

PROGRAMME

17TH INTERNATIONAL RESEARCH CONFERENCE

6-7 December



Spatial Dynamics: Envisioning Tomorrow's Design through Advanced Practices

6-7 December 2024
Rubert Peiris Building

ORGANIZED BY



FARU FACULTY OF ARCHITECTURE
RESEARCH UNIT
UNIVERSITY OF MORATUWA, SRI LANKA

Day 01 – 6th December 2024

2.30pm	Arrival of Guests
3.00pm	National Anthem Lighting of the Oil Lamp
3.10pm	Welcom Address by Prof. Yasangika Sandanayake Conference Chair, FARU 2024 Dean, Faculty of Architecture, University of Moratuwa
3.25pm	Theme Address by Dr. Menaha Thayaparan, Director- FARU, Conference Co-Chair
3.35pm 3.45pm	Address by the Chief Guest Sponsor Video
3.50pm	Keynote Address Prof.Kaushal Keraminiyage University of Salford United Kingdom
4.30pm	Refreshments
5.00pm	Parallel Session A (A1, A2, A3)
6.30pm 7.00pm	Leaving to the Dinner Conference Dinner

Day 02 – 7th December 2024

8.30am	Registrations
9.00am	Parallel Session B (B1, B2, B3)
10.15am 10.45am	Refreshments Parallel Session C (C1, C2, C3)
12noon	Lunch
1.00pm	Parallel Session D (D1, D2, D3)
2.30pm	Refreshments
3.00pm 3.00pm 3.20pm 3.50pm	Closing Ceremony Rapporteurs' Report Awarding of Certificates Unveiling of FARU 2025 Conference Theme and Vote of Thanks

6th December 2024

5.00pm Auditorium – Rubert Peiris Building

Session A1

Sustainable Design

Session Chair : Dr. Sumanthri Samarawickrama

Session Coordinator : Mr. Praneeth Perera

FARU-C-2024-30 The impact of urban blue green space design on thermal comfort: with special reference to parks in Jaffna city centre
Harsana. S. & Jayaweera. N.

FARU-C-2024-34 Explore the viability of utilizing jackfruit leaves (*artocarpus heterophyllus*) as a sustainable resource for the production of particleboard for interior applications
Welagedara. T & Mendis. M.

FARU-C-2024-40 Enhancing mangrove restoration through innovative and sustainable design solution for Sri Lanka
Uresha E.D.T, Ranasinghe W.M.N.D.

FARU-C-2024-36 Carbon neutral design process towards sustainable tourism architecture: a case study of tourist accommodations in Ella
Ranaweera. N.A. & Rajapaksha. I.G.P.

FARU-C-2024-20 Investigate the potential of bamboo leaves for the development of particle boards for interior applications
Silva K.H.N.D.D. & Mendis M.

5.00pm Class Room 01 Rubert Peiris Building

Session A2

Economic, Social and Environmental Livability

Session Chair : Prof. Kanchana Perera

Session Coordinator : Mr. Clarence Dissanayake

FARU-C-2024-35 Co-living with seasonal migrants: in respect of Chanpara
Chowdhury M.S.

FARU-C-2024-72 The impact of railway station interiors on user usability case study of Colombo railway stations
Abeysekara W.A.V.S.

FARU-C-2024-51 Living structures across urban hierarchies: a comparative study of five Sri Lankan cities
Selvaratnam. V, Bandara.N.S, Jayasinghe A.B. & Hasan M.A.F.

FARU-C-2024-61 Mitigating measures for the escalation of building project costs amid Sri Lanka's economic crisis
Fonseka W.V.T., Withanage K.T. & Jayasuriya D.M.S.

FARU-C-2024-50 Concept map technique to represent the building cost information
Uduwage-Don N.L.S. & Jayasena H.S.

6th December 2024

5.00pm Virtual –Please Refer the Zoom Link in the last page

Session A3

Sustainable Urbanism (Online Session)

Session Chair : Dr. Harshini Mallawarachchi

Session Coordinator : Ms. Nadeera Maddakandage

FARU-C-2024-03 Envisioning river-based urbanism in Bangladesh a landscape-systems-informed approach for urban settlement pattern within a decolonized river terrain
Ahammad-Al-Muhammin, & Alia Shahed

FARU-C-2024-06 Influence of soundmarks in creating the sense of place in urban landscape design of public spaces
Silva C.N.

