

DETAILED SESSION PLAN

FRIDAY, 21 JULY 2023

SESSION 1A

Theme Green Solutions for Construction

Session Chair Dr. Niluka Domingo

Session Duration 05.00 PM - 06.30 PM

Time Paper ID, Title and Author(s)

05.00 PM - 05.15 PM	S15119: Alternative materials for sustainable road construction in Sri Lanka <i>H.D.D.P. Kodithuwakku, T. Ramachandra and P. Kajavathani</i>
05.15 PM - 05.30 PM	S15089: Adoptability of bioplastic as a sustainable material in Sri Lankan building construction industry <i>N.S. Muhammed, S.D. Gallage, B.A.I. Eranga and T.H. Madushanka</i>
05.30 PM - 05.45 PM	S15046: Assessment of design and construction related factors influencing maintainability of green roofs: A case of high-rise buildings in Sri Lanka <i>G. Kulasekara, B.H. Mallawaarachchi, and A.G.U. Damsari</i>
05.45 PM - 06.00 PM	S15117: A study of green roof application in Sri Lanka <i>Dasuni Kodituwakku, T. Ramachandra and U.G.D. Madushika</i>
06.00 PM - 06.15 PM	S15032: A taxonomy of waterproofing systems for high-rise building projects in the tropics <i>H.N.Y. Senarathne and A. S. Asmone</i>
06.15 PM - 06.30 PM	Q&A

Session Coordinator: Ms. Dilmi Atapattu

FRIDAY, 21 JULY 2023

SESSION 1B

Theme	Disaster Resilience
Session Chair	A/Prof. Thayaparan Gajendran
Session Duration	05.00 PM - 06.30 PM

Time	Paper ID, Title and Author(s)
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05.00 PM - 05.15 PM	S15068: Comparative cost assessment of drywall technologies in disaster-induced housing reconstruction <i>Nimasha Dilukshi Hulathdoowage and H. Chandanie</i>
05.15 PM - 05.30 PM	S15071: Review on the importance of capacity building for enhancing disaster resilience through the effective utilisation of resources <i>K.H.K. Dharmadasa, U. Kulatunga, M. Thayaparan and K.P. Keraminiyage</i>
05.30 PM - 05.45 PM	S15072: Inclusion of marginalised communities during post-disaster context in Sri Lanka: What methodology? <i>A.P.K.D Mendis., M. Thayaparan and Y. Kaluarachchi</i>
05.45 PM - 06.00 PM	S15074: Critical assessment of the existing disaster resilience frameworks and their applicability to improve community resilience <i>M.L.S.S. Fernando, K.A.T.O. Ranadewa, U. Kulatunga and K.P. Keraminiyage</i>
06.00 PM - 06.15 PM	S15108: Cargotecture to minimise problems in post-disaster reconstruction projects in Sri Lanka <i>K.D. Gurusinghe, K.A.T.O. Ranadewa, Agana Parameswaran, D. Weerasooriya and M.D.D. Costa</i>
06.15 PM - 06.30 PM	Q&A

Session Coordinator: Ms. Isuri Illeperuma

FRIDAY, 21 JULY 2023

SESSION 1D

Theme Blockchain Technology in Construction

Session Chairs Dr. Navodana Rodrigo

Session Duration 05.00 PM - 06.30 PM

Time Paper ID, Title and Author(s)

05.00 PM - 05.15 PM **S15015: Potential impacts of blockchain technology implementation on construction contract management in Sri Lanka**

B.C.T.M. Karunaratne and D.N. Abeynayake

05.15 PM - 05.30 PM **S15056: Applicability of blockchain technology to improve the productivity of Sri Lankan construction industry**

G.P.D.A. Weerathna and K.P.S.P.K. Bandara

05.30 PM - 05.45 PM **S15060: Exploring state-of-the-art research on blockchain adoption in the construction industry: A systematic literature review**

S. Hirusheekesan, U. Kulatunga and Adeesha Wijayasiri

05.45 PM - 06.00 PM **S15100: Adaptation of blockchain and smart contracts to the construction industry of developing countries**

