

## DETAILED SESSION PLAN

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Friday, 24 June 2022

### SESSION 1A

**Theme** Sustainable Urban Development and Infrastructure

**Session Chair** Prof. Udayangani Kulatunga

**Session Duration** 05.00 PM – 06.30 PM

**Time** Paper ID, Title and Author(s)

05.00 PM – 05.15 PM **S14089: State of the art in risk sensitive urban development: A systematic literature review**

*A.G.U. Damsari, M. Thayaparan and T. Fernando*

05.15 PM – 05.30 PM **S14093: A review of drivers of sustainability in mega infrastructure projects: An institutional approach**

*Nicola Thounaojam, Ganesh Devkar and Boeing Laishram*

05.30 PM – 05.45 PM **T14007: Sustainable challenges and strategies for managing stakeholders in megaprojects: Review of cases from Australia**

*Sepani Senaratne and Siryana Rai*

05.45 PM – 06.00 PM **T14032: Value engineering for the selection of a suitable type of foundation in metro rail projects: A case study from India**

*Aneetha Vilventhan, R. Rajadurai and Prateek Vishwakarma*

06.00 PM – 06.15 PM **S14086: Analysis of the current housing market in Colombo metro region to enhance the prospective consumer satisfaction**

*S.R. Dunuwila and K.A.K. Devapriya*

06.15 PM – 06.30 PM **Q&A**

*Session Coordinator: Ms. Agana Parameswaran*

## DETAILED SESSION PLAN

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Friday, 24 June 2022

### SESSION 1B

**Theme** Knowledge Management and Lessons Learned

**Session Chair** Dr. Menaha Thayaparan

**Session Duration** 05.00 PM – 06.30 PM

**Time** Paper ID, Title and Author(s)

05.00 PM – 05.15 PM **S14016: The impact of professionals’ knowledge on innovation adoption in the construction industry: A critical literature review**  
*Umesha Weerapperuma, Suranga Jayasena, Akila Rathnasinghe and Niraj Thurairajah*

05.15 PM – 05.30 PM **S14082: Safety in the maritime construction site: Capturing lessons learned**  
*Jose Rocha and Anoop Sattineni*

05.30 PM – 05.45 PM **S14020: Level of risk management knowledge among construction project managers in Sri Lanka**  
*D.H.N. Welikala, H.S. Jayasena and B.K.C. Perera*

05.45 PM – 06.00 PM **S14090: Knowledge management practices to minimize the impact of staff turnover**  
*K.P.A.N. Karunanayake, M.L.S.S. Fernando and U. Kulatunga*

06.00 PM – 06.15 PM **S14048: Defining a ‘maturity model’ in the construction context: A systematic review**  
*J.K.D.D.T. Jayanetti, B.A.K.S. Perera and K.G.A.S. Waidyasekara*

06.15 PM – 06.30 PM **Q&A**

*Session Coordinator: Mr. Sasanka Gallge*

## DETAILED SESSION PLAN

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Friday, 24 June 2022

### SESSION 1C

**Theme** Cost Management in Construction

**Session Chairs** Dr. Gayani Karunasena

Dr. Sachie Gunatilake

**Session Duration** 05.00 PM – 06.30 PM

**Time** Paper ID, Title and Author(s)

05.00 PM – 05.15 PM **S14075: An assessment of maintenance cost of residential apartments in Sri Lanka**

*P. Kajavathani and T. Ramachandra*

05.15 PM – 05.30 PM **S14005: Availability of reliable cost data for whole life costing in the Tanzania building construction industry**

*Sylvester L. Manege and Craig J. Kennedy*

05.30 PM – 05.45 PM **T14063: The impact of material and labour cost variables on contactors' budgeted cost**

*R.D.W.W. Jayathilaka, K.G.A.S. Waidyasekara and D.C. Sirimewan*

05.45 PM – 06.00 PM **S14091: Cost overrun factors in pre-contract and post-contract stages: A critical analysis**

*Chanuka Ariyawansha and Mathusha Francis*

06.00 PM – 06.15 PM **S14040: Beyond the iron-triangle: Accommodating sustainable construction in the new-normal conditions**

*L.R.V.N. Rathnakumara and H. Chandanie*

06.15 PM – 06.30 PM **Q&A**

*Session Coordinator: Ms. Kalindu Mendis*

## DETAILED SESSION PLAN

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Friday, 24 June 2022

### SESSION 1D

**Theme** Innovative Procurement Approaches

**Session Chairs** Dr. Tharusha Ranadewa

Dr. Ashan Asmone

**Session Duration** 05.00 PM – 06.30 PM

**Time** Paper ID, Title and Author(s)

05.00 PM – 05.15 PM **S14034: Successful delivery of Public-Private Partnership (PPP) in the construction projects of Sri Lankan higher education sector**  
*Neranja Kandawinna, Harshini Mallawaarachchi and Dimuthu Vijerathne*

