

R4TLI

Research for Transport and Logistics Industry
Proceedings of the 8th International Conference

Organized by
Sri Lanka Society of Transport and Logistics

26th August 2023
at the Department of Transport Management & Logistics Engineering
and
the Department of Town & Country Planning
University of Moratuwa
Sri Lanka



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Message from the President

The Sri Lanka Society of Transport and Logistics (SLSTL) is looking forward to celebrating its 10th anniversary in 2024. It has been recognized as the 19th domestic society of East Asia Society for Transport Studies (EASTS) in 2015. The society has gradually reached its target passing several milestones in the areas of Transport and Logistics research during this period and has acquired high level of recognition in the domestic industry and the academia. As a leader in transportation research and a significant contributor at advisory level in decision making process for the national level development projects. We have committed to address national level economic crisis by helping the government of Sri Lanka with our innovative and professional contributions to regain the transport sector, supply and distribution system into a reasonable level as of today from the economic crisis prevailed in 2022. Such contributions made as a society, laid the pathway to make the transportation industry aware of the required alternatives and rational thinking. It was an eye opener to transport planners to orient their development proceedings on more controlled and innovative manner to have the sustainable transportation systems in future.



I am happy to note here that SLSTL has published JSALT journal twice a year and continued to its Volume 2 of issue 3 in this year having high quality research papers by highly qualified researchers in the sector. It has enriched further the recognition of SLSTL activities and facilitate academic and technical knowledge sharing among the members and the other researchers in Sri Lanka and the South Asian region.

The 8th international research conference, R4TLI 2023 has attracted a large number of research papers is a testimony for the progress of SLSTL. Although a challenging task organizing this as a physical event after a few years shows that the researchers are back on the track. It was a great opportunity to orient their research in a more innovative way to respond to the openings created through challenges faced. Transport and logistics play a vital role in any country for its economic contributions and hence the outcomes of these research must be useful in addressing the present economic crisis of Sri Lanka and the Globe. Therefore, I would like to record my appreciation for the continuous assistance by our industry partners and sponsors for encouraging the researchers by their contributions to the transport sector through R4TLI which brings direct and indirect benefits to the national economy at this critical time of Sri Lanka.

I warmly welcome our Chief Guest, Guest of Honors, Guest Speakers, Keynote Speaker, Judges, Presenters, Authors, Volunteers, and all participants, to witness the full-day's international research conference, specific topics at panel discussions, and enjoy the event under the theme of "Quality Transport and Logistics: Towards Improving the Wellbeing of the Public". I am also thankful to the past presidents, conference chair, co-chairs, conference organizing committee, editorial board, Exco Members and all SLSTL members for their untiring efforts to make the event a success.

Tissa U Liyanage

*B.Sc. Hons. Eng. (Moratuwa) PhD, MEng, CEng, IntPE, FIESL, MCILT, MACE,
Chairman/ CEO – Master Hellie's Engineering Consultants (Pvt.) Ltd,
President - SLSTL*

Message from the Conference Chair

On behalf of the Organizing Committee, I am delighted to welcome all of you to the 8th International Conference on Research for Transport and Logistics Industry (R4TLI) 2023. This gathering represents a significant milestone for us, and I am honored to have each one of you here with us today, including scholars and practitioners from Sri Lanka and various Asian countries.



The response to this year's conference has been overwhelming, with over 100 registered participants and more than 80 abstract submissions. It is truly inspiring to witness the dedication and commitment of all the authors who will be presenting their research works at R4TLI 2023. Your diverse perspectives and ideas hold great promise for the advancement of the Sri Lanka Society for Transport & Logistics (SLSTL) and the Transport and Logistics Industry as a whole.

Our theme for this conference is "Quality Transport and Logistics: Towards Improving the Wellbeing of the Public," focusing on addressing the challenges our industry faces. We are honored to have Prof. Ryuichi Shibasaki from the University of Tokyo as our keynote speaker, who will share valuable insights on "Global intermodal logistics network simulation modelling and maritime big data analysis using AIS data."

I would like to extend my heartfelt gratitude to all the participants, presenters, session chairs, judges, keynote speakers, the chief guest, and the guest of honor for gracing us with your presence. Your contributions are invaluable, and I am confident that they will enrich our discussions and lead to meaningful outcomes.

As you engage in the conference sessions and activities, I encourage you to take full advantage of this opportunity to network, exchange ideas, and engage in fruitful conversations. Conferences like R4TLI are not just about learning from each other's research but also about building lasting connections and collaborations that can drive positive change in our industry.

