.C. Tharupath, G.Y. Jayasinghe</i>			

15.35 – 15.50 hrs	ICSBE24_778	<p>SUSTAINABLE TRANSFORMATIONS IN SRI LANKA'S TEA INDUSTRY: CIRCULAR ECONOMY PRACTICES IN VALUE ADDITION, POST-HARVEST PROCESSING, AND WASTE MANAGEMENT</p> <p><i>I.A.T.D.S. Karunasinghe, S.M.S.N. Senanayake, P.R.T. Ariyaratna, G.R.P. Hettiarachchi, P.R.B.W. Dhananjaya, J.M.H.M. Upulwehera, W.G.M. Randika, M.M.S.T. Jayamali, Pradeep Gajanayake</i></p>
15.50 – 16.05 hrs	ICSBE24_781	<p>FOSTERING ENTREPRENEURIAL INTENTIONS AND OVERCOMING CHALLENGES IN STUDENT ENTREPRENEURSHIP THROUGH UNIVERSITY-INDUSTRY COLLABORATION IN SRI LANKA</p> <p><i>WGM Randika, M.C. Karunadasa, M.M.S.T. Jayamali, K.M.C. Tharupath, G.Y.Jayasinghe</i></p>
16.05 – 16.20 hrs	ICSBE24_782	<p>ASSESSING VERTICAL GREENING SYSTEMS FOR INDOOR AIR QUALITY ENHANCEMENT IN URBAN ENVIRONMENTS: A SUSTAINABLE APPROACH TO BUILT ENVIRONMENT HEALTH.</p> <p><i>M.C. Karunadasa, K.G.N.H. Weerasinghe, R.U. Halwatura, G.Y. Jayasinghe</i></p>
16.20 – 16.35 hrs	ICSBE24_552	<p>SYSTEMATIC REVIEW OF UNIVERSITY-INDUSTRY COLLABORATION: ENHANCING THE TRIPLE BOTTOM LINE FOR SUSTAINABILITY.</p> <p><i>D.P.T.T. Silva, G.Y. Jayasinghe</i></p>
Session Coordinator	<p>Ms. Sadeesha Senanayake +94 70 124 9883</p>	

Date: 22nd December 2024/ Time: 8.30 -10.30 hrs

Room 2 (Hybrid)/ Session 01

Innovations in Building Materials

Join Zoom Meeting	https://us06web.zoom.us/j/87319842721?pwd=I6fpbiK2bkJ7zFlTOtZwYzabta1BD2.1				
	Meeting ID: 873 1984 2721		Meeting Passcode: 314042		
Session Chair 1	Dr. Ganila Paranawithana Open University of Sri Lanka	Session Chair 2	Dr. H.A.D. Samith Buddhika University of Peradeniya Sri Lanka	Session Chair 3	Dr. Isuru Wijewardana The Open University of Sri Lanka
Time	Paper ID	Title			
8.30-8.45 hrs	ICSBE24_072	UNIAXIAL COMPRESSION RESPONSE OF CONCRETE WITH COMMUNICATION CABLE WASTE UNDER VARYING LOADS <i>M.N.M. Nifal, H.M.C.C. Somarathna, I. Pithurjan, K. Satkunanathan</i>			
8.45-9.00 hrs	ICSBE24_295	COMPARISON OF PHYSICAL AND MECHANICAL PROPERTIES OF FLY ASH BRICKS WITH NORMAL CLAY BRICKS <i>U. G. R. P. C. Kumara, Chandana Kulasuriya</i>			
9.00-9.15 hrs	ICSBE24_180	DEVELOPMENT OF COIR FIBER REINFORCED CEILING BOARD WITH INTEGRATED MECHANICAL, THERMAL, AND PHYSICAL PROPERTIES. <i>D. A. Madarasinghe, K. Chandrathilake, N. W.A. Lidula, A. A. P. De Alwis, J.C.P.H. Gamage</i>			
9.15-9.30 hrs	ICSBE24_126	EFFECT OF SAND TYPES ON MECHANICAL PERFORMANCE AND MORPHOLOGY OF CEMENT MORTAR COMPOSITE CONTAINING CEMENT STRENGTH CLASS 42.5 N <i>D. D. Dheerathna, A. M. B. Chandima, S. Guluwita, M. T. K. P. Perera</i>			