05.15 PM – 05.30 PM **S14055: Applicability of public-private partnership to overcome the challenges encountered by public sector building projects in Sri Lanka**  
*D.M.D.D. Dissanayake and K.A.K. Devapriya*

05.30 PM – 05.45 PM **S14085: Adaptability of blockchain-based E-Procurement system in Sri Lankan construction projects**  
*N. Nitharsan and Mathusha Francis*

05.45 PM – 06.00 PM **S14088: Strategies adopted by design and build contractors to enhance the implementation of sustainable construction practices**  
*B.K.M. Nadeetharu and U. Kulatunga*

06.00 PM – 06.15 PM **S14078: Exploring the lesson learnt by implementing e-tendering - A review of literature**  
*Kavitha Kajendran*

06.15 PM – 06.30 PM **Q&A**

*Session Coordinator: Mr. Buddhika Arsekularathne*

## DETAILED SESSION PLAN

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Saturday, 25 June 2022

### SESSION 2A

**Theme** Building Information Modelling

**Session Chairs** Ch QS Suranga Jayasena

**Session Duration** 09.00 AM – 10.30 AM

**Time** Paper ID, Title and Author(s)

09.00 AM – 09.15 AM **S14049: Establishing the role of BIM towards mitigating critical project risks assessed using a fuzzy inference system**  
*Sulakshya Gaur and Abhay Tawalare*

09.15 AM – 09.30 AM **S14077: A review on unexploited features of n-dimensional BIM: An Indian construction scenario**  
*Rhijul Sood and Boeing Laishram*

09.30 AM – 09.45 AM **S14010: BIM-Lean relationship assessment framework: A conceptual establishment**  
*Mohammad Afjalur Rahman and Sheila Belayutham*

09.45 AM – 10.00 AM **S14068: Enhance the collaborative involvement of stakeholders through cloud-based BIM in the Sri Lankan construction industry**  
*R. Mohanaraj, P. Ganeshu and M. Gowsiga*

10.00 AM – 10.30 AM **Q&A**

*Session Coordinator: Ms. Agana Parameswaran*

## DETAILED SESSION PLAN

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Saturday, 25 June 2022

### SESSION 2B

**Theme** Contract Administration and Dispute Resolution

**Session Chairs** Prof. Kanchana Perera

**Session Duration** 09.00 AM – 10.30 AM

**Time** Paper ID, Title and Author(s)

09.00 AM – 09.15 AM **S14058: Deficiencies in bespoke labour subcontract agreements: The case of large-scale contractors in the Sri Lankan construction industry**  
*A.M.N.N Arampath, Roshani Palliyaguru and G. Karunasena*

09.15 AM – 09.30 AM **T14056: Challenges on bonds and guarantees under the payment security regime in the construction industry of Sri Lanka**  
*P.W.V. Manohara and M.D.T.E. Abeynayake*

09.30 AM – 09.45 AM **S14043: Selection approaches and methods of construction industry consultant: A systematic literature review**  
*Mohammed Ahmed Hummadi, Srinath Perera, Xiao-Hua Jin and Ali Alashwal*

09.45 AM – 10.00 AM **S14076: Cultural basic assumptions of consultants and contractors during negotiations: The case of South Australian construction industry**  
*Sonali Alankarage, Aparna Samaraweera, Joseph Royle, Adrian Macolino, Steven Robertson and A.D. Palihakkara*

10.00 AM – 10.15 AM **S14059: Opportunities and challenges in conducting virtual Alternative Dispute Resolution (ADR) methods in the Sri Lankan construction industry**  
*Vithusha Lingasabesan and Mahesh Abenayake*

