INDRA MAHAKALANDA

E: indram@uom.lk ⋄ **M:** +94714433613

Department of Decision Sciences, University of Moratuwa, Sri Lanka

https://uom.lk/staff/Mahakalanda.I

EDUCATION

University of Canterbury, New Zealand *2012 - 2017*
Ph.D. in Management Science
Thesis Title: An integrated water-electricity market design for multi-reservoir mixed operation: Supervised by Dr. Grant E. Read and Dr. Shane Dye

University of Moratuwa, , Sri Lanka *2009-2011*
M. Sc. in Financial Mathematics, GPA - 3.85
Thesis Title: Risk based optimal electricity generation planning using modern portfolio theory: Supervised by Dr. Rahula Attalage and Dr. P. D. Nimal

University of Moratuwa, Sri Lanka *1998 - 2002*
B. Sc. Eng. Hons. specialized in Electrical Engineering, GPA - 3.72

Staff and Educational Development Association (SEDA), United Kingdom *2008 - 2009*
Certificate in Teaching in Higher Education

Chartered Institute of Marketing, United Kingdom *2004 - 2006*
Professional Postgraduate Diploma in Marketing

The British Computer Society, United Kingdom *2001 - 2002*
Professional Graduate Diploma

Indian Institute of Technology, Bombay *2022*
CE and QIP in Artifitial Intelligence

DATA ANALYTICS SKILLS

Programming Languages	Python, MATLAB
Software & Tools	LaTeX, MS Excel

EXPERIENCE

University of Moratuwa, Sri Lanka August 2008 - present
Senior Lecturer, Grade – I

· Head, Department of Decision Sciences, Faculty of Business (March 2018 – to date)
· Director – Undergraduate Studies Division, Faculty of Business (August 2017 – August 2020)
· Student Counsellor (January 2018 - January 2021)
· Teaching Responsibilities : Operations Research, Machine Learning, Technology Management, Engineering Economics (University of Moratuwa), Business Process Management, (University of Sri Jayawardenapura, Visiting), Electrical Power Systems, Energy Management (ICBT, Visiting), HR Analytics (University of Colombo, Visiting), Data Analytics (University of Kelaniya, Visiting)

Hayleys Industrial Solutions Ltd, Colombo 10, Sri Lanka February 2003 - June 2008
Customer Service Engineer/Project Engineer

· Application engineer- prepared tender bid proposal for Maldives Airport Upgrading Project, Phase IV(C) Power Generation (awarded to Hayleys Industrial Solutions Ltd in May 2004).

· Application engineer - prepared tender bid proposals Outer Island Electrification Project, Phase I, for Ministry of Atolls, Republic of Maldives (awarded to Hayleys Industrial Solutions Ltd in March 2005).
· Project engineer, Design, installation, commissioning and testing 1500 kVA generator system at Kalu Ganga Water Project in June 2006.

Linea Intimo (Pvt) Ltd, A subsidiary of MAS Holdings, Sri Lanka July 2000 - January 2001
Implant Trainee
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INDUSTRY ENGAGEMENTS

Team member, Productivity improvement project, Ceylon Cold Stores, Sri Lanka (December 2010 - March 2011)
Team member, Time study project, Dipped Products PLC, Sri Lanka(April 2010 - June 2010)
Content writer, UN – ESCAP report on rubber and electronic sectors in Sri Lanka (2010-2011)
Member, Pricing Committee, NMRA, Sri Lanka. Involved in developing a pricing mechanism for non-gazzetted medicines (2019 – 2023)
Trainer, Corporate/executive training program, Brandix Fast Fashion, Sri Lanka (March 2019 to August 2019)

RESEARCH INTERESTS

Operations Research (Linear Programming, Stochastic Programming, Dual Dynamic Programming and MCDA)
Machine Learning and Reinforcement Learning

RESEARCH PUBLICATIONS

Mahakalanda, I., and Read, E. G., (2022), Contract Networks for Stored and Distributed Surface Water for Mixed-use, Proceedings of 4th Euro-Mediterranean Conference for Environmental Integration (EMCEI-4), Tunisia. Springer International Publishing. (accepted)

