

# Dr. Ramya Priyangani Kumanayake

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## ACADEMIC QUALIFICATIONS

- 2018: PhD in Engineering (Specializing in Construction Management), School of Civil Engineering and Mechanics, Huazhong University of Science and Technology (HUST), Wuhan, People's Republic of China
- 2003: MBA, Faculty of Graduate Studies, University of Colombo, Sri Lanka
- 1997: BSc Engineering (Civil Engineering) with 2<sup>nd</sup> Class (Lower Division), University of Moratuwa, Sri Lanka

## PROFESSIONAL QUALIFICATIONS

- Associate Member, The Institute of Engineers, Sri Lanka (IESL)
- Member, Sri Lanka Association for Advancement of Science (SLAAS)
- Associate Professional, Green Building Council of Sri Lanka (GBCSL)
- Member, Institute of Environmental Professionals (IEPSL)
- Certificate in Teaching Higher Education (CTHE), Staff Development Centre, General Sir John Kotelawala Defence University

## PROFESSIONAL EXPERIENCE

- Aug. 2019 - To date: Senior Lecturer- Grade I, Department of Civil Engineering, General Sir John Kotelawala Defence University, Ratmalana, Sri Lanka
- Aug. 2013 – Aug 2019: Senior Lecturer- Grade II, Department of Civil Engineering, General Sir John Kotelawala Defence University, Ratmalana, Sri Lanka
- Apr. 2012 – Aug. 2013: Lecturer (Probationary), Department of Civil Engineering, General Sir John Kotelawala Defence University, Ratmalana, Sri Lanka
- Oct. 2009 – Mar. 2012: Senior Lecturer, University of Vocational Technology (UNIVOTEC), Ratmalana, Sri Lanka
- Jan. 2006- Oct. 2009: Deputy Director (Curriculum Development & Research), National Institute of Technical Education of Sri Lanka, Ratmalana
- June. 2005- Dec. 2005: Lecturer, National Institute of Technical Education of Sri Lanka, Ratmalana
- Jan. 2000- June 2005: Assistant Lecturer, National Institute of Technical Education of Sri Lanka, Ratmalana
- Jan. 1999 – Dec. 1999: Civil Engineer, Fisheries Sector Development Project, Ceylon Fishery Harbours Corporation
- Oct. 1997 – Dec. 1998: Instructor/Research Assistant, Department of Civil Engineering, University of Moratuwa

## PUBLICATIONS

### Publications in refereed journals

- Ramya Kumanayake, Hanbin Luo, A tool for assessing life cycle CO<sub>2</sub> emissions of buildings in Sri Lanka, *Building and Environment*. 128 (2018) 272-286.  
<http://doi.org/10.1016/j.buildenv.2017.11.042>
- Ramya Kumanayake, Hanbin Luo, Natali Paulusz, Assessment of material related embodied carbon of an office building in Sri Lanka, *Energy and Buildings*. 166 (2018) 250-257. <http://doi.org/10.1016/j.enbuild.2018.01.065>
- Ramya Kumanayake, Hanbin Luo, Development of an automated tool for buildings' sustainability assessment in early design stage, *Procedia Engineering*. 196 (2017) 903-910.  
<http://doi:10.1016/j.proeng.2017.08.023>
- Ramya Kumanayake, Hanbin Luo, Life cycle carbon emission assessment of a multi-purpose university building: A case study of Sri Lanka, *Frontiers of Engineering Management*. 2018, 5(3): 381-393. <http://doi.org/10.15302/J-FEM-2018055>
- Ramya Kumanayake, Hanbin Luo, Cradle-to-gate life cycle assessment of energy and carbon of a residential building in Sri Lanka, *Journal of the National Science Foundation of Sri Lanka*, 2018 46(3): 355-367. <http://dx.doi.org/10.4038/jnsfsr.v46i3.8487>

