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SUMMARY

He is a Senior Lecturer at Department of Civil Engineering at University of Moratuwa, Sri Lanka. He received his M.Sc. in Transportation Engineering and B.Sc. in Civil Engineering from the University of Moratuwa, Sri Lanka. He completed his PhD in Transportation Engineering from University of Calgary, Canada. He has over 15 years of transportation engineering experience in Sri Lanka, Canada and in USA. From 2006 to 2014 he worked as a Transportation Engineer in Canada, developing activity based transport demand models, spatial economic land use models for policy testing in macro and micro policy planning. In 2014 he has returned back to Sri Lanka to join the University of Moratuwa. He was the team leader developing the Megapolis Transport Masterplan. He has been instrumental in developing the Google Transit for Sri Lanka and development of software tools to use Google traffic data on many transport planning and management projects.

NATIONALITY

Sri Lankan/Canadian

UNIVERSITY EDUCATION

2011 **PhD** (Transportation), University of Calgary, Canada. Dissertation: “An Analysis of Daily Activity Patterns in Time and Space”

2003 **MSc** (Transportation), University of Moratuwa, Sri Lanka. Dissertation: “Feasibility of Water Transportation in Colombo Metropolitan Region in Sri Lanka”

2002 **BSc** (Hons) Civil Engineering, University of Moratuwa, Sri Lanka.

PROFESSIONAL AFFILIATIONS

- Professional Engineer (P.Eng) - Association of Professional Engineers and Geoscientists of Alberta (APEGA)
- Chartered Member (CMILT)- The Chartered Institute of Logistics and Transport
- Founder member - Special Interest Group (SIG) - H3: Infrastructure Operation and Traffic Management in Developing Countries, World Conference on Transport Research Society
- Member - SIG F1: Transport and Spatial Development, World Conference on Transport Research Society.

WORK EXPERIENCE

Senior Lecturer – Transportation Engineering Division, Department of Civil Engineering, University of Moratuwa (2014 - Present)

Board Member – National Transport Commission (NTC) – (2017 – 2018)

Transportation Consultant – Private/University of Moratuwa (2014 – Present)

- Team Leader for Revisit of feasibility Study of Ruwanpura Expressway of Road Development Authority, Ministry of Highways, by Department of Civil Engineering University of Moratuwa (2020-2021)
- Transport Planning Consultant to the Project Management Unit of JICA LRT project, Ministry of Megapolis and Western Development. (2017 – 2020)
- Transport Consultant and Team Leader for Transport Sub Committee in the Western Region Megapolis Planning Project (WRMPP) for Ministry of Megapolis and Western

Development. (2015-2017) which developed the Megapolis Transport Master plan. The works include development of the Megapolis Transport Master Plan with planning of transport infrastructure and transport demand modelling of proposed plan using JICA STRADA model.