FARU-C-2024-42 Rejuvenating the disappearing urban spaces in Dhaka: An approach through placemaking around Hazaribagh canal area
Chanda.A.K, Sikder.M.P. & Sikder.S.P

FARU-C-2024-46 Sustainable composite insulation panels: investigating diverse alternatives for insulating applications utilizing coconut husk and agro- industrial residue composites
Shamindi. A., Kudaligama. A. & Udawattha.C

FARU-C-2024-68 Clean construction guidelines to mitigate air pollution at construction sites
Goel.A & Lahiri.S

7th December 2024

9.00am Auditorium – Rubert Peiris Building

Session B1

Sustainable Practices in Construction

Session Chair : Prof. Anuradha Waidyasekara

Session Coordinator : Ms.Piyumi Tennakoon

FARU-C-2024-07 Impact of use of sustainable materials on road construction
Sayanthan T., Perera B.A.K.S. & Fernando S.M.H.

FARU-C-2024-60 Limitations of traditional building materials for sustainable construction in Sri Lanka
Wickramanayake. N.D, Jayalath. J.A.C.D, Kulatunga. U & Siriwardhana. S.D.

FARU-C-2024-80 Circular economy as a solution for construction demolition waste management in Sri Lanka
Welihinda R.H., Gunatilake S., Weerasooriya D. & Ilangakoon I.W.M.A.D.

FARU-C-2024-13 Society 5.0 for lean-driven sustainable construction: a conceptual framework
Madhushani S.J.L., Ranadewa K.A.T.O. & Seneviratne L.D.I.P.

FARU-C-2024-64 Can business models minimise lean implementation barriers in construction industry? A systematic literature review
Lawanga P.W.A.H., Sandanayake Y.G. & Ranadewa K.A.T.O.

7th December 2024

9.00am Class Room 01 Rubert Peiris Building

Session B2

Culture and Social Spaces

Session Chair : Prof.Udayanagi Kulatunga

Session Coordinator : Mr. Hasith Victar

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- FARU-C-2024-30 Social impacts due to landscape disruption caused by the central expressway: with reference to Kadawatha – Mirigama section
Wijesinghe. W. A. M. O. & Gamage. W. O.
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- FARU-C-2024-32 Destigmatizing mental health treatment centers through architectural interventions; insights from national institute of mental health, mulleriyawa, Sri Lanka.
Ranasinghe R.D.A. & Hettiarachchi A.A.
-
- FARU-C-2024-32 Circular e-food supply chain for achieving zero food waste goals: insights from Sri Lankan hotel industry
Dilshan K.D.S.I., Mallawaarachchi B.H. & Yatawatta Y.J.M.
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- FARU-C-2024-67 Impact of energy cultures for adoption of electric vehicles
Pathirana I.U. & Soorige S.D.A.
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- FARU-C-2024-63 Brain drain amidst economic crisis in sri lanka: an analysis on the migration of construction professionals
Wijerathna W.S.S., Sandanayake Y.G. & Bandaranayake D.M.L.N.

9.00am Virtual –Please Refer the Zoom Link in the last page

Session B3

Health, Environment, and Sustainable Spaces (Online Session)

Session Chair : Dr. Pournima Sridarran

Session Coordinator : Ms. Sandumini Nimashi

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- FARU-C-2024-02 Analysis of PM 2.5 exposure impact in different atmospheric contexts: A detailed fem simulation analysis in a virtual loac device
Sami. M.G., Dola. M.Y., Roy.A. & Rahman.T.U.
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- FARU-C-2024-01 Analyng numerical simulation of ventilation system and filter membrane: the exposure of airborne nanoparticles in health interior space
Sami, M.G., Dola, M.Y. & Morshed, A.
-
- FARU-C-2024-10 Remote work: reshaping physical space in the post-pandemic
Sachithra. T.M., Thilakarathne. K., Vale.B. & Petrovic.E.K.
-
- FARU-C-2024-43 An investigation into the relationship between visual greenery of urban canal environment and emotional well-being of teenagers in low-income settlements
Hettiarachchi. T.C. & Hettiarachchi. A.A.
-
- FARU-C-2024-54 Human-landscape relationship for sustainability of a climate change affected mangrove settlement: a study of Kailashganj
Nandi, P.K.
-
- FARU-C-2024-59 Climate-resilient agriculture in coastal Khulna: unveiling the spatial dynamics of peri-urban growth centres
Podder.A.K, Shahidullah.F.B, Ahammad-Al-Muhammad, Priota, R.N
-
- FARU-C-2024-76 Negotiating modernity on the periphery: Daniel C. Dunham's architectural legacy in Bangladesh
Tasnim S.T. & Podder.A.K.

