

# HASITHA DAMRUWAN HIDALLANA GAMAGE

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## CAREER OBJECTIVE

Work as an academic who uses the knowledge creatively, thereby contributes to the society whilst expanding the knowledge and proficiency.

## ACADEMIC QUALIFICATIONS

- September 2015      **Doctor of Philosophy (PhD),**  
Queensland University of Technology (QUT), Brisbane, Australia  
Research Title – Response of Laminated Glass Panels to Near Field Blast Events
- October 2010      **Bachelor of Science - Engineering Honours (1<sup>st</sup> Class) specialised in Civil Engineering**  
University of Moratuwa, Sri Lanka  
Course Grade point average (GPA) of **3.93 out of 4.2**

## EMPLOYMENT HISTORY

- October 2018 - Present      **Senior Lecturer,**  
**Department of Civil Engineering, Faculty of Engineering, University of Moratuwa, Katubedda, Sri Lanka**  
Key Accomplishments:
- Teach subjects such as Design of water retaining structures, Structural Mechanics II, Structural Analysis I, Building Engineering, etc.
  - Supervise undergraduate and postgraduate research students
  - Conduct structural engineering consultancy work
- January 2018 – September 2018      **Senior Lecturer,**  
**Department of Civil Engineering, School of Engineering, Sri Lanka Technological Campus (SLTC), Padukka, Sri Lanka**  
Key Accomplishments:
- Performed as the program coordinator of the BSc Civil Engineering Degree Program
  - Taught subjects related to Structural engineering such as Mechanics of Materials I & II, Strength of Materials, Structural Analysis I & II, Engineering Mathematics and research projects
  - Evaluated the performance of students based on the exams, course works and assignments

January 2015-  
December  
2017

**Senior Lecture,  
Department of Civil & Infrastructure Engineering, Faculty of Engineering, South  
Asian Institute of Technology and Medicine (SAITM), Malabe, Sri Lanka**

**Key Accomplishments:**

- Taught subjects related to Structural engineering such as Mechanics of Materials I & II, Strength of Materials, Structural Analysis I & II, Engineering Mathematics and research projects
- Evaluated the performance of students based on the exams, course works and assignments
- Involved in the development of curriculum for the 4 year full time B.Sc. Engineering (Civil Engineering) degree program offered by SAITM
- Performed as a member in the organising committee of the annual International Research Symposium on Engineering Advancements (IRSEA) organized by the Faculty of Engineering, SAITM

July 2011-  
December  
2014

**Postgraduate Research Scholar  
Queensland University of Technology (QUT), Brisbane, Australia**

**Key Accomplishments:**

- Researched on areas such as blast and impact loads, strain rate effect, building facades and finite element (FE) analysis
- Obtained a competent knowledge on LS-DYNA FE code
- Obtained a competent knowledge on bibliographic databases, database management software and other searching facilities
- Improved academic writing and other English language skills

July 2012-  
December  
2014

**Sessional Staff Member  
Queensland University of Technology (QUT), Brisbane, Australia**

**Key Accomplishments:**

- Taught subjects related to civil engineering such as Finite element analysis, Concrete design, structural dynamics, Geotechnical engineering, Hydraulic engineering and Water & Waste water engineering
- Improved teaching and communication skills
- Evaluated the performance of students based on course works and assignments

March 2011-  
June 2011

**Research Assistant (Structural Engineering) – 4 months  
University of Moratuwa, Sri Lanka**

**Key Accomplishments:**

- Researched on areas such as truss type steel bridges and FE modelling
- Obtained a competent knowledge on SAP2000 FE code
- Tested physical models of truss type steel bridges