- Co- Developer of **M-TRADA** software to use **Google Traffic Data** on Transport planning and monitoring work. Voluntary consultancy done for Sri Lanka Police, RDA, CMC and Ministry of Megapolis in many projects such as bus lane progress monitoring, Parliament road, Galle road contra flow lane monitoring, Traffic signal coordination and delay monitoring, road bottleneck detection.
- Team Leader in Developing **Google Transit** Data for Sri Lanka which enabled public transport data to be displayed in Google Maps. A project done for National Transport Commission (2018-2019)
- Team Leader in Developing **Pasal-Maga** a software tool for managing, displaying school van services within Western Province. A project done for Road Passenger Transport Authority – Western Province. (2019)
- Deputy Team Leader, Pre Feasibility Study of the Canal Commuter Transport Project for Ministry of Megapolis and Western Development (2017)
- Traffic Modeller for Consultancy Services for Preliminary Design and Feasibility Study for New Customs Inspection Facility for ADB in association with EGIS International (2020)
- Transport Modeller for Consultancy Services for Feasibility Study and Detailed Design of Kandy Suburban Railway Project (KSRP) for IDOM/SAMAN in association with Resource Development Consultants (Pvt) Ltd. (2020)
- Mobility Consultant to Infrastructure Sector Assessment Program (InfraSAP) for Urban Transport in Sri Lanka for World Bank (2018)
- Transport and Land Use Planning Expert (National Consultant) for the Study on TOD and LVC in the Greater Colombo: TA-9454 SRI: Supporting Delivery of Strategic Knowledge Solutions for ADB (2019-2020)
- Transport Modeller for Sri Lanka Railway Master Plan Development for PADECO in association with Resource Development Consultants (Pvt) Ltd. (2018-2019)
- International Transport Modeller, Resource person for the Workshop on Integrated Transport Demand Modelling under the TA for the Southern Highways Investment Program for ADB (2018)
- Transport Planner for Transport Masterplan Development for Tech City Development Project of Ministry of Megapolis and Western Development conducted by Department of Civil Engineering University of Moratuwa (2018-2019)
- Individual Consultant to CHEC Port City Colombo PVT Limited to provide Demand Estimation for Marine Drive Tunnel Project (2018-2019)
- Transport Planner for Feasibility Study for New Access Roads from Kottawa to Mahenwatta of the Western Region Tech City Development Project for CECB (2018 - 2019)
- Transport Modeller (International) for Feasibility Study for Proposed four lane Elevated Highway from Rajagiriya to Athurugiriya for SMEC International. (2018)
- Transport Modeller for Feasibility Study and Detailed Design of Colombo Suburban Railway Project for DOHWA in association with Resource Development Consultants (Pvt) Ltd. (2018-2019)
- Traffic Engineer for Feasibility Study to reduce the traffic Delay on Peliyagoda-Puttalam (A003) Road within Kochchikade town area for EML Consultants (Pvt) Ltd. (2019)
- Mobility Expert for Anuradhapura Integrated Urban Development Project (AIUDP) for GreenTech Consultants. (2017-2018)
- Sustainable Urban Transport Expert for Development of a SUTI Index for Colombo for UNESCAP. (2017)
- Transport Planner for Preliminary Study for Proposed Colombo Inner Circular Expressway for MCC International in association with UNIC Pvt Ltd. (2019)
- Transport Engineer for Feasibility Study for Marine Drive Extension from Dehiwela Station Road to Panadura for EML Consultants (Pvt) Ltd. (2017-2018)
- Traffic Modelling and Simulation specialist for the Impact Assessment Study due to Closure of CKE during NKB Construction conducted by Department of Civil Engineering University of Moratuwa (2016 - 2017)
- Team Member for the Optimizing Existing Fuel Distribution Network project- Ceylon Petroleum Storage Terminals Pvt Ltd conducted by Department of Civil Engineering University of Moratuwa (2016)

- Team Member for the Formulation of Pricing Formula for Fuel Transport Bowser project- Ceylon Petroleum Storage Terminals Pvt Ltd conducted by Department of Civil Engineering University of Moratuwa (2016)
- Traffic Modeller for the Colombo Suburban Railway Project for EGIS International , France in association with Resource Development Consultants (Pvt) Ltd. (2016)
- Transport Planning Expert/Transport Demand Modelling Specialist for the Feasibility Study for the Proposed Central Expressway (CEP) Corridor for Road Development Authority (RDA) conducted by the Department of Civil Engineering, University of Moratuwa. (2015-2016)
- Transport Planning Expert/Transport Demand Modelling Specialist for the Feasibility Study for the Proposed Ruwanpura Expressway for Maga Neguma Consultancy (2015-2016)
- Traffic Engineer for Southern Connectivity Project for Resources Development Consultants (Pvt) Ltd. (2015)
- Team Member for Feasibility of Bus Rapid Transit (BRT) for Galle Road – Ministry of Transport, Sri Lanka conducted by Department of Transport Logistics and Management, University of Moratuwa.