I would also like to express my sincere appreciation to everyone who has worked tirelessly to organize this conference on such a grand scale. Without your dedication and effort, this event would not have been possible. I wish you all a successful and fulfilling conference experience. May this gathering be a source of inspiration and growth for each one of you, and may your contributions continue to make a lasting impact on the Transport and Logistics Industry.

Thank you and best wishes.

Dr Amila Jayasinghe

B.Sc. Hons T&CP. (Moratuwa), MPlan. Infrastructure (India) EngD. (Japan), MITP (Sri Lanka)

Vice President (Conferences) - SLSTL

Conference Chair - R4TLI 2023

Message from the Founding President of SLSTL



It's a pleasure to congratulate the Sri Lanka Society of Transport and Logistics (SLSTL) for its 8th 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 80 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 '*Quality Transport and Logistics: Towards Improving the Wellbeing of the Public*' 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 the first hybrid event for R4TLI. I also congratulate the Conference Committee for having 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.

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 8th International Conference**

Organized by
Sri Lanka Society of Transport and Logistics

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Technology, Norway*

Conference Summary



Chief Guest

Mr. M.M.P.K. Mayadunne
Secretary,
Ministry of Transport and Highways,
Sri Lanka



Guest of Honors

Dr. D.P. Chandrasekara
Deputy Vice-Chancellor,
University of Moratuwa,
Sri Lanka



Guest of Honors

Eng (Prof.) Ranjith Disanayake
President Elect,
Institution of Engineers Sri Lanka (IESL)
Sri Lanka

Keynote Speech



Prof. Ryuichi Shibasaki

Associate Professor,

The Resilience Engineering Research Center and
Department of Technology Management for
Innovation (TMI),
The University of Tokyo
Japan

*Keynote speech title: Global Intermodal Logistics
Network Simulation Modeling*

About the speaker

Dr. Ryuichi Shibasaki is an Associate Professor at the Resilience Engineering Research Center and Department of Technology Management for Innovation (TMI), School of Engineering, The University of Tokyo. After his graduation from the Department of Civil Engineering, The University of Tokyo, he was a research associate at the University of Tokyo until 2002. He worked as a researcher at the National Institute for Land and Infrastructure Management, Ministry of Land, Infrastructure, Transport and Tourism, Japan, for 15 years, including temporary assignment as chief researcher of the Overseas Coastal Area Development Institute of Japan (2012-2015), visiting researcher of Modern Logistics Research Center, Tsinghua University (2006-2007), and visiting Associate Professor of Kyoto University (2014-2017). His research focuses on global intermodal freight flow modeling, port logistics, and maritime big data analysis. Dr. Shibasaki's research has received three awards for "Best Application in Practices" from the Eastern Asia Society of Transport Studies (EASTS) in 2009, 2011, and 2015, two from the International Association of Maritime Economists (IAME) in 2014 and 2020, and one from the TLOG Conference in 2022. He is an associate editor of Maritime Policy & Management and Asian Transport Studies. Also, he is one of the representative organizers of the International Conference on Transportation and Logistics (TLOG Network).

Panel Discussion

***Title: Policy-Driven Approach Towards a Quality Transportation System for Sri Lanka:
Revisiting the Realization of National Physical Planning Policy for 2050***



A blue rectangular graphic containing four portrait photos of panelists and their names and titles. The photos are arranged in a 2x2 grid. The text is white and yellow. The background has a subtle pattern of blue and white shapes.

	<p>Prof. Amal Kumarage Senior Professor, Department of Transport Management and Logistics Engineering, University of Moratuwa, Sri Lanka</p>		<p>Prof. Jagath Munasinghe Head of Department, Department of Town & Country Planning, University of Moratuwa, Sri Lanka</p>
	<p>Prof. Sirimal Abeyratne Senior Professor, Department of Economics, University of Colombo, Sri Lanka</p>		<p>Moderator Dr. Chathura De Silva Senior Lecturer, Department of Town & Country Planning, University of Moratuwa, Sri Lanka</p>

Tracks, Sessions, and Papers

Track	Supply Chain	Maritime and Logistics	Transport Planning	Urban Transport	Smart Mobility	Total
Session	A1	B1	C1	D1	E1	
Number of Papers	10	10	10	10	10	50
Session	A2	B2	C2	D2	E2	
Number of Papers	5	4	4	4	4	23
Total	15	14	14	14	14	71

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