10.15 AM – 10.30 AM **Q&A**

*Session Coordinator: Ms. Umesha Weerapperuma*

## DETAILED SESSION PLAN

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Saturday, 25 June 2022

### SESSION 2C

<b>Theme</b>	<b>Health, Safety and Wellbeing</b>
<b>Session Chairs</b>	<b>Dr. H. Chandanie</b>
<b>Session Duration</b>	<b>09.00 AM – 10.30 AM</b>
<b>Time</b>	<b>Paper ID, Title and Author(s)</b>
09.00 AM – 09.15 AM	<b>S14073: Stressors of quantity surveyors working on-site: Female vs male</b> <i>K.A. Gunasekara and B.A.K.S. Perera</i>
09.15 AM – 09.30 AM	<b>S14021: Evaluation of construction workers mental health during COVID-19 pandemic in Nigeria</b> <i>Oni Olatoyese Zaccheus, Olanrewaju Abdullateef, Khor Soo Cheen and Akinbile Bolatito Folasade</i>
09.30 AM – 09.45 AM	<b>S14018: Implementing Safe Working Cycle (SWC) concept amidst the COVID-19 crisis in Sri Lanka</b> <i>H.P. Rasanjana and Chamari Allis</i>
09.45 AM – 10.00 AM	<b>S14029: Quantity surveyors working from home during COVID-19 pandemic: Does place matter?</b> <i>G.H.A.H.N. De Silva and Y.G. Sandanayake</i>
10.00 AM – 10.15 AM	<b>S14064: The role of quantity surveyors for the success of small-scale construction projects in Sri Lanka</b> <i>G.C. Rathnayake, K.P.S.P.K. Bandara and K.T. Withanage</i>
10.15 AM – 10.30 AM	<b>Q&amp;A</b>

*Session Coordinator: Mr. Dulshan Costa*

## DETAILED SESSION PLAN

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Saturday, 25 June 2022

### SESSION 2D

**Theme** Pandemic Resilient Construction

**Session Chairs** Ch QS Vijitha Disaratne

**Session Duration** 09.00 AM – 10.30 AM

**Time** Paper ID, Title and Author(s)

09.00 AM – 09.15 AM **T14041: Contractual implications related to the construction industry in pandemic situations: A review of case laws**  
*R.D.W.W. Jayathilaka and K.G.A.S. Waidyasekara*

09.15 AM – 09.30 AM **S14061: Adapting the standard forms of contract to minimize the contractual effects of COVID-19 on construction projects**  
*Chathuranga Perera and Roshani Palliyaguru*

09.30 AM – 09.45 AM **S14031: The impact of COVID-19 pandemic on the demand and supply of apartment projects in Sri Lanka**  
*J.R. Koonkaduwa and Y.G. Sandanayake*

09.45 AM – 10.00 AM **S14024: Delays and disruptions in the construction industry during the global pandemic**  
*Sithum Hansaka Gammanage and Nishanthi Gunarathna*

10.00 AM – 10.15 AM **S14025: Effect of COVID-19 on the small-scale construction companies: The case of Colombo district, Sri Lanka**  
*Chamodi Piumika Namarathna and Nishanthi Gunarathna*

10.15 AM – 10.30 AM **Q&A**

*Session Coordinator: Ms. Shashini Jayakody*



## DETAILED SESSION PLAN

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**Saturday, 25 June 2022**

### **SESSION 3A**

**Theme** Waste Management  
**Session Chairs** Prof. Lalith de Silva  
**Session Duration** 11.00 AM – 12.30 PM

**Time** Paper ID, Title and Author(s)

11.00 AM – 11.15 AM	<b>S14096: Enablers to facilitate industrial symbiosis for better waste management of industrial zones in Sri Lanka</b> <i>Pubudu Herath, Piumi Dissanayake and Binashi Kumarasiri</i>
11.15 AM – 11.30 AM	<b>S14006: Reusing and repurposing of glass waste: A literature review</b> <i>Tushar Sood and Argaw Gurmu</i>
11.30 AM – 11.45 AM	<b>S14042: A study of liquid waste management practices in construction projects in Australia</b> <i>Shiyamini Ratnasabapathy, Srinath Perera and Mary Hardie</i>
11.45 AM – 12.00 NOON	<b>S14023: The applicability of regulations for the disposal of construction and demolition waste in Sri Lanka</b> <i>Warnakulasuriya Dinu Ashen Chanaka Tissera, Rangamal Dahanayake and Vajira Edirisinghe</i>
12.00 NOON – 12.15 PM	<b>S14037: The impact of procurement method on construction time waste</b> <i>Kavishka Hewamulla, Himal Suranga Jayasena and Kavini Guruge</i>
12.15 PM – 12.30 PM	<b>Q&amp;A</b>

*Session Coordinator: Ms. Agana Parameswaran*

## DETAILED SESSION PLAN

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Saturday, 25 June 2022

### SESSION 3B

**Theme** Energy and Retrofitting

**Session Chairs** Dr. D.P. Chandrasekara

**Session Duration** 11.00 AM – 12.30 PM

**Time** Paper ID, Title and Author(s)

11.00 AM – 11.15 AM **S14008: Strategies to enhance the applicability of grid power solar net metering concept in Sri Lanka**