I.G.N. Anuradha, Krishni Kavindya Ambagala, Samudaya Nanayakkara and Srinath Perera

06.00 PM - 06.15 PM **S15116: An introduction to blockchain in building services: A literature review**

Sachindra Hewavitharana, Srinath Perera, Xiaohua Jin, Krisanthi Seneviratne and Keivan Bamdad

06.15 PM - 06.30 PM **Q&A**

Session Coordinator: Mr. Dulshan Costa

FRIDAY, 21 JULY 2023

SESSION 1E

Theme Procurement Solutions for Construction

Session Chairs Prof. Kanchana Perera

Session Duration 05.00 PM - 06.30 PM

Time Paper ID, Title and Author(s)

05.00 PM - 05.15 PM	S15019: Is integrated project delivery sufficient to reduce adversarialism in the UK construction industry? <i>Abiola Aderibigbe, Nnedinma Umeokafor and Tariq Umar</i>
05.15 PM - 05.30 PM	S15049: Strategies to create an enabling environment for public private partnership (PPP) projects in Sri Lanka <i>Tharaka Kodippili, G.I. Karunasena, B.H. Mallawarachchi and Shashini Jayakodi</i>
05.30 PM - 05.45 PM	T15102: Strategic implementation of PPP for small-scale infrastructure in Sri Lanka: A comparative analysis of alternative PPP models <i>Kavini Guruge, Pramuditha Coomasaru and Chathuni Weeraman</i>
05.45 PM - 06.00 PM	S15079: Investigating the motivation for implementing unsolicited proposals in the Sri Lankan construction industry <i>T.M.P.N. Thennakoon, H.S. Jayasena and U.S. Weerapperuma</i>
06.00 PM - 06.15 PM	S15092: Legal and regulatory framework related to unsolicited proposals in various countries: A systematic review for procurement stage <i>G. Fernando, U. Kulathunga, M. Thayaparan and H. Chandani</i>
06.15 PM - 06.30 PM	Q&A

Session Coordinator: Ms. Thilini Liyanawatta

SATURDAY, 22 JULY 2023

SESSION 2A

Theme Digitalization in Construction

Session Chairs Prof. Srinath Perera

Session Duration 09.00 AM - 10.30 AM

Time Paper ID, Title and Author(s)

09.00 AM - 09.15 AM **S15030: An IOT-based electrical and electronic appliance management system for Sri Lankan residential buildings**
Samarakoon Arachchige Dinusha Sandaru, D.L.C.P Liyanage, I.G.N Anuradha, Janani Uvasara Kumarathunga and Chanuri Kalugala

09.15 AM - 09.30 AM **S15098: Potential use of digital twin for construction progress monitoring**
K. Amirthavarshan, S.D. Gallage, M.D.D. Costa and B.A.I. Eranga

09.30 AM - 09.45 AM **S15105: Big data analytics in the Sri Lankan construction industry: An assessment of the challenges and strategies**
A.M.D.S. Atapattu, R.M. Wattuhewa, K.G.A.S. Waidyasekara and R. Dilakshan

09.45 AM - 10.00 AM **S15106: Status quo of digitalisation in the Sri Lankan construction industry**
W.S.D. Perera, K.A.T.O. Ranadewa, Agana Parameswaran and D. Weerasooriya

09.45 AM - 10.15 AM **S15045: Building information modelling for construction productivity measurement**
Shandraseharan Archchana and Wei Pan

10.15 AM - 10.30 AM **Q&A**

Session Coordinator: Mr. Lakshitha Bandaranayake

SATURDAY, 22 JULY 2023

SESSION 2B

Theme Construction Management

Session Chairs A/Prof. Sepani Senaratne

Session Duration 09.00 AM - 10.30 AM

Time Paper ID, Title and Author(s)

09.00 AM - 09.15 AM **S15011: Quantity surveyor's perspective on document management in construction projects: An exploratory study in Sri Lanka**

L.S.D. Rathnayaka, B.K.M. Nadeetharu and U. Kulatunga

09.15 AM - 09.30 AM **S15099: Minimising logistic cost of construction materials in the construction industry: Contractor's perspective**