Transportation Engineer - HBA Spectro Incorporated, Canada. (2006 - 2014)

Development, setup and support services of transport demand models for use in policy analysis;

- California Statewide Transport Demand Model Future Expansion for Caltrans in collaboration with Cambridge Systematic 2012-2014.
- California Statewide Travel Model Framework for Caltrans in collaboration with University of California at Davis 2009-2010.
- San Joaquin Valley Travel Demand Model for California Air Resources Board in collaboration with University of California at Davis 2011-2012.

Development, setup and support services of spatial economic land use forecasting models for use in policy analysis;

- California PECAS land use model development for Caltrans in collaboration with University of California at Davis 2009-2010.
- San Diego PECAS land use model development for San Diego Association of Governments 2008-2013.
- Atlanta PECAS land use model development for Atlanta Regional Commission 2007-2014.
- Sacramento PECAS land use model development for Sacramento Area Council of Governments 2009-2014
- Los Angeles PECAS land use model development for Southern California Association of Governments 2008-2010.
- Baltimore PECAS land use model development for Baltimore Regional Council 2007-2012.

Teaching/Research Assistant - Department of Civil Engineering, University of Calgary (2003 -2007)

Research Assistant -Transport Engineering Division, Department of Civil Engineering, University of Moratuwa – (2002)

- Pre Feasibility Report of ‘Colombo Canal Commuter Transit Project’ for Info Consult Inc., Global Engineering consultants, Canada.
- Transport Impact Assessment reports for Colombo Municipal Council.
- Project coordinator: Public Expenditure Management System (PEMS) workshops for transport sector.
- Team Member: Environmental Impact Analysis (EIA) Report for Baseline Road Phase III (Construction of 7.5 km of new road length.)
- Transport Situation Report for Kurunagela & Matara Districts for Centre for Poverty Analysis (CEPA) - ADB funded Project.

Teaching Assistant - Department of Civil Engineering, University of Moratuwa (2002)

Trainee Civil Engineer - Road Development Authority, Sri Lanka (2000-2001)

ACADEMIC AWARDS

Best paper in Transportation Engineering and Logistics Track at the MERcon 2020.

CN Graduate Award in Transportation, Canada, 2006

TAC Foundation, ND Lea Scholarship for Graduate Studies, Canada, 2006

Graduate Research Scholarship, Institute for Advanced Policy Research (IAPR), University of Calgary, Canada, 2005, 2006

Asian Development Bank (ADB) Scholarship for Graduate Studies, Sri Lanka, 2002

E.O.E Pereira Memorial Award for the best paper presented at The Institution of Engineers Sri Lanka, Annual Sessions, 2003.

Best Transport Engineering Project, University of Moratuwa, Sri Lanka, 2002

University of Moratuwa Award for the Best Civil Engineering Graduate in Transportation and Geotechnical Engineering 1999/2000

PUBLICATIONS

Refereed Journals

Kumarage S.P., Rajapaksha R.P.G.K.S., **De Silva D.**, Bandara J.M.S.J. (2018) Traffic Flow Estimation for Urban Roads Based on Crowdsourced Data and Machine Learning Principles. In: Kováčiková T., Buzna L., Pourhashem G., Lugano G., Cornet Y., Lugano N. (eds) Intelligent Transport Systems – From Research and Development to the Market Uptake. INTSYS 2017. Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering, vol 222. Springer, Chamdoi.org/10.1007/978-3-319-93710-6_27

Gao S., Lehmer E., Wang Y., McCoy M, Johnston R.A, De Silva D., Abraham JE. and HuntJD, (2010). A Preliminary Test on the Interactions between Land Use and Travel Models. Traffic and Transportation Studies: pp. 787-799 ASCE Publications.

Kumarage K.A.S., De Silva D.(2003), Feasibility of a bus Priority lane for Galle Road, Annual Transactions, Institution of Engineers, Sri Lanka, October. Vol.1.