9.30-9.45 hrs	ICSBE24_069	EVALUATING THE CRACKING BEHAVIOR OF RECYCLED TILE WASTE AGGREGATE CONCRETE <i>P.U.D. Pathirana, U.N.D. Perera, R.S. Mallawaarachchi</i>			
9.45-10.00hrs	ICSBE24_141	A REVIEW OF ENHANCEMENT OF STRUCTURAL PROPERTIES OF CEMENTITIOUS MATERIALS VIA GRAPHENE OXIDE <i>W.S.P. Peiris, C.J. Thambiliyagodage, S.V.T.J. Perera, R.K.N.D. Rajapakse</i>			
10.00-10.15 hrs	ICSBE24_177	TEMPERATURE ASSESSMENT OF CONCRETE MADE UP OF RECYCLED WASTE PLASTIC <i>C. Nirushan, G. Nantharuban, T. Abirami, C. S. Bandara</i>			
10.15-10.30 hrs	ICSBE24_038	INVESTIGATION OF THE SUITABILITY OF THE SANDY SOIL AVAILABLE IN BALANGODA KODDUWATHTHA AREA FOR USE AS FINE AGGREGATE <i>H.C.D. Obeysekara, R.A.N. Dilrukshi</i>			
Session Coordinator 1	Eng. Chamath Dulanjana +94 77 8116448	Session Coordinator 2	Ms. Lakmi Perera +94763705037	Session Coordinator 3	Ms. Nipuni Sewwandi +94 701673177

Date: 22nd December 2024/ Time: 14.00-16.00 hrs

Room 2 (Hybrid)/ Session 03

Urban Landscape and Ecological Planning

Join Zoom Meeting

<https://us06web.zoom.us/j/87319842721?pwd=I6fpbiK2bkJ7zFITOtZwYzabta1BD2.1>

Meeting ID: 873 1984 2721

Meeting Passcode: 314042

Session Chair 1

Prof. Criston Ioja
University of
Bucharest, Romania

Session
Chair 2

Prof. Lalitha Dissanayake
University of Peradeniya
Sri Lanka

Time

Paper ID

Title

14.00-14.15 hrs

ICSBE24_611

RAINWATER HARVESTING AS AN URBAN PLANNING STRATEGY IN PINGA OYA IN AKURANA, SRI LANKA

D.M.L. Dissanayake, M.H.S. De Silva

14.15-14.30 hrs

ICSBE24_617

THE ROLE OF URBAN CEMETERIES IN ECOSYSTEM SERVICES: THE CASE OF KANDY, SRI LANKA

D.M.L. Dissanayake, P.G.R.A. Nayanthima, D.R.P. Godamunna

14.30-14.45 hrs

ICSBE24_615

FOREST AND URBAN INTERACTION: A CASE STUDY OF THE KANDYAN LANDSCAPE IN SRI LANKA

L. Dissanayake, U. Jinadasa, M. Wijesuriya, N. Senarath

14.45-15.00 hrs

ICSBE24_619

WATER POLLUTION IN THE URBAN SEGMENT OF PINGA OYA DURING FLOOD SITUATIONS

W.R.M.N.R. Wickramasinghe, R.T. Jayasinghe, P.C.L. Kapugama, J.G. Ilakshika, A.R. Ushani, L. Dissanayake

15.00-15.15 hrs

ICSBE24_618

VEGETATION CHANGES IN URBAN STREAM CORRIDORS: A CASE STUDY OF THE PINGA OYA URBAN-RURAL GRADIENT

N.M.G.I. Udari, B.G.W.M. Sriyananda, K.N.K. Kankanamge, J.M.S.G.B Navarathne, L. Dissanayake