7th December 2024

10.45am Auditorium - Rubert Peiris Building

Session C1

Workplace Safety

Session Chair : Prof. Nayanthara de Silva

Session Coordinator : Ms. Kavishka Jayakodi

FARU-C-2024-09 Exoskeleton for health and safety in construction workers: A literature review
Wijesinghe S.M.N.B., Wijerathna M.R.D.P., Ranadewa K.A.T.O. & Parameswaran A.

FARU-C-2024-33 Thermal performance and behavioural diversities of workers at mixed - mode office buildings in Mannar: A field investigation
Kanistan. A.A. & Rajapaksha. I.G.P.

FARU-C-2024-77 Investigating suitable shift patterns for improving work performance of construction workers in building projects in Sri Lanka
Gajanayaka. A.M.M.T., Waidyasekara. K.G.A.S. & Victor. H.C.

FARU-C-2024-39 Key factors to consider when designing products to overcome the persistence of unsafe kerosene lamps among low-income households in Sri Lanka
Manawasinghe M.D.R.N., Ranasinghe W.M.N.D & Dissanayake M.K.

FARU-C-2024-21 The impact of viewing vistas on psychological well-being a study on the service providers in selected government hospitals in the hill country, Sri Lanka
Rathnasinghe A.S. & Hettiarachchi A.A

FARU-C-2024-79 Guideline to minimise and mitigate technical risks in road projects: contractor's perspective in Sri Lanka
Nivathsan. R., Lingasabesan. V. & Francis. M.

10.45am Class Room 01 Rubert Peiris Building

Session C2

Urban Resilience and Sustainability

Session Chair : Prof. Jagath Munasinghe

Session Coordinator : Ms. Mathanky Sachithanantham

FARU-C-2024-69 Simulation of plausible hazard scenarios associated with dam failures: case study on Kantale dam, Sri Lanka
Rahubadda. R.V.A.D, Dassanayake. S.M, De-Silva. M.C.K., Thayaparan. M. & Kulathunga. U.

FARU-C-2024-44 Climate-resilient cities: temporal analysis of urban land changes, and percapita green spaces from 1993 to 2023: case study of Colombo, Sri Lanka
Abeyasinghe. U.M., Hewawasam. H.U.C.P. & Saparamadu. S.

FARU-C-2024-49 Enhancing building resilience: the role of future weather data in building design
Gupta. A., Thounaojam. A. & Vaidya. P.

FARU-C-2024-47 Product innovation through solar decathlon India sustainable cooling solutions for retrofitting residential ildings
Suresh Hollannavar. P., Vaidya. P. & Thounaojam.A.

FARU-C-2024-14 A study of smart snhancements in specialized AI applications comparing initial versions to upgraded models within sustainable urban planning integration
Hasan. F, Kaveesha. L, Sankalpa. S, Jayasinghe. A. & Sathsarana.S

FARU-C-2024-28 A study of integrating real-time emotion and sentiment analysis in urban planning
Kaveesha.L, Sankalpa.S & Diwyanjali. G

7th December 2024

10.45am Virtual – Please Refer the Zoom Link in the last page

Session C3

Urban Space and Cultural Dynamics (Online Session)

Session Chair : Dr. Priyanwada Singhapathirana

Session Coordinator : Mr. Thisal Devin

FARU-C-2024-57 Evaluating publicness of public space and its transforming pattern: a case of the inner courtyard at Khulna new market

Morshed. A., Sami. M.G., Islam. N. & Dola. M. Y.

FARU-C-2024-53 Spatial inequities: child-friendly spaces and ethnic sensitivity in Balukhali Rohingya refugee camp, Cox's bazar, Bangladesh

Hossain. S. M. A. & Podder. A. K.

FARU-C-2024-12 A comparative analysis of the cognitive differences in wayfinding among local and internally migrant students in urban environments a trip from buet campus to Dhaka new market

Nandi, D. & Kundu, G.

FARU-C-2024-73 Bridging consumer preferences and cultural norms in sri lankan lingerie retail through visual merchandising strategies

Wijenayake, M.H.K.A. & Rathnayake. R.

FARU-C-2024-78 Kolkata cultural heritage: Past and present scenario case study: Khidderpore

Lahiri. S.

FARU-C-2024-55 Sustainable cooling approaches for a warming world: a literature review

Konsam M., Vaidya P. & Thounaojam A.

7th December 2024

1.00pm Auditorium – Rubert Peiris Building

Session D1

Design for Well-Being Across Generations

Session Chair : Dr. Kamal Wasala

Session Coordinator : Ms. Malsha Manohari

FARU-C-2024-11 The impact of Sri Lankan traditional toy design on child development

Kulathunga .W.D.D.