Mahakalanda, I., Dassanayake, S., Vithanachchi, D., Chandrasiri, D., Tharuka, D., and Abeysinghe, S., (2022), Geospatial Predictive Analytics Model for Urban Impervious Surface Detection: A Study on North Central Province of Sri Lanka, Proceedings of Mediterranean Geosciences Union Annual Meeting (MedGU-22), Marrakech, Morocco. Springer International Publishing. (accepted)

Gunathilake, S. D. N. U., Kasun, K. M. D., Marasinghe, M. P. S. P., Premawansha, D. M. A. B., Mahakalanda, I.,and Gamage, H. G. C. P. (2022). GIS-based classification of the land use of man-made reservoirs and ponds for agricultural use. International Symposium on Agriculture and Environment (ISAE), University of Ruhuna.

I. Mahakalanda, P. Demotte, I. Perera, D. Meedeniya, W. Wijesuriya, L. Rodrigo, "Deep learning-based prediction for stand age and land utilization of rubber plantation", M. A. Khan, R. Khan, M. A. Ansari (Eds.), in: Application of Machine Learning in Smart Agriculture, Ch. 7, pp.131-156, Elsevier Academic Press, 2022. ISBN: 9780323905503

Meedeniya, D. A., Mahakalanda, I., Lenadora, D. S., Perera, I., Hewawalpita, S. G. S., Abeysinghe, C., and Nayak, S. R. (2022). Prediction of paddy cultivation using deep learning on land cover variation for sustainable agriculture. In Deep Learning for Sustainable Agriculture (pp. 325-355). Academic Press.

Mahakalanda, I., and Arunapriya, R. D. S. (2021, July). An MILP-based Intra-firm Smart Resource Sharing Model. In 2021 Moratuwa Engineering Research Conference (MERCon) (pp. 119-123) IEEE.

Perera, S., Attalage, R. A., Mahakalanda I. 2021. Concentrated solar thermal power – potential of application in Sri Lanka, MESfIA International Conference, Sustainable Energy Transition Programme, AIT, Thailand (Conference proceedings)

Kumara, S., and Mahakalanda, I. 2019. Factors affecting for consumer attractiveness towards net metered solar PV technology in Sri Lanka. 8th International Conference on Renewable Power Generation (RPG 2019), Shanghai, China, IET (conference proceedings)

Perera. G., A., S., Attalage. R., and Mahakalanda. I., 2019. Feasibility of concentrated solar thermal power for grid connected system in Sri Lanka. IESL Transactions, Colombo, Sri Lanka

Edirisooriya, M., Yapa T. S. D., Mahakalanda, I. 2019, July). Generalized framework for automated conversational agent via QFD. In 2019 Moratuwa Engineering Research Conference (MERCon) (pp. 132-137). IEEE (conference proceedings).

I. Mahakalanda, "Easy Implementation of Intra-Period Water Market Clearing Using CDDP Models," International Journal of Environmental Science and Development vol. 9, no. 6, pp. 147-151, 2018.

Mahakalanda, I. (2018, May). Financial Contracting for Hydro Generators in a Water Market. In 2018 Moratuwa Engineering Research Conference (MERCon) (pp. 132-137). IEEE (conference proceedings – track best paper).

Wanigasinghe, P. C., and Mahakalanda, I. (2018). Building services maintenance: an outsource service provider selection via scoring model. In 2018 International Conference on Business Research (ICBR) (pp. 132-137). (conference proceedings).

Mahakalanda, I, 2018, Easy Implementation of Intra-period water market clearing using CDDP models, ICIEA – 2018, Singapore (conference proceedings – track best paper).

Mahakalanda, I, 2017, Intra-period market clearing for a mixed-use single reservoir catchment, ICCMS-2017, Colombo (conference proceedings).

Mahakalanda, I., Dye, S., Read, E. G., Starkey, S.R., 2015, Financial Rights and Obligations for Water Delivery in Mixed Use Catchments, NZSA and ORSNZ conference, Canterbury, New Zealand (conference presentation).

Mahakalanda, I., Dye, S., Read, E. G., Starkey, S.R., 2014, Financial Hedging Instruments for Water Markets, NZSA and ORSNZ conference, Hamilton, New Zealand (conference presentation).