- October 2010-  
February 2011      **Research Assistant (Hydraulic Engineering) – 5 months**  
**University of Moratuwa, Sri Lanka**  
Key Accomplishments:
- Researched on areas such as river flow characteristics, sand mining and sediment transportation
  - Obtained a competent knowledge on HECRAS computer code
- October 2008-  
March 2009      **Trainee Engineer (Water Supply Project at Polonnaruwa)– 6 months**  
**International Construction Consortium (ICC)**  
Key Accomplishments:
- Involved in construction of water towers, pipe laying and valve fixing
  - Prepared bar schedules and pipe laying reports
  - Obtained an experience in working with different levels of people such as project managers, site engineers, consultants, sub-contractors and labours

## **AWARDS AND ACHIEVEMENTS**

- July 2011-  
July 2014      QUT Postgraduate Award (**QUTPRA**) **scholarship** and the Civil Engineering & Build Environment (**CEBE**) **Top Up scholarship** award
- October  
2011      **IESL (INSTITUTION OF ENGINEERS-SRI LANKA) YOUNG MEMBERS SECTION, LATE ENG. NIMAL CHANDRASENA AWARD, FIRST PLACE**  
for the paper “Analysis of Truss Type Steel Bridges in Sri Lanka”
- 2006-2010      Included in the **Dean’s List** for **six times** (within 7 semesters) by obtaining a semester GPA over 3.8 out of 4.2, University of Moratuwa, Sri Lanka

## **RESEARCH INTERESTS**

- Finite element modelling and analysis
- Structural dynamics and health monitoring
- Structures under blast and impact loading
- Facade engineering and protective glazing
- Truss type steel bridges
- Design of water retaining structures
- Sustainable Building Materials
- Engineering aspects of the ancient built-environment

## PUBLICATIONS

### PhD Thesis

**Hidallana-Gamage, H. D.**, (2015). Response of laminated glass panels to near field blast loads. *PhD Thesis*. Queensland University of Technology (QUT), Brisbane, Australia

### Journal Papers

- **Hidallana-Gamage, H. D.**, Thambiratnam, D. P., & Perera, N. J. (2013a). Computational analysis of laminated glass panels under blast loads: A comparison of two dimensional and three dimensional modelling approaches. *The International Journal of Engineering and Science*, 2(8), 69-79.
- **Hidallana-Gamage, H. D.**, Thambiratnam, D. P., & Perera, N. J. (2013b). Failure analysis of laminated glass panels subjected to blast loads. *Engineering Failure Analysis*, 36, 14-29.
- **Hidallana-Gamage, H. D.**, Thambiratnam, D. P., & Perera, N. J. (2014a). Numerical modelling and analysis of the blast performance of laminated glass panels and the influence of material parameters. *Engineering Failure Analysis*, 45, 65-84.
- **Hidallana-Gamage, H. D.**, Thambiratnam, D. P., & Perera, N. J. (2014b). Influence of structural sealant joints on the blast performance of laminated glass panels. *Journal of Performance of Constructed Facilities (ASCE)*.
- **Hidallana-Gamage, H. D.**, Thambiratnam, D. P., & Perera, N. J. (2014c). Design guidance for blast resistant glazing. *Journal of Architectural Engineering (ASCE)*.
- **Hidallana-Gamage, H. D.**, Thambiratnam, D. P., & Perera, N. J. (2016). Influence of interlayer properties on the blast performance of laminated glass. *Construction and Building Materials*, 98, pp. 502-518.
- **Hidallana-Gamage, H. D.**, Thambiratnam, D. P., & Perera, N. J. (2017). Blast response of flexible façade systems and the influence of the negative phase. *Construction and Building Materials*, 154, pp. 462-481.

### Conference Papers

- Baskaran, K., Karunarathna, W. W. N., **Hidallana-Gamage, H. D.**, Lolitha, H.W.S., & Chathurika, D.J. (2010). Analysis of Truss Type Steel Bridges, Paper presented at the *Annual Symposium 2010 at General Sir John Kotelawala Defence University, Sri Lanka*.
- Baskaran, K., Karunarathna, W. W. N., **Hidallana-Gamage, H. D.**, Lolitha, H.W.S., & Chathurika, D.J. (2010). Analysis of Truss Type Steel Bridges in Sri Lanka, Paper presented at the *IESL Young Members Forum 2010, Sri Lanka*.
- Baskaran, K., Karunarathna, W. W. N., & **Hidallana-Gamage, H. D.** (2011). Finite Element Analysis of Truss Type Steel Bridges, Paper presented at the *105<sup>th</sup> IESL Annual Session, Sri Lanka*.