S.M.R. Jayaruwan, H.S. Jayasena and U.S. Weerapperuma

09.30 AM - 09.45 AM **S15077: Measures to mitigate termination of construction contracts in Sri Lanka**

S. Laxsana, S. Abiramy and A.F. Fayasa

09.45 AM - 10.00 AM **S15044: Use of building information modelling to mitigate cost overruns in design and build projects**

K.L. Chamikara, B.A.K.S. Perera and I.N. Kurukulasooriya

10.10 AM - 10.30 AM **Q&A**

Session Coordinator: Mr. Hashan Madushanka

SATURDAY, 22 JULY 2023

SESSION 2C

Theme Sustainability Practices in Construction

Session Chairs Ch. QS Indunil Seneviratne

Session Duration 09.00 AM - 10.30 AM

Time Paper ID, Title and Author(s)

09.00 AM - 09.15 AM	S15112: Sustainability practices implemented in the Indian construction industry: A focus of construction phase <i>Nicola Thounaojam, Ganesh Devkar and Boeing Laishram</i>
09.15 AM - 09.30 AM	S15026: Construction innovation towards sustainable construction project success in Sri Lanka <i>M.P.T.C. Jayasena, P.A.P.V.D.S. Disaratna and H.C. Victar</i>
09.30 AM - 09.45 AM	S15082: Exploring sustainable project management practices in Sri Lankan construction projects: A perspective of MEP contractors <i>M.N.M. Amri, M. Francis and T.N. Liyanawatta</i>
09.45 AM - 10.00 AM	S15101: Investigation of the challenges of executing sustainable construction practices in the Sri Lankan construction industry <i>K.B.K.R.G.G. Wimalarathna, M.L.S.S. Fernando and U. Kulatunga</i>
10.00 AM - 10.15 AM	S15093: Digital technology enabled circularity in the construction industry: A bibliometric study <i>Shashini Jayakodi, Sepani Senaratne, Srinath Perera and Keivan Bamdad</i>
10.15 AM - 10.30 AM	Q&A

Session Coordinator: Ms Agana Parameswaran

SATURDAY, 22 JULY 2023

SESSION 2D

Theme Urban-Rural Development

Session Chairs Dr. Gamini Weerasinghe

Session Duration 09.00 AM - 10.30 AM

Time Paper ID, Title and Author(s)

09.00 AM - 09.15 AM **S15083: Management of social sustainability and quality aspects of rural road construction in Sri Lanka**

L.A. Nissanka and K.A. Gunasekara

09.15 AM - 09.30 AM **S15017: Need of establishing desalination plants to mitigate water scarcity in dry zones of Sri Lanka**

Y.J.M. Yatawatta and P. Sridarran

09.30 AM - 09.45 AM **S15029: Can Colombo port city high-rise tower and podium morphology improve pollutant dispersion and urban ventilation?**

Malithie Vidanapathirana, Narein Perera, Rohinton Emmanuel and Sheleeni Coorey

09.45 AM - 10.00 AM **S15054: Smart village concept for rural area development in Sri Lanka: A study on implementation, benefits, and challenges**

I.V.M. Ayodyani, F.S. Nazeer and A.M.L. De Alwis

10.00 AM - 10.15 AM **S15070: Barriers to the adoption of emerging technologies for sustainable construction in SMEs**

Samuel Adeniyi Adekunle, Clinton Ohis Aigbavboa, Obuks Ejohwomu and Babatunde Ogunbayo

10.15 AM - 10.30 AM **Q&A**

Session Coordinator: Ms. Dasuni Kodithuwakku

SATURDAY, 22 JULY 2023

SESSION 2E

Theme Construction Business Continuity and Management

Session Chairs Dr. Suranga Jayasena

Session Duration 09.00 AM - 10.30 AM

Time Paper ID, Title and Author(s)

09.00 AM - 09.15 AM **S15004: Key attributes of construction maturity models: A systematic review**

J.K.D.D.T. Jayanetti, B.A.K.S. Perera and K.G.A.S. Waidyasekara

09.15 AM - 09.30 AM **S15090: Encumbrances of the competitiveness of South African construction organisations in the business environment of other African countries**