15.15-15.30 hrs

ICSBE24_888

ANALYSIS OF TRAFFIC PATTERNS IN AKURANA TOWN DURING FLOOD SITUATIONS AND NORMAL CONDITIONS

K. S. Rathnayaka, B. E. Wickramasinghe, J. V. S. Samanmali, K.M.C.Wijerathna, S. B. Prasangika, L. Dissanayake

15.30-15.45 hrs	ICSBE24_616	<p>STREAM MODIFICATION AND FLOOD IMPACTS IN URBAN TOWNS: A CASE STUDY OF AKURANA IN SRI LANKA</p> <p><i>R.M.C.D. Jayaweera, A.A. Pandigama, M.K. Madushani, D.D.P. Kumari, H.B.S. Kavindi, L. Dissanayake</i></p>			
15.45-16.00 hrs	ICSBE24_620	<p>SOLID WASTE MANAGEMENT ISSUES DURING FLOOD HAZARDS IN URBAN ENVIRONMENTS – CASE STUDY OF AKURANA, SRI LANKA</p> <p><i>H. Ayesha, D. Deepthika, I. Hemachandra, M. Hapugoda, S. Hettiarachchi, L. Dissanayake</i></p>			
16.00-16.15 hrs	ICSBE24_889	<p>A SPATIAL STUDY ON THE ECOLOGICAL SIGNATURES OF LANDSCAPES IN COLOMBO</p> <p><i>J. C. Subasinghe, T. M. C. I. Madhushani, P. I. A. Gomes</i></p>			
16.15-16.30 hrs	ICSBE24_614	<p>ECOLOGICAL SENSITIVITY OF ANCIENT AND MODERN BUILDINGS: CASE OF KANDY GRID CITY AREA</p> <p><i>D.R.P. Godamunna, H.M.S.M. Pitawala</i></p>			
Session Coordinator 1	Eng. Chamath Dulanjana +94 77 8116448	Session Coordinator 2	Ms. Lakmi Perera +94 763705037	Session Coordinator 3	Ms. Nipuni Sewwandi +94701673177

Date: 22nd December 2024/ Time: 8.30-10.30 hrs

Room 3 (Physical)/ Session 01

Sustainable Materials

Session Chair 1	Dr. H.A.D. Samith Buddhika University of Peradeniya, Sri Lanka	Session Chair 2	Dr. Sahan Bandara University of Peradeniya Sri Lanka
Time	Paper ID	Title	
8.30 – 8.45 hrs	ICSBE24_074	FLEXURAL RESPONSE OF COCONUT FIBRE REINFORCED MORTAR UNDER VARYING LOADS <i>L.H.G. Lamahewa, H.M.C.C. Somarathna, O.K. Surasinghe, K.G.K.D. Samarakoon</i>	
8.45 – 9.00 hrs	ICSBE24_157	THE EFFECT OF BORON TREATMENT ON SELECTED PINE WOOD SECTIONS USING THE DIP DIFFUSION METHOD <i>C. K. Muthumala, W.V. T. D. Amarasinghe, C. Madusanka</i>	
9.00-9.15 hrs	ICSBE24_184	UTILIZATION OF CONSTRUCTION AND DEMOLITION WASTE AS A REPLACEMENT FOR NATURAL SAND IN MORTAR <i>H.G.T. Ravishka, C. Jayasinghe, I. E. Ariyaratne</i>	
9.15-9.30 hrs	ICSBE24_494	PROMOTING SUSTAINABILITY BY IMPLEMENTING “OL-ID” SYSTEM FOR THE HEALTHCARE INDUSTRY <i>W.M.M.A. Abeyaratne, W.M.H.M. Aththanayake, Roshani faleel, R.M.A.U. Rathnayaka, K.C.S. Ekanayake</i>	
9.30-9.45 hrs	ICSBE24_118	TENSILE RESPONSE OF COCONUT FIBRE REINFORCED MORTAR UNDER VARYING LOADS <i>O.K. Surasinghe, H.M.C.C. Somarathna, L.H.G. Lamahewa, K.G.K.D. Samarakoon</i>	