### Publications of seminar and conference proceedings

- Ganegoda, P, Kumanayake, RP, Improving water use efficiency of a residential building through introduction of green features. *Proceedings of 11th International Conference on Sustainable Built Environment (ICSBE2020)*, December 10-12, 2020.
- Bandara, NHMWWDS, Kumanayake, RP, incorporating green building features to enhance water use efficiency of the new building of Lady Ridgeway Children's Hospital. *Proceedings of 11th International Conference on Sustainable Built Environment (ICSBE2020)*, December 10-12, 2020.
- Withanage, RSR, Kumanayake, RP, Effects of wall materials on building sustainability: A comparison of different wall materials. *Proceedings of the International Research Conference of Uva Wellassa University*, July 19-20, 2020.
- Kumanayake, RP, Embodied carbon emission profile of buildings: A Sri Lankan case study, *Proceedings of the 75th Annual Scientific Sessions, Sri Lanka Association for Advancement of Science (SLAAS)*, Colombo, Sri Lanka, 8-13 December, 2019.
- Kumanayake, RP, Establishing embodied carbon coefficients for building materials in Sri Lanka, *Abstracts of papers of the 10th International Conference on Structural Engineering and Construction Management (ICSECM)*, Kandy, Sri Lanka, 12-14 December, 2019, ISBN- 978-955-589-272-8.
- Kumanayake, RP, Luo, H.B., Development of an automated tool for buildings' sustainability assessment in early design stage, *Proceedings of Creative Construction Conference (CCC-2017)*, Premosten, Croatia, 19-22 June, 2017.

- Kumanayake RP, Luo HB, Bandara, RMPS, A conceptual tool for assessing building life cycle carbon emissions in the context of Sri Lanka, 111th Annual Sessions of the Institution of Engineers Sri Lanka, 23-24 October, 2017, pp. 505-517.
- Fernando, W C D K & Kumanayake R P, Implementing Outcome Based Education through Problem Based Learning : A Case Study of Kotelawala Defence University, Proceedings of the International Research Conference on Expanding Developmental Horizons through Education, Research & Innovation, General Sir John Kotelawala Defence University, Sri Lanka, 21<sup>st</sup>-22<sup>nd</sup> August 2014.
- Kumanayake R P & Bandara R M P S, Building Information Modelling (BIM): How it Improves Building Performance, Outcomes of the International Symposium on Ensuring National Security Through Reconciliation & Sustainable Development, General Sir John Kotelawala Defence University, Sri Lanka, 22<sup>nd</sup>- 23<sup>rd</sup>August, 2012, ISBN 978-955-0301-05-8, pp. 357-365.
- Bandara R M P S & Kumanayake R P, "Investigation of the Instantaneous Thermal Efficiency of a Flat Plate Solar Collector", Proceedings of the 2nd International Symposium on Modelling the Issues and Challenges towards Sustainable Development, Sabaragamuwa University of Sri Lanka, Belihuloya, 8th-12th July 2008, ISSN 1800-4407.
- Bandara R M P S, Kumanayake R P & Kanthi J K, "Energy Performance Analysis of the Cafeteria Building of a Sri Lankan University through Energy Modelling", Proceedings of the 105<sup>th</sup> Annual Sessions of the Institution of Engineers, Sri Lanka, (IESL), Colombo, 22<sup>nd</sup>-25<sup>th</sup> October, 2011, pp. 272-280.

**Text books**

- "Research Methodology" published by the University of Vocational Technology as a supplementary text book for Bachelor of Education in Technology Degree Programme in 2008

## OTHER RESEARCH RELATED ACTIVITIES

- Reviewer of the *Architectural Engineering and Design Management* Journal (published by Taylor & Francis Group).
- Reviewer of research papers for the Young Members' Technical Conference, the Institution of Engineers Sri Lanka in 2020.
- Reviewer of research papers for the SLAAS/SLIC Conference on From Innovation to Impact in 2019 & 2020.
- Reviewer of engineering research papers for the KDU Annual International Research Conferences/Symposia from 2012 to 2020.
- Reviewer of engineering research papers for the Annual Sessions of the Sri Lanka Association for the Advancement of Science (SLAAS) from 2018 to 2020.
- Member of the best paper selection committee of the Annual Sessions of the Sri Lanka Association for the Advancement of Science (SLAAS) held in December 2018 and 2020.
- Member of Panel of Technical Session Judges at the Civil Engineering Session of the 11<sup>th</sup> International Research Conference of KDU from 2018 to 2020.
- Chairperson of the best paper selection committee of the Engineering Faculty for International Research Conference, KDU in 2019.