M. Ikuabe, C. Aigbavboa and S. Adekunle

09.30 AM - 09.45 AM **S15061: The use of project governance modes to minimise contractors' opportunistic behaviour**

B.P. Arsecularatne

09.45 AM - 10.00 AM **S15020: Assessing delay claims in terms of excusability and criticality of delays in FIDIC based contracts**

Eranga Jayasena, U. Kulatunga

10.00 AM - 10.15 AM **S15086: Outsourcing consultant quantity surveying activities during the post-pandemic era**

Dilrangi Samarathunga, Iresha Gamage and Vithusha Lingasabesan

10.15 AM - 10.30 AM **Q&A**

Session Coordinator: Ms. Nishadi Nanayakkara

SATURDAY, 22 JULY 2023

SESSION 3A

Theme Economics of Construction

Session Chairs Dr. H. Chandanie

Session Duration 11.00 AM - 12.30 PM

Time Paper ID, Title and Author(s)

11.00 AM - 11.15 AM	S15076: Economic models of climate change: Systematic review of benefits, limitations, and future directions <i>B.K.M. Nadeetharu, U. Kulatunga and M.J.B. Ingirige</i>
11.15 AM - 11.30 AM	T15091: Impact of economic crisis on employees of contractors' organisations in the Sri Lankan construction industry <i>S.S. De Silva, W.M.C.L.K. Wijekoon and Chanuri Kalugala</i>
11.30 AM - 11.45 AM	S15115: The impact of the depletion of foreign currency reserves on the Sri Lankan construction industry <i>Naveesha Malmi Jayasinghe and Roshani S. Palliyaguru</i>
11.45 AM - 12.00 NOON	S15110: Impact of economic decisions on building construction material prices in Sri Lanka <i>K. Thilakshan, B. Arsecularatne and Y.G. Sandanayake</i>
12.00 NOON - 12.15 PM	S15012: Transaction costs in Australian construction projects <i>Sahani Fernando and Argaw Gurm</i>
12.15 PM - 12.30 PM	Q&A

Session Coordinator: Ms. Thilini Liyanwatta

SATURDAY, 22 JULY 2023

SESSION 3B

Theme Industrial Symbiosis

Session Chairs Dr. Narein Perera

Session Duration 11.00 AM - 12.30 PM

Time Paper ID, Title and Author(s)

11.00 AM - 11.15 AM **S15021: Internet of things (IoT)-enabled industrial symbiosis model for construction material sharing: Bibliometric analysis**

B.H. Mallawaarachchi and Shashini Jayakodi

11.15 AM - 11.30 AM **S15031: The potential of industrial symbiosis: An analysis of barriers to its implementation for better waste management in industrial zones in Sri Lanka**

Pubudu Herath, Piumi Dissanayake and Geethmi Thisakya

11.30 AM - 11.45 AM **S15062: Adopting urban symbiosis for sustainable urban water reduction and management: A bibliometric analysis**

Y.J.M. Yatawatta

11.45 AM - 12.00 NOON **S15109: Merits and demerits of off-grid solar systems: Key stakeholders' perspective**

D.S.A. Ranasinghe, K.G.A.S. Waidyasekara and D.

Weerasooriya

12.00 NOON - 12.15 PM **S15059: Barriers to emerging smart solutions adoption for energy efficiency in the construction industry**

Olusegun Aanuoluwapo Oguntona, Fikile Ngobeni, Opeoluwa Akinradewo, Babatunde Ogunbayo and Clinton Aigbavboa

12.15 PM - 12.30 PM **Q&A**

Session Coordinator: Ms. Dasuni Kodithuwakku

SATURDAY, 22 JULY 2023

SESSION 3D

Theme Construction Human Resource 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 **T15096: Issues caused by employment of migrant workers in the Sri Lankan construction industry**
W.G.H.K. Nawarathna, M.D.T.E. Abeynayake and I.E. Illeperuma