9.45-10.00 hrs	ICSBE24_993	<p>EVALUATING THE EFFECTS OF RUBBER PARTICLE SOURCE AND SHAPE ON THE MECHANICAL PROPERTIES OF AQUA-THERMALLY TREATED RUBBERIZED CONCRETE</p> <p><i>B.G.V. Sanjaya, J.M.R.S. Appuhamy, W.M.K.R.T.W. Bandara, S. Venkatesan, R.J. Gravina</i></p>	
10.00 – 10.15 hrs	ICSBE24_076	<p>PROCESSING LIPSTICKS FROM SRI LANKAN NATURAL RESOURCES: LITERATURE REVIEW</p> <p><i>W.M.P.K.K. Walgampaya, C.S. Kalpage</i></p>	
10.15-10.30 hrs	ICSBE24_002	<p>ASSESSMENT OF MECHANICAL PROPERTIES OF EUCALYPTUS SPECIES IN SRI LANKA</p> <p><i>C. K. Muthumala, K.K.I.U.Arunakumara</i></p>	
Session Coordinator 1	Ms. Madhushani Gunawardana +94 71 6240453	Session Coordinator 2	Ms. Sajani Kolambage +94 71 5642762

Date: 22nd December 2024/ Time: 14.00-16.00 hrs

Room 3 (Physical)/ Session 03

Materials and Resource Management

Session Chair 1	Dr. Pujitha Dissanayake University of Peradeniya Sri Lanka	Session Chair 2	Dr. Ajith Thambo Eastern University Sri Lanka	Session Chair 3	Dr. Balasubram aniam Janarthanan University of Jaffna Sri Lanka
Time	Paper ID	Title			
14.00-14.15 hrs	ICSBE24_073	GRAPH NEURAL NETWORK BASED SURROGATE MODEL FOR DESIGN INFORMED STRUCTURAL OPTIMIZATION <i>Nisal Ariyasinghe, Hansani Weeratunga, Chinthaka Mallikarachchi, Sumudu Herath</i>			
14.15-14.30 hrs	ICSBE24_174	SHEAR STRENGTH OF PLAIN CONCRETE WITH RECYCLED POLYPROPYLENE PLASTIC AGGREGATES <i>K.G.D.I.H.Thilakarathna, T.Abirami, W.A.R.U.Weragama, C.S.Bandara</i>			
14.30-14.45 hrs	ICSBE24_181	EXPLORING THE POTENTIAL OF COLOURED GLASS PARTICLES AS FINE AGGREGATE REPLACEMENTS IN CONCRETE: AN EXPERIMENTAL STUDY <i>D.H.A. Maduranga, J.M.R.S. Appuhamy, W.M.K.R.T.W. Bandara, C.E. Kankanamge</i>			
14.45-15.00 hrs	ICSBE24_054	MECHANICAL RESPONSES OF CONCRETE WITH SURFACE- TREATED CALICUT TILE AGGREGATES <i>S. Kishotharan , H.M.C.C. Somarathna, J. Johnkeshanth , M. M. M. Kaashif</i>			
15.00-15.15 hrs	ICSBE24_098	THE SUSTAINABILITY IMPACTS OF MATERIAL REUSE IN RESIDENTIAL CONSTRUCTION PROJECTS <i>H.A.D.M. Happitiya, K.P.K.M.H. Polhena, M.G.P. Manelgama, J. Wijesundara</i>			

15.15-15.30 hrs	ICSBE24_452	<p>ASSESSING THE ADOPTABILITY OF MATERIAL REUSE IN SRI LANKAN BUILDING CONSTRUCTION PROJECTS: A CIRCULAR ECONOMY PERSPECTIVE</p> <p><i>K.G.D.K Harinya, D.M.S. Jayasuriya</i></p>	
15.30-15.45 hrs	ICSBE24_097	<p>RECYCLING SOLUTIONS FROM END-OF-LIFE TEXTILE WASTE IN SRI LANKA FOR BUILDING AND DECORATIVE MATERIALS</p> <p><i>K. K. Dias, T. D. Amarasooriya</i></p>	
Session Coordinator 1	Ms. Madhushani Gunawardana +94 71 6240453	Session Coordinator 2	Ms. Sajani Kolambage +94 71 5642762