Refereed Conference Papers

B. H. A. Mendis and **G. L. D. I. De Silva (2020)**, "Analyzing the Geographical Catchment Areas of Fort-Malabe LRT by Access Modes," *Moratuwa Engineering Research Conference (MERCon)*, Moratuwa, Sri Lanka, 2020, pp. 384-389, doi: 10.1109/MERCon50084.2020.9185208.

P. D. L. Fernando, **G. L. D. I. De Silva** and H. R. Pasindu (2019) Evaluation of Optimum Service Area for Bulk Depots for Petroleum Distribution; Moratuwa Engineering Research Conference (MERCon), Moratuwa, Sri Lanka, pp. 256-260. DOI:10.1109/MERCon.2019.8818913.

Kumarage Sakitha P, **De Silva D**, Bandara JMSJ (2019) Average Queue Length Estimation Using Crowdsourced Travel Time Data Under Heterogenous Traffic Conditions.; World Conference on Transport Research, May 2019, Mumbai, India

Vajeeran A, **De Silva D** (2019), Identification of Effective Intersection Control Strategies During Peak Hours.; World Conference on Transport Research, May 2019, Mumbai, India

Kumarage Sakitha P, **De Silva Dimantha**, Bandara JMSJ (2018) Identification of congestion patterns and road bottlenecks on urban road networks using crowdsourced traffic data; The 6th International Symposium of Transport Simulation and the 5th International Workshop on Traffic Data Collection and its Standardization (ISTS & IWTDCS 2018), August 2018, Matsuyama, Japan

Premasiri SMPM, **De Silva GLDI** (2018) Developing of Land Use and Economic Inputs for a PECAS Activity Allocation Module; Institute of Engineers Sri Lanka Annual Sessions, October 2018, Colombo, Sri Lanka.

Kumarage Sakitha P, Rajapaksha RPGKS, **De Silva D**, Bandara JMSJ (2017) Traffic flow estimation for urban roads based on crowd sourced data and machine learning principles; Conference on Intelligent Transport Systems – From research and development to the market uptake, November 2017, Helsinki, Finland.
DOI: 10.1007/978-3-319-93710-6_27

A. Vajeeran and **G. L. D. I. De Silva** (2017), Delay analysis at a signalized T intersection, ; *Moratuwa Engineering Research Conference (MERCon)*, Moratuwa, pp. 325-330, doi: 10.1109/MERCon.2017.7980504.

Kumarage Sakitha P, Jayawardana VM, **De Silva Dimantha**, Bandara JMSJ (2017) Travel Time Estimation Based on Dynamic Traffic Data and Machine Learning Principles; Institute of Engineers Sri Lanka Annual Sessions, October 2017, Colombo, Sri Lanka. DOI: 10.13140/RG.2.2.21664.89604

De Silva D, Abraham JE, Flyte D, Keating M and Hunt JD, (2014). SANDAG PECAS Scenario Testing. Proceedings of 5th TRB Conference on Innovations in Travel Modeling, Baltimore, Maryland, USA, April.

Alexander B, Abraham JE, Hunt JD, **De Silva D** and Gao S. (2011), Lifestyle Clusters for Laborforce Participation, Occupation and Housing Use. Proceedings of the 12th International Conference on Computers in Urban Planning and Urban Management, Lake Louise AB, Canada, July.

Bridges J, Baber C, Abraham JE, Muhsen AR, **De Silva D** and Hunt JD, (2011), Investigating Zoning Policy with the Baltimore PECAS Model. Proceedings of the 12th International Conference on Computers in Urban Planning and Urban Management, Lake Louise AB, Canada, July.

Hunt JD, Abraham JE, **De Silva D**, Zhong M, Bridges J and Mysko J. (2008), Developing and Applying a Parcel-Level Simulation of Developer Actions in Baltimore. Preprints for the 87th Annual Transportation Research Board Conference, Washington DC, USA, January. (15 pages, CD-Rom Format)

Hunt JD, Abraham JE, **De Silva D**, Zhong M, Bridges J and Mysko J. (2007), Microsimulating space development in Baltimore. Proceedings of the 12th International Conference of the Hong Kong Society for Transportation Studies: Transportation Systems Engineering and Management. Hong Kong SAR, China, December. pp:513-522.