11.15 AM - 11.30 AM **S15027: Comparative study of work-related factors affecting mental well-being of male and female construction workers in Australia**
Maheshi Tennakoon, Aparna Samaraweera, Thomas Colangelo, Shorup Sharma, Jake Tiller, Jayden Zeller and S.D. Gallage

11.30 AM - 11.45 AM **T15114: Conflicting situations affecting performance of construction workers at site**
Ayusman Biswal, Syed Husam and Sparsh Johari

11.45 AM - 12.00 NOON **S15063: The customer satisfaction on the railway infrastructure in Sri Lanka: A study on railway stations**
M.A.K.N. Perera, F.S. Nazeer and A.M.L. De Alwis

12.00 NOON - 12.15 PM **S15097: A study on the physical and mental health issues to the neighbouring residences due to the construction projects in Sri Lanka**
M.P. Arjuna, V. Edirisinghe, K. Manoharan and S.S. Herath

12.15 PM - 12.30 PM **Q&A**

Session Coordinator: Ms. Dilmi Atapattu

SATURDAY, 22 JULY 2023

SESSION 3E

Theme	Lean Construction
Session Chairs	Prof. Udayanganie Kulatunga
Session Duration	11.00 AM - 12.30 PM

Time	Paper ID, Title and Author(s)
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11.00 AM - 11.15 AM	S15006: Adaptability of lean concept to reduce plumbing waste in high-rise building construction in Sri Lanka <i>S.M.A.H. Senanayake, L.D.I.P. Seneviratne and K.A.T.O. Ranadewa</i>
11.15 AM - 11.30 AM	S15037: Strategies to implement lean maintenance concept for high-rise commercial buildings in Sri Lanka <i>K.K. Arasakulasooriya, P. Sridarran and T. Sivanuja</i>
11.30 AM - 11.45 AM	S15057: Lean six sigma tools for improving administrative processes in different sectors: A systematic review <i>U.D.R.E. Ruwanpura, B.A.K.S. Perera and K.A.T.O. Ranadewa</i>
11.45 AM - 12.00 NOON	S15111: Lean iceberg model to minimise barriers for digital twin implementation: Sri Lankan construction industry perspective <i>D.W.J.W. Bandara, K.A.T.O. Ranadewa, Agana Parameswaran, B.A.I. Eranga and Amalka Nawarathna</i>
12.00 NOON - 12.15 PM	S15088: Applicability of BIM technology for enhancing the lean construction process in Sri Lanka <i>M.D.Y. Madusha, M. Francis and T.N. Liyanawatta</i>
12.15 PM - 12.30 PM	Q&A

Session Coordinator: Ms. Isuri Illeperuma

SATURDAY, 22 JULY 2023

SESSION 4A

Theme Legal Practices in Construction

Session Chairs Dr. Dilani Abenayake
Mr. Mahesh Abeynayake

Session Duration 01.00 PM - 02.15PM

Time Paper ID, Title and Author(s)

01.00 PM - 01.15 PM **S15033: Quantitative analysis of construction-related legal cases in New Zealand**

*Pramod Malaka Silva, Niluka Domingo and Noushad Ali
Naseem Ameer Ali*

01.15 PM - 01.30 PM **S15066: Barriers for implementing dispute review board (DRB) method to Sri Lankan construction industry**

*T.N. Liyanawatta, M.D.T.E. Abeynayake and P.M.S.U.
Sumanarathna*

01.30 PM - 01.45 PM **S15067: Legal and policy provisions for protecting energy and telecommunication infrastructure against hazards: Comparison between Sri Lanka and other countries**

*Maheshi Randeniya, Roshani Palliyaguru and Dilanthi
Amaratunga*

01.45 PM - 02.15 PM **Q&A**

Session Coordinator: Mr. Hashan Madusanka

SATURDAY, 22 JULY 2023

SESSION 4B

Theme Construction Waste Management

Session Chairs Dr. Gayani Karunasena

Session Duration 01.00 PM - 02.15PM

Time Paper ID, Title and Author(s)