Date: 22nd December 2024/ Time: 8.30-10.30 hrs

Room 4 (Hybrid)/ Session 01

Indoor Environmental Quality & Indoor Plants

Join Zoom Meeting

<https://us06web.zoom.us/j/82855673242?pwd=IF4bqwRRuOhLi5DVOcySXcVbRbt4y8.1>

Meeting ID: 828 5567 3242

Meeting Passcode: 773277

Session Chair 1

Prof. Chintha Jayasinghe
University of Moratuwa
Sri Lanka

Session Chair 2

Dr. Chamila Dias
Open University of Sri Lanka |
Sri Lanka

Time

Paper ID

Title

8.30 – 8.45 hrs

ICSBE24_078

THE IMPACT OF INTERIOR DESIGN ENVIRONMENT ON EMPLOYEE SATISFACTION: AN INSIGHT ON STATE OFFICES IN SRI LANKA

K.I. Kalpani, J.C. Ratnayake, P.L. Wimalaratna, G.W.J.K.K. Wijesundara

8.45 – 9.00 hrs

ICSBE24_046

SYSTEMATIC REVIEW ON VERTICAL GREENERY SYSTEMS IN INDOOR ACOUSTIC CONTROL: ADDRESSING NEEDS, EXPLORING PROSPECTS, AND HIGHLIGHTING BENEFITS

M.A.U.C. Wijeratne, H.A.T.N. Perera, R.U. Halwatura, G.Y. Jayasinghe

9.00-9.15 hrs

ICSBE24_048

THE APPLICABILITY OF SMART WATERING ON REDUCING ROOM TEMPERATURE

R. H. G. N. Deshan, K. B. A. Silva

9.15-9.30 hrs

ICSBE24_246

ASSESSING CARBON SEQUESTRATION IN URBAN ARCHITECTURE: THE POTENTIAL OF BUILDING-INTEGRATED VEGETATIVE SYSTEMS

T.T. Ranasinghe, H.A.C. Priyankara, G.Y. Jayasinghe

9.30-9.45 hrs

ICSBE24_247

THERMAL SATISFACTION OF STUDENTS IN INDOOR SPACES AT ACCADAMIC INSTITUTIONS

K.A.B. Weerasinghe, A.G.D.T.N. Nanayakkara

9.45-10.00hrs	ICSBE24_788	<p>BIOMIMICRY IN SUSTAINABLE ARCHITECTURE AND CONSTRUCTION: STATE-OF-THE-ART STRATEGIES AND AI APPLICATIONS</p> <p><i>K. Keerthana, W.A.D.C.S. Perera, T.A.N.T.Perera and G.Y. Jayasinghe</i></p>	
10.00-10.15hrs	ICSBE24_245	<p>A SYSTEMATIC REVIEW ON THE ROLE OF INDOOR PLANT-ASSOCIATED MICROBIAL COMMUNITIES IN AIR PURIFICATION</p> <p><i>J.A.S.G, Randimali, E.M.G.D.B.Ekanayake, B.K.A. Bellanthudawa, G.Y. Jayasinghe</i></p>	
Session Coordinator 1	Eng. Hashan Thilakarathne +94 71 5174147	Session Coordinator 2	Eng. Dilan Danushka +94 76 5336754

Date: 22nd December 2024/ Time: 14.00-16.00 hrs

Room 4 (Hybrid)/ Session 03

Waste in the Construction Industry

Join Zoom Meeting

<https://us06web.zoom.us/j/82855673242?pwd=IF4bqwRRuQhLi5DVOcySXcVbRbt4y8.1>

Meeting ID: 828 5567 3242

Meeting Passcode: 773277

Session Chair 1

Dr. Chandima Somarathna
Sri Lanka Institute of
Information Technology
Sri Lanka

Session Chair 2

Ms. Kamani Sylva
University of Peradeniya,
Sri Lanka.