- **Hidallana-Gamage, H. D.**, Thambiratnam, D. P., & Perera, N. J. (2013c). Response of a building envelope system to near field blast events. Paper presented at the *5<sup>th</sup> international conference on structural engineering, mechanics and computation, Cape Town, South Africa*.
- Atapattu S. I. S., Amaraweera A., Siyambalapitiya S. D. L. H., Weeraratne H. U. A., Nabrees T. L., & **Hidallana-Gamage H. D.** (2016). Analysis of the Meeliyadda Bridge Failure in Kurunegala. Paper presented at the *6<sup>th</sup> International Research Symposium on Engineering Advancements (IRSEA), SAITM, Malabe, Sri Lanka*. pp. 21-26.
- Colombage R. N., Hettigoda A. H., Thilakarathna P. H. L. U., Waidyawardhana V. K. C., & **Hidallana-Gamage H. D.** (2016). Study on Ancient mansions (Walawwas) in Sri Lanka. Paper presented at the *6<sup>th</sup> International Research Symposium on Engineering Advancements (IRSEA), SAITM, Malabe, Sri Lanka*. pp. 27-32.
- Wanigadewa G. H. V. M. T., Perumpulliarachchi P. P., Gallege D. S., Hemakumara S. P., Krishanth T., & **Hidallana-Gamage H. D.** (2016). Modelling and Analysis of the Ancient Chapter House Lovamahapaya. Paper presented at the *6<sup>th</sup> International Research Symposium on Engineering Advancements (IRSEA), SAITM, Malabe, Sri Lanka*. pp. 33-39.
- Bogahawaththa, P. B. M. R., **Hidallana-Gamage, H. D.** & Baskaran, K. (2019). Investigate an Economical Truss Type Steel Pedestrian Bridges for Sri Lanka, Paper presented at the *International Conference on Civil Engineering and Applications 2019 (ICCEA 2019), Department of Civil Engineering, University of Moratuwa, Sri Lanka*. 25<sup>th</sup>-26<sup>th</sup> July 2019.
- Sumanasinghe, Y., Jayasinghe M. T. R. & **Damruwan, H. G. H.** (2019). Euro Code Loads and the Implications for the Structural Design of Box Culverts in Sri Lanka, Paper presented at the *International Conference on Civil Engineering and Applications 2019 (ICCEA 2019), Department of Civil Engineering, University of Moratuwa, Sri Lanka*. 25<sup>th</sup>-26<sup>th</sup> July 2019.
- Eric, T. B., Gunawardana, S. G. W., Hasalanga, H. H. H., Jayasinghe M. T. R. & **Damruwan, H. G. H.** (2019). Rapidly Constructed Two Storey Thermally Comfortable Houses for Tropical Climates with Light Weight Loadbearing Concrete Panels. Paper presented at the *International Conference on Civil Engineering and Applications 2019 (ICCEA 2019), Department of Civil Engineering, University of Moratuwa, Sri Lanka*. 25<sup>th</sup>-26<sup>th</sup> July 2019.
- Fowza, M. J. F., & **Hidallana-Gamage, H. D.** (2020). Study on Use of Glass in Sri Lankan Construction Industry. *2020 Moratuwa Engineering Research Conference (MERCon), Moratuwa, Sri Lanka*. pp. 107-112, doi: 10.1109/MERCon50084.2020.9185303.
- Bogahawaththa, P. B. M. R., Madhuranga, K. P., Baskaran K., & **Hidallana-Gamage, H. D.** (2020). Study on Concrete Filled Steel Circular and Square Tubes. *2020 Moratuwa Engineering Research*

Conference (MERCon), Moratuwa, Sri Lanka, pp. 42-47, doi: 10.1109/MERCon50084.2020.9185319.