*M.G.W.U. Abeywickrama, P. Sridarran, M. Gowsiga and R.A.A. Dilogini*

11.15 AM – 11.30 AM **S14070: Developing a decision-making model for selecting smart retrofits**

*G.H.T.D. Jayarathne and Nayanthara De Silva*

11.30 AM – 11.45 AM **S14071: Investigating the sustainable use of energy on construction sites in Sri Lanka**

*S.A.U.M. Athukorala and K.G.A.S. Waidyasekara*

11.45 AM – 12.00 NOON **S14003: Electricity generation through municipal solid waste in Sri Lanka: Drivers and barriers**

*T.A.D.C.D. Karunarathna, P. Sridarran and M. Gowsiga*

12.00 NOON – 12.30 PM **Q&A**

*Session Coordinator: Ms. Umesha Weerapperuma*

## DETAILED SESSION PLAN

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Saturday, 25 June 2022

### SESSION 3C

**Theme** Green Building Systems

**Session Chairs** A/Prof. Nirodha Fernando

**Session Duration** 11.00 AM – 12.30 PM

**Time** Paper ID, Title and Author(s)

11.00 AM – 11.15 AM **S14080: Economic performance of green walls: A systematic review**

*U.G.D. Madushika, T. Ramachandra and D. Geekiyanage*

11.15 AM – 11.30 AM **S14087: Green roof as a technology towards sustainability: A perspective of benefits offered**

*K.A.L. Dasuni, Thanuja Ramachandra and M.N. Zainudeen*

11.30 AM – 11.45 AM **S14022: The effect of orientation and plant type on the thermal behaviour of living wall systems in buildings**

*H. Merve Yanardag Erdener and Ecem Edis*

11.45 AM – 12.00 NOON **S14054: Drivers and barriers to implement the green building practices in higher education institutes in Sri Lanka**

*I.E. Illeperuma, and M.D.T.E. Abeynayake*

12.00 NOON – 12.30 PM **Q&A**

*Session Coordinator: Mr. Dulshan Costa*

## DETAILED SESSION PLAN

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Saturday, 25 June 2022

### SESSION 3D

**Theme** Disaster Resilient Built Environments

**Session Chairs** Prof. Thayaparan Gajendran

**Session Duration** 11.00 AM – 12.30 PM

**Time** Paper ID, Title and Author(s)

11.00 AM – 11.15 AM **S14083: Development of post-disaster resettlement strategies for Sri Lanka**

*H.L.J.M. Lunuvila and U. Kulatunga*

11.15 AM – 11.30 AM **S14084: Functional characteristics of an early warning system to minimise the risks of dam breaks in Sri Lanka**

*L.N.K. Weerasinghe, M. Thayaparan and T. Fernando*

11.30 AM – 11.45 AM **S14081: Policy-level considerations on marginalised communities in the post-disaster context: A desk study**

*A.P.K.D. Mendis, P.A.P.V.D.S. Disaratna, Menaha Thayaparan and Yamuna Kaluarachchi*

11.45 AM – 12.00 NOON **S14067: Lean iceberg model for post disaster reconstruction projects**

*B.A.I. Eranga, K.A.T.O. Ranadewa, A.P. Rathnasinghe and P.A.D. Rajini*

12.00 NOON – 12.15 PM **S14050: Defining critical infrastructure for Sri Lanka**

*Maheshi Randeniya, Roshani Palliyaguru and Dilanthi Amaratunga*

12.15 PM – 12.30 PM **Q&A**

*Session Coordinator: Ms. Shashini Jayakody*

## DETAILED SESSION PLAN

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Saturday, 25 June 2022

### SESSION 4A

**Theme** Enhancing Construction Performance

**Session Chairs** Ch QS Indunil Seneviratne

**Session Duration** 01.30 PM – 03.00 PM

**Time** Paper ID, Title and Author(s)

01.30 PM – 01.45 PM **S14030: Factors affecting construction time performance in high-rise building projects in Sri Lanka**

*K. Kilintan, B.A.K.S Perera and P. Kajavathani*

01.45 PM – 02.00 PM **S14072: A methodology to study the complexity of buildability in construction projects: Phenomenological research perspective**

*P.L.I. Wimalaratne and U. Kulatunga*

02.00 PM – 02.15 PM **S14045: Housing quality indicators: A systematic review**

*Nipuni Nilakshini Wimalasena, Alice Chang-Richards, Kevin I-Kai Wang and Kim Dirks*

02.15 PM – 02.30 PM **S14027: The effect of labour productivity on successful completion of major contracts during the COVID pandemic in Sri Lanka**