De Silva D and Hunt JD, (2005), A fuzzy clustering examination of spatial time use data in Calgary. Proceedings of the International Association of Time Use Research Conference, Halifax NS, Canada, November.

Unrefereed or 'Refereed/Selected on Basis of Abstract' Conference Proceedings

Damsara P., **De Silva D** and Sirisoma N., (2020), Analysis on Transport Mode Choices of School Children in Colombo District, Sri Lanka. Proceedings of the Transport Research Forum, Colombo, Sri Lanka, December 2020.

Perera A.P. and **De Silva D**, (2020), Applying Built Operate Transfer (BOT) systems for Sri Lankan Expressways: A Case study. Proceedings of the Transport Research Forum, Colombo, Sri Lanka, December 2020.

De Silva Dimantha, Bandara JMSJ and Kumarage Sakitha P (2019) Use of Crowd Source Data as a Low Cost Solution in Transport Planning and Traffic Management: The 14th International Joint Transportation Conference, University of Calgary, August 2019

Kumarage Sakitha P, **De Silva Dimantha**, Bandara JMSJ (2018) Use of Google Traffic Data in Traffic Analysis; Seminar Day of Road Development Authority Sri Lanka, January 2018, Kandy, Sri Lanka. DOI: 10.13140/RG.2.2.27486.95041

Kumarage Sakitha P, **De Silva Dimantha**, Bandara JMSJ (2017) Crowdsourced data into evaluation of development projects: Applications in Sri Lanka; 6th Biennial International Conference of Sri Lanka Evaluators Association (SLEvA), September 2017, Colombo, Sri Lanka

Kumarage S, **De Silva D** and Bandara J.M.S.J., (2017), Use of Travel Time Data in Transport Planning. Proceedings of the Transport Research Forum, Colombo, Sri Lanka, August.

De Silva D and Bandara J.M.S.J. (2016), Transport Infrastructure Requirements for Dynamic Vibrant Colombo. Urban Structural Dynamics, 2016 International Conclave of Society of Structural Engineers Sri Lanka, July

Vajeeran A and **De Silva D**, (2016), Delay Analysis at a Signalized T Intersection. Proceedings of the Transport Research Forum, Colombo, Sri Lanka, August.

Wimalasurendra K, **De Silva D**, Sirisoma R.M.N.T. and Bandara J.M.S.J., (2016), Formulation of a Rapid Transit Route Network for Colombo. Proceedings of the Transport Research Forum, Colombo, Sri Lanka, August.

Abewickrema W and **De Silva D**, (2016), Suitability of Light Rail Transit (LRT) and Monorail for Western Province Sri Lanka. Proceedings of the Transport Research Forum, Colombo, Sri Lanka, August.

Sutharman P. and **De Silva D**, (2016), Logit Choice Model for Passenger Boat Service in the Wellawatte Canal. Proceedings of the Transport Research Forum, Colombo, Sri Lanka, August.

Premasiri S.M.P.M. and **De Silva D**, (2016), Developing a PECAS Spatial Economic Model for Sri Lanka: Opportunities and Challenges. Proceedings of the Transport Research Forum, Colombo, Sri Lanka, August.

De Silva D, Hunt JD, Abraham JE and Stefan KJ, (2013), Generating a Population Synthesis for Colombo. Proceedings of the International Conference on Advances in Highway Engineering and Transportation Systems, Colombo, Sri Lanka, July.

Flyte D, **De Silva D**, Hunt JD, Abraham JE and Keating M, (2013), Scenario Testing with an Integrated Spatial Economic Model for San Diego. Proceedings of the International Conference on Advances in Highway Engineering and Transportation Systems, Colombo, Sri Lanka, July.