Time

Paper ID

Title

14.00-14.15 hrs

ICSBE24_016

OVERCOMING BARRIERS IN IMPLEMENTING
LEAN CONSTRUCTION PRACTICES IN THE
BUILDING CONSTRUCTION INDUSTRY IN
SRI LANKA

L.S Weerasinghe, I.W.N Bandaranayake, A.K Kulatunga

14.15-14.30 hrs

ICSBE24_056

A QUANTITATIVE ANALYSIS OF
IMPLEMENTING CIRCULAR ECONOMIC
PRACTICES TO MANAGE CONSTRUCTION
AND DEMOLITION WASTE IN SRI LANKA

*Saumya Perera, Udayangani Kulathunga, Panchali
Weerakoon, Maheshi Pabasara Tennakoon*

14.30-14.45 hrs

ICSBE24_676

BARRIERS TO IMPLEMENTING WASTE
MANAGEMENT STRATEGIES IN
CONSTRUCTION PROJECTS IN QATAR

T.D. Denagama, J.M.I.S. Jayasundara

14.45-15.00 hrs

ICSBE24_006

CURRENT PRACTICES OF DEMOLISHED
CONCRETE WASTE MANAGEMENT IN
BUILDING PROJECTS IN SRI LANKA

S.S Hettihewa, D.R Dassanayake

15.00-15.15 hrs	ICSBE24_026	<p>MINIMIZING MATERIAL WASTES THROUGH THE APPLICATION OF LEAN PRINCIPLES: A STUDY OF CONSTRUCTION PHASE OF HIGHEST GRADE CONSTRUCTION COMPANIES IN SRI LANKA</p> <p><i>M.M.Dissanayaka, M.M.D.R.Deegahawature</i></p>	
15.15-15.30 hrs	ICSBE24_052	<p>SUITABILITY OF FIBER MOLDING WASTES AS FINE AGGREGATE FOR CASTING PAVING BLOCKS</p> <p><i>W.P.M. Dilsara, D.R. Dassanayake</i></p>	
Session Coordinator 1	Eng. Hashan Thilakarathne 071 5174147	Session Coordinator 2	Eng. Dilan Danushka +94 76 5336754

Date: 22nd December 2024/ Time: 14.00-16.00 hrs

Room 5 (Hybrid)/ Session 03

Carbon Footprint

Join Zoom Meeting

<https://us06web.zoom.us/j/86576920548?pwd=00bKILX2aKjujVgcXKVPgJPv9NhM76.1>

Meeting ID: 865 7692 0548

Meeting Passcode: 880657

Session Chair 1

Prof. Parakrama
Karunaratne
University of
Peradeniya
Sri Lanka

Session Chair 2

Dr. M.G.G.
Awanthi
University of
Ruhuna
Sri Lanka

Session Chair 3

Dr. Sewwandi
Chandrasekara
University of
Peradeniya
Sri Lanka

Time

Paper ID

Title

14.00-14.15 hrs

ICSBE24_ 081

CARBON FOOTPRINT ANALYSIS OF THE CONSTRUCTION PROCESS OF A SMALL-SCALE HOUSING PROJECT IN SRI LANKA – A CASE STUDY TO EXPLORE STRATEGIES FOR CLIMATE MITIGATION THROUGH GHG EMISSION REDUCTION

K.A.S.H. Wijayasenarathne, P.I.M. Ariyawansa ,R.M.A.Dilini

14.15-14.30 hrs

ICSBE24_ 168

CALCINATION AND MECHANICAL ACTIVATION OF WASTE CLAYS FOR LOW-CARBON CONCRETE

Roshan Jayathilake, Chamila Gunasekara, David Law, Sujeeva Setunge

14.30-14.45 hrs

ICSBE24_ 172

DIGITAL BUILDING PASSPORT FOR RESIDENTIAL DWELLINGS

L Thilakarathna, N Weerasinghe, R Edirisinghe, S Setunge

14.45-15.00 hrs

ICSBE24_ 240

ASSESSING THE ROLE OF MANGROVES IN REDUCING BLUE CARBON FOOTPRINT: IMPORTANCE, THREATS, AND CONSERVATION STRATEGIES FOR CLIMATE CHANGE MITIGATION