## POSITIONS HELD

- Head of the Department, Department of Civil Engineering, General Sir John Kotelawala Defence University (from May 2019 to date)
- Vice President, Section C (Engineering, Architecture and Surveying), Sri Lanka Association for the Advancement of Science (SLAAS) for 2021
- Rapporteur, Section C, Sri Lanka Association for the Advancement of Science (SLAAS) for 2020
- Chairperson, Engineering Faculty Quality Assurance Cell (EFQAC), KDU (from Jan-May 2019)
- Head of the Department, Department of Construction Technology, University of Vocational Technology (UNIVOTEC) (from Oct. 2009 to April 2012)

## TRAINING

- "Preparing for IESL accreditation" programme conducted by Institution of Engineers Sri Lanka (IESL) in Jan. 2020
- 'Microsoft Project Management 'CPD Course conducted by the Institution of Engineers, Sri Lanka, 2019.
- Green Associate Professional Training programme, Green Building Council of Sri Lanka (2018).
- Training of Trainers Workshop on Sustainable Consumption and Production (SCP), SwitchAsia project, Ministry of Mahaweli Development and Environment (2018).
- "Great Engineering Orators" online CPD programme, Institution of Engineers Sri Lanka (2018).
- AuthorAID Course in Research Writing, International Network for Availability of Scientific Publications (INASP) (2016).
- Certificate in Teaching in Higher Education (CTHE) Programme, Staff Development Centre, General Sir John Kotelawala Defence University (2015).
- "Teacher Educator as an Educational Technologist" stand alone online course, Faculty of Education, The Open University of Sri Lanka (2010).
- Green and Clean Technology for TVET, In-country programme of Colombo Plan Staff College for Technician Education, Manila, Philippines (2010).
- Industrial Technology Education Training Programme, Aichi University of Education, Japan (2010).
- APACC Accreditation of TVET Institutions in Sri Lanka, In-country programme of Colombo Plan Staff College for Technician Education, Manila, Philippines (2008).
- Research and Survey in TVET, In-country programme of Colombo Plan Staff College for Technician Education, Manila, Philippines (2006).
- Training Course on Research Methodology, Skills Development Project, Ministry of Skills Development, Vocational and Technical Education (2005).
- ISO 9000:2000 Lead Auditor Training Course, Sri Lanka Standards Institution (2005).
- CBT Instructional Resource Development programme, TAFE NSW- Sydney Institute, Australia (2004).
- Competency Based Assessment, Ministry of Skills Development, Vocational and Technical Education (2004).
- Video and Multi-media Learning Resources Development, Skills Development Project, Ministry of Tertiary Education and Training (2002).

- Quality Assurance System and Quality Assurance Auditing for TVET sector, Ministry of Tertiary Education and Training (2002).
- CBT Curriculum Development, Ministry of Tertiary Education and Training (2002).
- Entrepreneurship Development Awareness Training Programme, Sarvodaya Economic Enterprises Development Services and Ministry of Tertiary Education and Training (2003).
- In-country programme on Training Needs Assessment, Colombo Plan Staff College for Technician Education, Manila, Philippines (2000).
- PC Based Instructional Applications, Swisscontact Sri Lanka (2000).
- Simple Instructional Media, Swisscontact Sri Lanka (2000).
- Training of Trainers-Skills, Swisscontact Sri Lanka (2000).

### **SPECIAL AWARDS AND ACHIEVEMENTS**

- Honorary International Student Award, Huazhong University of Science and Technology, People's Republic of China (2018)
- Chinese Government Scholarship for Doctoral Degree at Huazhong University of Science and Technology, Wuhan, China (2015)
- Award for the best performance in Certificate in Teaching in Higher Education (CTHE) programme 2014/2015 conducted by Staff Development Center, General Sir John Kotelawala Defence University.
- Gold Medal awarded for the Best Presentation in Technology at the 2nd International Symposium on Modelling the Issues and Challenges towards Sustainable Development held at Sabaragamuwa University of Sri Lanka (2008).
- Award for the Best Civil Engineering Final Year Research Project in Water Engineering Division of the Department of Civil Engineering, University of Moratuwa (1998)
- Japan International Cooperation Agency (JICA) scholarship to follow "Industrial Technology Education" training program at Aichi University of Education, Japan (June/July 2010).
- Asian Development Bank (ADB) scholarship to follow "CBT Instructional Resource Development" training program at Institute of Technical and Further Education (TAFE) NSW, Sydney, Australia (Feb – April 2004).