Abraham JE, Hunt JD and **De Silva D**, (2008), Calibrating a Random Utility Equilibrium Model of Spatial Interactions. Included in the Book of Abstracts for the 2nd World Conference of the Spatial Econometrics Association, New York NY, USA, November 2008.

De Silva D and Hunt JD, (2007), Fuzzy Clustering Examination of Activity Patterns in Time and Space. Presented at the Seminar at Doctoral Student Research in Transport Modeling at the 86th Annual Transportation Research Board Conference, Washington DC, USA, January.

De Silva D and Hunt JD, (2006), Fuzzy clustering activity patterns in activity-based model development. Proceedings of the Second International Conference on Transport and Logistics Systems, Colombo, Sri Lanka, August. (14 pages, CD-Rom Format).

De Silva D and Hunt J.D. (2005). Examining Person Activity Patterns Using Fuzzy Clustering. PROCESSUS Second International Colloquium, Toronto ON, Canada, June.

Conference Presentations

De Silva D and Mendis B.H.A. (2020), Evaluation of Geographical Catchment Area for Mass Transport: A Case study for Colombo LRT. Presented at the 6th International Conference on Integrated Land Use Transport Modeling (ILUTM-6), Wuhan, China, December 2020.

De Silva D and Vajeeran A. (2019), Analysis of the Impact of Manual Controlling of Congested Intersections at Peak Hours. Presented at the 5th International Conference on Integrated Land Use Transport Modeling (ILUTM-5), Haikou, China, May 2019.

De Silva Dimantha, Bandara JMSJ and Kumarage Sakitha P (2018) Application of Google Traffic Data in Transport Planning: Presented at the 4th International Conference on Integrated Land Use Transport Modeling (ILUTM-4), Beijing, China, June 2018

De Silva D (2017), Development of a Spatial Economic Model for Sri Lanka: Lessons Learnt. Presented at the 3rd Integrated Land Use Transport International Workshop, Shanghai, China, June 2017.

De Silva D (2016), ILUTM in Megapolis Master Plan in Sri Lanka or lack of it. . Presented at the 2nd Integrated Land Use Transport International Workshop, Wuhan, China, July 2016.

De Silva D, Pubudu M. (2016), A PECAS Spatial Economic Model for Sri Lanka: Opportunities and Challengers. Presented at the special session H5-SS1: Integrated land use transport modeling in developing countries at World Conference on Transport Research Society, Shanghai, China, July (2016)

De Silva D (2015), Showcase of Policy Testing with PECAS. Presented at the 1st Integrated Land Use Transport International Workshop, Wuhan, China, June 2015.

De Silva D (2015), Clustering Daily Activity Patterns in Time and Space. Presented at the 3rd International Conference on Transportation Information and Safety. Wuhan, China, June 2015

De Silva D (2014), Generating a Population Synthesis for Colombo. Presented at the Seminar-Cum-Meeting of SIG-G6 & H3 on Transportation in Developing Countries & Disaster Resilience, Bangalore, India, December 2014.

Abraham JE, Hunt JD and **De Silva D**, 2008, PECAS as a CGE Model. Presented at the 55th Annual North American Meeting of the Regional Science Association International, Brooklyn NY, USA, November 2008.

Hunt JD, Abraham JE, Zhong M and **De Silva D**, 2007, Micro-simulation Modelling of Land Use and Transport in North America: Space Development in Micro-Simulation in Baltimore PECAS. Presented at the SOLUTIONS Annual Conference, London, UK, July 2007.

Hunt JD, Abraham JE, Zhong M and **De Silva D**, 2006, Baltimore PECAS Land Use Model. Presented at the University of Seoul – University of Calgary Joint Workshop, University of Calgary, Calgary AB, Canada, June 2006.

Kumarage K.A.S., **De Silva D**. (2003), Feasibility of Reviving Inland Water Transport in the Colombo Metropolitan Region, 9th International Seminar in Transport and Logistics, The Chartered Institute of Logistics & Transport (CIT), October.