N. Saheedha, C.P. Rupasinghe

15.00-15.15 hrs

ICSBE24_059

ESTIMATION OF CARBON SEQUESTRATION IN THE LOLC FINANCE DENIYAYA REFORESTATION AND BIODIVERSITY RESTORATION PROJECT

S.D.S.A. Wijerathna, E. Lokupitiya

15.15-15.30 hrs	ICSBE24_162	SUSTAINABLE HOUSING SOLUTIONS FOR DISPLACED SRI LANKANS <i>Kavitha Vipulananda</i>	
15.30-15.45 hrs	ICSBE24_192	ORGANIZATION CARBON FOOTPRINT CALCULATION FOR NON-BANK IN SRI LANKA – A CASE STUDY FOR LOLC FINANCE PLC <i>N.S.Liyanage, Y.R. Kodagoda, Pradeep Gajanayake, S.D.S.A. Wijerathne</i>	
15.45-16.00 hrs	ICSBE24_007	DEVELOPMENT OF AN ODORLESS RAPID COMPOSTING MACHINE FOR DOMESTIC USE <i>A. A. Darshani, K. K. D. V. N. Kannangara, S. A. Kariyawasam, Prof. J. G. A. S. Jayasekara</i>	
Session Coordinator 1	Ms. Nayanathara Jayasinghe +94 76 7311951	Session Coordinator 2	Ms. Yashoda Kodagoda +94 70 1506141

Date: 22nd December 2024/ Time: 8.30-10.30 hrs

Room 7 (Online)/ Session 01

Geotechnical Engineering

Join Zoom Meeting

<https://learn.zoom.us/j/91461153424?pwd=9zh2WUMQ3LU0wfdPDbVcQZjYfKXUsO.1>

Meeting ID: 914 6115 3424

Meeting Passcode: Abc@1234

Session Chair 1

Dr. M.C.M. Nasvi
University of Peradeniya
Sri Lanka

Session Chair 2

Dr. R.A.N. Dilrukshi
University of Wayamba
Sri Lanka

Time

Paper ID

Title

8.30-8.45 hrs

ICSBE24_156

COMPARATIVE ANALYSIS OF RECYCLED CONCRETE AGGREGATE AND CONVENTIONAL UNBOUND GRANULAR MATERIALS USED IN LOW-VOLUME ROAD CONSTRUCTION

