



Sri Lanka Society of  
Transport and Logistics

# R4TLI

**Research for Transport and Logistics Industry  
Proceedings of the 9<sup>th</sup> International Conference**



Jointly Organized with  
Department of Town & Country Planning  
Department of Transport Management & Logistics Engineering  
University of Moratuwa

Organized By  
Sri Lanka Society of Transport and Logistics (SLSTL)

**August 5-7, 2024**

**At the Department of Town & Country Planning  
University of Moratuwa  
Sri Lanka**

# R4TLI

## Research for Transport and Logistics Industry Proceedings of the 9<sup>th</sup> International Conference

*“Navigating Transport and Logistics in the Digital Era”*

Jointly Organized with  
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Sri Lanka Society of  
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## Message from the President

As the President of the Sri Lanka Society of Transport and Logistics (SLSTL), it is my great pleasure to extend a warm welcome to all of you attending the 9th International Conference on Research for Transport and Logistics Industry (R4TLI) 2024. Established in 2014, the SLSTL was recognized as the 19th domestic society of the East Asia Society for Transport Studies (EASTS) in 2015. R4TLI is a pioneering conference that aims to foster research and development within the transport and logistics sectors in Sri Lanka and beyond. For nine consecutive years, this annual research conference has created a dynamic platform for meaningful dialogue among academics and professionals, facilitating the exchange and dissemination of innovative research and knowledge.



In 2024, our conference theme, "Navigating Transport and Logistics in the Digital Era," promises to deliver insights from both local and international experts. This year's event marks a significant milestone, and I am deeply honored to have each of you here with us, including distinguished scholars and practitioners from Sri Lanka and around the world. The overwhelming response, with over 40 abstract submissions, is a testament to the dedication and passion of all the researchers presenting their work at R4TLI 2024. This year, our conference runs concurrently with T-LOG conference, enhancing international participation and fostering shared learning experiences. Additionally, our collaboration with Rider for Life Sri Lanka allows us, as researchers, to showcase the benefits of non-motorized transportation to the community.

I also extend my heartfelt congratulations to the Conference Committee for successfully securing the Department of Transport Management & Logistics Engineering (TMLE) and the Department of Town & Country Planning (TCP) from the University of Moratuwa as Hosting Partners for this conference.

Thank you all for your commitment to advancing the field of transport and logistics. I look forward to a highly productive and enriching conference.

### **Prof. Niranga Amarasingha**

*B.Sc. Hons. Eng. (Moratuwa), M.Sc. Eng. (Thammasat), PhD Eng.(K-State), MCILT  
Professor in Civil Engineering, Sri Lanka Institute of Information Technology  
President - SLSTL*

## Message from the Conference Chair

Dear Colleagues and Distinguished Guests,

It is with great pleasure that I extend a warm welcome to you for our 9th Conference on Research for the Transport and Logistics Industry (R4TLI). This year, our conference theme, “Navigating Transport and Logistics in the Digital Era,” reflects our collective ambition to explore and embrace the transformative impact of digital technologies on our industry. The rapid advancement of digital tools and technologies is reshaping the landscape of transport and logistics industries across the world. From artificial intelligence and big data analytics to blockchain and smart infrastructure, the digital era presents both unprecedented opportunities and complex challenges.



We are particularly excited to announce that this year’s conference will be held in conjunction with the Tenth International Conference on Transportation and Logistics (T-LOG). This collaboration marks a significant milestone, bringing together a broader spectrum of global expertise and fostering a more dynamic exchange of ideas. The synergy between two conferences promises to enrich our discussions and enhance our collective understanding of the challenges and opportunities in the digital era.

I encourage each of you to engage actively in different events line up in the conference. Let us use this opportunity not only to present our research and findings but also to forge meaningful connections that will advance our industry’s progress and foster future collaborations.

Thank you for your continued support and look forward to a productive and inspiring conference here in Colombo, Sri Lanka.

Warm regards,

### **Prof. Jagath Munasinghe**

*BSc (BE), MSc(Architecture), MSc (Town & Country Planning), PhD (NUS)*

*Chartered Architect, Town Planner & Urban Designer*

*RIBA, FSLIA, FITPSL*

*Professor, Department of Town & Country Planning,*

*University of Moratuwa, Sri Lanka.*

*Vice President - SLSTL*

## **Message from the Founding President of SLSTL**



It's a pleasure to congratulate the Sri Lanka Society of Transport and Logistics (SLSTL) for its 9<sup>th</sup> International Conference on Research for Transport & Logistics Industry (R4TLI) to be held in the original physical format after a break of a few years as an online conference. The submission of over 40 manuscripts provides many expectations that this conference would showcase the research aptitude of students and industry practitioners in the transport & logistics industry which is increasing in stature and position as a major sector that can bring about the revival of the economy of Sri Lanka. The theme '*Navigating Transport and Logistics in the Digital Era*' is a most appropriate theme for the conference at a time when sector reforms aimed at addressing user requirements directly are gaining attention. It is note that the conference will be conducted both online and in person, making it a hybrid event for R4TLI. I also congratulate the Conference Committee for having partnership with T-LOG conference and secured the Department of Transport Management & Logistics Engineering (TMLE) and the Department of Town & Country Planning (TCP) from the University of Moratuwa as Hosting Partners for the conference. Their support and expertise will undoubtedly contribute to the success of the conference.

### **Prof. Amal S. Kumarage**

*B.Sc. Hons Eng. (Moratuwa), Ph.D. (Calgary), FCILT, MIE(SL), CEng  
Founding President - SLSTL*

# **Research for Transport and Logistics Industry Proceedings of the 9<sup>th</sup> International Conference**

Jointly Organized with  
Department of Town & Country Planning  
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## KEYNOTE SPEECH



**Prof. Russell G. Thompson**  
Department of Infrastructure Engineering  
The University of Melbourne  
Australia

*Theme: Hyperconnected City Logistics*



**Mr. Takafumi Kadono**  
Country Director  
Sri Lanka Resident Mission  
Asian Development Bank

*Theme: Enhancing Sri Lanka's Position in Global  
Logistics through Infrastructure and Digital Innovation*

## **PANEL DISCUSSION**

**Theme:** *Navigating Transport with Micromobility*

### **Panelists**



**Dr. Ganga Samarasekara,**  
Head of Department, Department of Civil Engineering,  
Faculty of Engineering,  
University of Sri Jayewardenepura



**Mr. Sujeeva Premaratne,**  
Secretary,  
RIDE FOR LIFE - SRI LANKA



**Dr. T. Sivakumar,**  
Senior Lecturer,  
Department of Transport Management & Logistics Engineering,  
University of Moratuwa

### **Moderator**



**Dr. Tissa Liyanage,**  
Chief Executive Officer,  
Master Hellie's Engineering Consultants (Pvt.) Ltd

## **TRACKS, SESSIONS, AND PAPERS**

Track	Urban Transport	Maritime and Logistic	Supply Chain	Transport Planning	Total
Session	C1 and C2	D1 and D2	C3	D3 and D4	
Number of Papers	7	8	5	8	28

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