01.00 PM - 01.15 PM	S15016: Construction and demolition waste management issues in building project life cycle stages: A case of Sri Lanka <i>H.C. Victar and K.G.A.S. Waidyasekara</i>
01.15 PM - 01.30 PM	S15028: Construction waste estimation methods: A systematic literature review <i>Nguyet Tong, Niluka Domingo and An Thi Hoai Le</i>
01.30 PM - 01.45 PM	S15103: From grave-to-cradle: Quality assurance system for the demolition waste management <i>M.K.C.S. Wijewickrama, N. Chileshe, R. Rameezdeen and J.J. Ochoa</i>
01.45 PM - 02.00 PM	S15050: Applicability of recycling and resource recovery for solid waste of Sri Lankan supermarkets <i>K.G.M.B. Bandara, M. Gowsiga, A.S. Asmone and R.A.A. Dilogini</i>
02.00 PM - 02.15 PM	Q&A

Session Coordinator: Ms. Nishadi Nanayakkara

SATURDAY, 22 JULY 2023

SESSION 4C

Theme	Construction Projects
Session Chairs	Ch. QS Vijitha Disaratne
Session Duration	01.00 PM - 02.15PM

Time	Paper ID, Title and Author(s)
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01.00 PM - 01.15 PM	S15107: Modelling design stage risks in modular integrated construction projects in Sri Lanka <i>T.A.S. Sandeepani, E.M.A.C. Ekanayake and Ilnaz Ashayeri</i>
01.15 PM - 01.30 PM	S15087: A systematic review of vertical construction project characteristics <i>Iresha Jayasinghe, Niluka Domingo, An Le Thi Hoai and Monty Sutrisna</i>
01.30 PM - 01.45 PM	S15094: An exploratory study on abandoned construction projects in the Western Province, Sri Lanka <i>Dasun Jayamal, Nishanthi Gunarathne and B.L.S.H. Perera</i>
01.45 PM - 02.15 PM	Q&A

Session Coordinator: Mr. Lakshitha Bandaranayake

SATURDAY, 22 JULY 2023

SESSION 4D

Theme Construction Education

Session Chairs Dr. M Thayaparan

Session Duration 01.00 PM - 02.15PM

Time Paper ID, Title and Author(s)

01.00 PM - 01.15 PM	S15084: Exploring the facilities management education needs in Sri Lanka <i>P. Sridarran, Shashini Jayakodi, Sanduni Peiris, Nayanthara De Silva, Joseph H.K. Lai, Uthpala Rathnayake and Piumi Dissanayake</i>
01.15 PM - 01.30 PM	S15042: Honour codes and their influence on academic integrity in engineering education <i>Sam Wamuziri</i>
01.30 PM - 01.45 PM	T15058: Application of experiential knowledge and personal constructs into construction claims management <i>R.A.D. Piyumra and P.A.P.V.D.S. Disaratna</i>
01.45 PM - 02.00 PM	S15041: A systematic review of the challenges and strategies for addressing plagiarism in engineering education <i>Sam Wamuziri</i>
02.00 PM – 02.15 PM	Q&A

Session Coordinator: Mr. Isuru Eranga

SATURDAY, 22 JULY 2023

SESSION 4E

Theme	Carbon Footprint
Session Chairs	Dr. Sachie Gunathilake
Session Duration	01.00 PM - 02.15PM

Time	Paper ID, Title and Author(s)
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01.00 PM - 01.15 PM	S15078: Data science applications for carbon footprint management in buildings: A systematic literature review <i>I.P. Tharindu Sandaruwan, J.A.B. Janardana and K.G.A.S. Waidyasekara</i>
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01.15 PM - 01.30 PM	S15080: Management of carbon footprint in apparel industry: A systematic literature review <i>I.P. Tharindu Sandaruwan, K.G.A.S. Waidyasekara and Nisa Zainudeen</i>
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01.30 PM - 01.45 PM	S15104: Comparison of embodied carbon estimating methods <i>Navodana Rodrigo, Srinath Perera, Sepani Senaratne and Xiaohua Jin</i>
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01.45 PM - 02.15 PM	Q&A
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Session Coordinator: Mr. Dulshan Costa