Ravindu Ranasinghe, Jangchu Pelden, Ayesh Dushmantha, Shiran Jayakodi

8.45-9.00 hrs

ICSBE24_353

PREDICTIVE MODELLING OF MOISTURE DYNAMICS IN UNBOUND GRANULAR PAVEMENTS USING REAL-TIME SENSOR DATA AND PRECIPITATION

Ayesh Dushmantha, Shiran Jayakody

9.00-9.15 hrs

ICSBE24_110

SHREDDED RUBBER FOR PARTIAL REPLACEMENT OF BALLAST IN RAIL TRACK APPLICATIONS

C. Thanusikan, E. Mathynushan, S. K. Navaratnarajah

9.15-9.30 hrs

ICSBE24_105

INFLUENCE OF GRADATION ON SHEAR BEHAVIOR OF RAILWAY BALLAST MATERIAL

R Tharmarajah, M Amalan, S K Navaratnarajah

9.30-9.45 hrs

ICSBE24_151

CAPROCK INTEGRITY DURING UNDERGROUND HYDROGEN STORAGE: UNVEILING THE RISK OF CRITICAL CRACK PROPAGATION

R.A.D.P. Dilshan, M.S.A. Perera

9.45-10.00 hrs	ICSBE24_150	RECOVERED CARBON BLACK (rCB) FOR STABILIZATION OF EXPANSIVE SUBGRADE <i>G. Gedara, S. Jayakody, N. Nayanthara</i>
10.00-10.15 hrs	ICSBE24_355	FLUID INERTIA EFFECT ON TRANSIENT FLOW THROUGH ROCK FRACTURE INTERSECTIONS: IMPLICATIONS FOR ENHANCED UNDERSTANDING AND OPTIMISATION <i>E.A.A.V Edirisinghe, M.S.A Perera</i>
10.15-10.30 hrs	ICSBE24_166	USE OF LFWD AS A NON-DESTRUCTIVE TEST TO ASSESS CONDITIONS OF A PAVEMENT STRUCTURE DURING CONSTRUCTION <i>H.D.S Mithila, K.A.S.N Fernando, K Monneron, S Jayakody</i>
10.30-10.45 hrs	ICSBE24_110	SHREDDED RUBBER FOR PARTIAL REPLACEMENT OF BALLAST IN RAIL TRACK APPLICATIONS C. Thanusikan, E. Mathynushan , S. K. Navaratnarajah
Session coordinator 1	Eng. Ravindra Ekanayake +94 77 8638848	

Date: 22nd December 2024/ Time: 11.00-1.00 hrs

Room 7 (Online)/ Session 02

Sustainable Construction

Join Zoom Meeting

<https://learn.zoom.us/j/91461153424?pwd=9zh2WUMQ3LU0wfdPDbVcOZjYfKXUsO.1>

Meeting ID: 914 6115 3424

Meeting Passcode: Abc@1234

Session Chair 1

Dr.Chandana Siriwardena
Massey University
New Zealand

Session Chair 2

Dr. K.H.P Madusanka
University of Sri Jayewardenepura
Sri Lanka

Time

Paper ID

Title

Key Lecture

11.00– 11.15 hrs

ICSBE24_035

ASSESSMENT OF THE STATUS OF THE
HIKKADUWA MARINE SANCTUARY

*D. P. C. Laknath, T.U.S. Manamperi, H.P.G.M. Caldera,
K.K.P.P. Ranaweera*

11.15 – 11.30 hrs

ICSBE24_047

DEVELOPMENT AND FINITE ELEMENT
ANALYSIS OF VISCOELASTIC TUNED MASS
DAMPERS FOR MITIGATING EXCESSIVE
WALKING-INDUCED VIBRATIONS IN
STRUCTURES

S.A.S. Madhushan, A.P.R.L. Rathnayaka, H.A.D.S. Buddika

11.30-11.45 hrs

ICSBE24_039

EVALUATION OF PASSIVE COOLING SOLUTIONS
TO MITIGATE THE COOLING LOAD DEMAND
FOR EXISTING BUILDINGS IN TROPICAL
CLIMATES.

*I.H.U.S.Hettiarachchi, V.W.A.D.Uthpala, A.S.R.Gnanarathna,
Indrajith Nissanka*

11.45-12.00 hrs

ICSBE24_083

ENVIRONMENTAL IMPACT DUE TO CO2
EMISSION CAUSED BY CONCRETE ELEMENTS
OF DOMESTIC CONSTRUCTION PROJECTS

A S H Silva, K Guruge

12.00-12.15 hrs

ICSBE24_131

TOWARDS ECO-URBANISM: EXPLORING THE
NEXUS OF SUSTAINABLE ARCHITECTURE AND
WASTE MANAGEMENT IN COLOMBO, SRI
LANKA

M.A.D.D.Mudannayaka, Jeeva Wijesundara

12.15-12.30 hrs	ICSBE24_692	<p>DEVELOPMENT OF A GREEN RATING SYSTEM FOR A SUSTAINABLE INDUSTRIAL ZONE</p> <p><i>Gunathunga D.M.V.D, Kolambage S.H, Gajanayake P, Samarawickrama H.G.T.P, Dissanayake P.B.R, Wijewardana Y.G.D.P</i></p>
12.30-12.45 hrs	ICSBE24_092	<p>GREEN BUILDING PRACTICES IN THE SRI LANKAN HOTEL SECTOR</p> <p><i>Suvmali Rathnayake, Julia N. Albrecht, Tobias Danielmeier</i></p>
Session Coordinator 1	<p>Eng. Ravindra Ekanayake +94 77 8638848</p>	