Mahakalanda, I., Dye, S., Read, E. G., Starkey, S.R., 2013, Representing flow mixing demands in a multi-nodal CDDP model of a mixed used catchment. In Piantadosi, J., Anderssen, R.S. and Boland J. (eds) MODSIM2013, 20th International Congress on Modelling and Simulation. Modelling and Simulation Society of Australia and New Zealand, December 2013, pp. 2506–2512. ISBN: 978-0-9872143-3-1. www.mssanz.org.au/modsim2013/L16/mahakalanda.pdf (conference paper).

Mahakalanda, I., Dye, S., Read, E. G., Raffensperger, J.F., 2012, Intra-period market clearing for multi-use catchment via CDDP, ORSNZ conference, Wellington, New Zealand. (Contribution: Proceedings paper).

Thirimanna, T. H. S. R., Tilakartane, C., Mahakalanda, I., and Pathirathne, L. (2013). Portfolio selection using cointegration and modern portfolio theory: An application to the colombo stock exchange. MATEMATIKA: Malaysian Journal of Industrial and Applied Mathematics, 29, 195-202.

Dassanayaka. S., Mahakalanda. I.,2008, Organization Culture and Innovation, IGBMR, Iran, retrieved 2009, April from www.bookpump.com/upb/pdf-b/9429446b.pdf. (Contribution: Proceedings paper).

Perera., H.S.C., Mahakalanda., I, 2008, Knowledge Management Practices in Apparel Sector, IRCMF, University of Colombo in December 2008. (Contribution: Proceedings paper).

POSTGRADUATE SUPERVISION

Aruppala W D N (MBA in MoT-2014), Intellectual Capital and Value creating competency of Firms in Financial sector in Sri Lanka (Co-supervisor).

Ismail I R (MBA in MoT-2014), Basel II operational risk advanced measurement approach implementation framework for Sri Lankan banking sector (Supervisor

De Silva S H S P L (MBA in MoT-2015), Sustainable management in automotive industry: A study on the adaptation of reverse logistics concept in the Sri Lankan automotive industry (Co-supervisor).

Kumara M A S (MBA in MoT-2015), Socio-economics feasibility for success of net metering facility in Sri Lanka (Supervisor)

Priyadarshana H A D D S (MBA in MoT-2016), A study of a Sri Lankan trailer manufacturing company for quality improvements through lean adoption (Supervisor)

Wanigasinghe P C (MBA in MoT-2016) Development of a Building Maintenance Outsourcing Service Provider Selection Model (Supervisor)

Arunapriya R D S (MBA in MoT-2017), Developing a framework for an integrated reverse engineering-based manufacturing-maintenance facility: A study of Naval organization (Supervisor)

Edirisooriya M W (MBA in MoT-2017), Developing a framework for automating technical support via conservational agents in IT organizations (Supervisor)

Thiyumini J H K (MBA in MoT-2017), Development of an integrated light rail transit and bus route transport system to Colombo city (Supervisor)

Vyravanathan U (MBA in MoT– 2018), Development of an intermodal coastal shipping and road transportation network model (Supervisor)

Jayawardena M N D C (MBA in MoT– 2018), Forecasting loan defaults of financial institutions using predictive analytic techniques (Supervisor)

Samarasinghe U R D (MBA in MoT– 2018), Certified organic agriculture in Sri Lanka: A review of scope certification process (Supervisor)

Jayaratnam A (MBA in MoT- 2018), Developing a smart customer service model for a tourism operator (Co-supervisor)

Sarachchandra K S H (MBA in IT – 2018), Usability of learning management systems in business and management higher education institutes in Sri Lanka (Supervisor)

Siriwardena J. W. T. K. (MBA in MoT – 2022), Factors affecting the misalignment between BPM and ERP implementations: A study on Sri Lankan Construction Company (Supervisor)

Vyravanathan U. (MBA in MoT – 2020), Development of an intermodal coastal shipping and road transportation network model (Supervisor)

Yarrushanan S. K. (MBA in MoT – 2022), Impact of Net-metering on the revenue of the transmission licensees (Supervisor).

REFERENCE

Prof. Rahula Attalage
Pro Vice Chancellor - Academic
SLIIT
rahula.a@sliit.lk
+94714964961

Prof. Chandana Perera
Senior Professor
SLIIT
chandana.p@sliit.lk
+94777688899