*B.M.H.D. Bandaranayake and M.D. Rathnayake*

02.30 PM – 02.45 PM **S14046: Construction industry on the brink: The COVID-19 impact**

*Agana Parameswaran and K.A.T.O. Ranadewa*

02.45 PM – 03.00 PM **Q&A**

*Session Coordinator: Ms. Kalindu Mendis*

## DETAILED SESSION PLAN

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Saturday, 25 June 2022

### SESSION 4B

**Theme** Innovative Technologies for Sustainability

**Session Chairs** Prof. Nayanthara de Silva

**Session Duration** 01.30 PM – 03.00 PM

**Time** Paper ID, Title and Author(s)

01.30 PM – 01.45 PM **S14001: A deep learning-based building defects detection tool for sustainability monitoring**

*Biyanka Ekanayake*

01.45 PM – 02.00 PM **S14095: As-built data acquisition for vision-based construction progress monitoring: A qualitative evaluation of factors**

*Varun Kumar Reja, Koshy Varghese and Quang Phuc Ha*

02.00 PM – 02.15 PM **S14009: Application of computer vision for construction progress monitoring**

*H.P.M.N.L.B. Moragane, B.A.K.S. Perera and A.D. Palihakkara*

02.15 PM – 02.30 PM **T14038: Offsite construction skills prediction: A conceptual model**

*Buddhini Ginigaddara, Srinath Perera, Yingbin Feng and Payam Rahnamayiezekavat*

02.30 PM – 02.45 PM **S14053: Container-based relocatable modular buildings for construction site offices in Sri Lanka: Contractors' perspective**

*K.Y. Sandamini and K.G.A.S. Waidyasekara*

02.45 PM – 03.00 PM **Q&A**

*Session Coordinator: Ms. Umesha Weerapperuma*

## DETAILED SESSION PLAN

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Saturday, 25 June 2022

### SESSION 4C

**Theme** Circular Built Environment

**Session Chairs** Dr. Thanuja Ramachandra

**Session Duration** 01.30 PM – 03.00 PM

**Time** Paper ID, Title and Author(s)

01.30 PM – 01.45 PM **S14097: Importance of a value assessment tool in regenerating a circular built environment in Sri Lanka**  
*A.M.D.S. Atapattu, H. Chandanie and R. Dilakshan*

01.45 PM – 02.00 PM **S14033: The role of the quantity surveyor in achieving circular built environment at the design stage**  
*H.C. Victar, B.A.K.S. Perera and A.D. Palihakkara*

02.00 PM – 02.15 PM **S14044: Circular Economy (CE) based material selection: Development of a CE-based ‘10R’ evaluation framework for building construction projects in Sri Lanka**  
*Koshalee Wanaguru, Harshini Mallawaarachchi and Dimuthu Vijerathne*

02.15 PM – 02.30 PM **S14036: Beyond the reuse: Potentials and barriers for exchanging treated wastewater among the industries in Sri Lanka**  
*Harshini Mallawaarachchi, Y.G. Sandanayake, Gayani Karunasena and Chunlu Liu*

02.30 PM – 03.00 PM **Q&A**

*Session Coordinator: Mr. Dulshan Costa*

## DETAILED SESSION PLAN

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Saturday, 25 June 2022

### SESSION 4D

**Theme** Sustainable Operation and Management of Facilities

**Session Chairs** Dr. Pournima Sridarran

Dr. Uthpala Rathnayake

**Session Duration** 01.30 PM – 03.00 PM

**Time** Paper ID, Title and Author(s)

01.30 PM – 01.45 PM **S14028: Industry 4.0 enabled predictive maintenance of facilities: A study on applicability, benefits and challenges**  
*T. Sivamuja and Y.G. Sandanayake*

01.45 PM – 02.00 PM **S14066: Sustainable facilities management practice and its perception in health care organisations: A Delphi survey**  
*F.S. Nazeer, T. Ramachandra and Sachie Gunatilake*

02.00 PM – 02.15 PM **S14092: Efficient workplace planning and designing strategies to reduce waiting time in the outpatient departments (OPD) of government hospitals in Sri Lanka**  
*D.P.I.M. Pathirana and Nayanthara De Silva*

02.15 PM – 02.30 PM **S14074: Industry 4.0 based sustainable manufacturing model for apparel industry in Sri Lanka**  
*A.M.L De Alwis and Nayanthara De Silva*

02.30 PM – 02.45 PM **S14004: The impact of COVID-19 on the business continuity of the Sri Lankan apparel industry: Human resource management (HRM)**  
*M. Gowsiga and T. Kartheepan*

02.45 PM – 03.00 PM **Q&A**

*Session Coordinator: Mr. Buddhika Arsekularathne*