FARU-C-2024-15 Effects on preschool furniture for physical comfort of children aged between 2-5 years in Colombo area

Trimanne H.D.D..S. & Samarasinghe A.

FARU-C-2024-18 Evaluation of user behavioral patterns responding to internal social spaces of elderly care resorts

Chinthaka K.W.C.J., Senaarachchige W. & Mendis M.

FARU-C-2024-25 A comprehensive study on the impact of the scale of learning spaces on happiness and well-being of preschool children with reference to two selected cases from Colombo, Sri Lanka

Siriwardena. M.G.M.A.S.R & Hettiarachchi. A. A

FARU-C-2024-27 Nature based therapeutic impact of borrowed landscape on the stress reduction of secondary school teachers

Welange. W.I.M.A.R., Chandrasekara. D.P. & Dharmasena. J.

7th December 2024

1.00pm Class Room 01 Rubert Peiris Building

Session D2

Technological advancements in the built environment

Session Chair : Dr. Chameera De Silva

Session Coordinator : Ms. Lavanya Baskaran

FARU-C-2024-08 Use of enabling technologies with industry 5.0 to align with sustainability in the construction industry
Kavirathna. A.S. & Perera. B.A.K.S.

FARU-C-2024-56 Leveraging applications of 5D BIM technology for building construction: enhancing efficiency of cost management practices
Liyanage G.H.M.D. & Kulatunga U.

FARU-C-2024-65 Exploring land use dynamics and impact of planning scenarios with land use simulation models: a case study of the molusce land use model to Trincomalee, Sri Lanka
Jayarathne D.N., Athapattu W.A.M.P.D.A., Kavishka W.R., Jayani T.A.C., Sooriyaarachchi N.S. & De Silva C.K.

FARU-C-2024-66 A role of digital drawing vs hand drawing in architectural design process
Liyanage, W. & Hettithanthri, U.

FARU-C-2024-74 Applicability of digital twin technology for quality management in the Sri Lankan construction industry
Madushika. H.M.I. & Thayaparan. M.

FARU-C-2024-31 A game theory-based decision-making framework for sustainable urban planning: optimizing residential density with the aid of machine learning techniques
Weragama T., Jayasinghe, A. & Hasan, F.

1.00pm Class Room 02 Rubert Peiris Building

Session D3

Sustainable Architecture and Built Environment

Session Chair : Prof. Narein Perera

Session Coordinator : Ms. Vithakshi Fernando

FARU-C-2024-23 Enhancing guest experience in guest rooms through sustainable strategies for indoor air quality improvement in Sri Lanka's luxury hotels
Chandani G.G.N. & Yatawatta Y.J.M.

FARU-C-2024-38 Indoor Environmental Quality (ieq) and its impact on job satisfaction in green buildings: a multi-factor analysis
Kariyawasam.T. & Samarasinghe A.M

FARU-C-2024-26 Decision-supportive framework towards sustainable adaptive reuse of historic buildings in Sri Lankan context.
Jayakody.J.P.N.S. & Munasinghe J.M. & Hewawasam. C

FARU-C-2024-52 Knowledge sharing strategies to improve buildability of construction projects in Sri Lanka
Wimalaratne. P.L.I. & Kulatunga. U.



3.00pm Day 02 – 7th December 2024

Closing Ceremony

3.00pm **Rapporteurs' Report**

3.20pm **Awarding of Certificates**

3.50pm Unveiling of FARU 2025 Conference Theme and
Vote of Thanks



17TH INTERNATIONAL RESEARCH CONFERENCE

FARU 2024

This Years Theme:

**Spatial Dynamics: Envisioning Tomorrow's
Design through Advanced Practices**

Date: 6-7 December 2024

Venue: University of Moratuwa, Katubedda, Sri Lanka



ZOOM LINKS FOR THE VIRTUAL SESSIONS

DAY 1: 6th December 2024 5.00 pm to 6.15 pm

Session A3 - Sustainable Urbanism (Virtual)

Zoom Link to [Session A3](#)

ID: 476 248 1055

Passcode: a3_FARU24

DAY 2: 7th December 2024 9.00 am to 10.15 am

Session B3 - Health, Environment, and Sustainable Spaces (Virtual)

Zoom Link to [Session B3](#)

ID: 939 7324 1600

Passcode: b3_FARU24

DAY 2: 7th December 2024 10.45 am to 12.00 noon

Session C3 - Urban Space and Cultural Dynamics (Virtual)

Zoom Link to [Session C3](#)

ID: 965 7800 1978

Passcode: c3_FARU24