- Mohamed-Zenith, M. M. & **Hidallana-Gamage, H. D.** (2020). Structural Defects in Domestic Buildings & Propose Guidelines for a Safe and Economical Design. *2020 Moratuwa Engineering Research Conference (MERCon), Moratuwa, Sri Lanka.* pp. 343-347, doi: 10.1109/MERCon50084.2020.9185364.
- Thadsanamoorthy, P. & **Hidallana-Gamage, H. D.** (2020). Intensity of Ground Vibration During the Passage of Trains: A Case Study. *Society of Structural Engineers (SSE), Sri Lanka.* EasyChair Preprint no. 3666

## **PROFESSIONAL SKILLS**

- Competent knowledge on structural analysis and design
- Expert in finite element modelling and analytical techniques
- Competent knowledge on computer software such as LS-DYNA, ANSYS, SAP 2000, MSC PATRAN, AUTO CAD, REVIT ARCHITECTURE, PROKON, HECRAS, EPANET
- Sound knowledge on current design standards (BS, ASTM and AS/NZS standards)
- Excellent communication skills
- Expert in Microsoft Office tools

## **PROFESSIONAL MEMBERSHIPS**

- Associate member of the Institution of Engineers Sri Lanka (IESL) since May 2011

## **SERVICE TO THE ENGINEERING PROFESSION / EXTRA CURRICULAR ACTIVITIES**

1. Served by providing the expertise knowledge for the Condition Assessment of Three Buildings at Taxila Central College, Horana conducted by the National Building Research Organization (NBRO) (December 2020 to date).
2. Serve as a member of the Accreditation Committee in the Department of Civil Engineering (September 2020 to date)
3. Served as a member of the Organizing committee and also as a Co-Chair of the Civil Engineering Track of the Moratuwa Engineering Research Conference 2020 (MERCon 2020) held at the University of Moratuwa (March 2020 – July 2020)
4. Served as the Assistant Coordinator of the Field Familiarization Program 2020 held by the Department of Civil Engineering (February 2020 – March 2020)

5. Served as an organizing committee member for the International Conference on Civil Engineering and Applications 2019 (ICCEA 2019), which will be held at Department of Civil Engineering, University of Moratuwa in 25<sup>th</sup>-26<sup>th</sup> July 2019
6. Conducted the session on “Cladding Design and Response of Structures under Blast and Impact Loading” in the workshop “SUPER-TALL BUILDINGS: ENGINEERING ASPECTS OF COLOMBO’S CHANGING SKYLINE” at Institute of Engineers Sri Lanka (IESL) Wimalasurendra Auditorium in 20<sup>th</sup> June 2019
7. Conducted the lecturers of the session on “Design of Water Retaining Structures with Euro Codes” in the Training programme on “Euro Codes for Design, Construction and Quality Assurance of Buildings and Highway Structures” which was conducted at Department of Civil Engineering, University of Moratuwa in March-May 2019
8. Serviced as the external examiner for the following postgraduate research projects conducted at the Department of Civil Engineering, University of Moratuwa, Sri Lanka.
  - Hewavitharana, N. (2018). Cost Comparison between Conventional and Flat Slab Structures. MEng. Thesis. Department of Civil Engineering, University of Moratuwa, Sri Lanka.
  - Dilrukshi, A.L.A., (2018). Identifying Structural Defects in Government Hospital Buildings in Sri Lanka and Developing Remedial measures. MEng. Thesis. Department of Civil Engineering, University of Moratuwa, Sri Lanka.
  - Prasad, R. M. B., (2017). Study on Behavior of Concrete Fins against Blast Pressure. MEng. Thesis. Department of Civil Engineering, University of Moratuwa, Sri Lanka.
  - Karththekeyan, T., (2017). Study on Properties of Concrete with Recent Advanced Admixtures. MSc. Thesis. Department of Civil Engineering, University of Moratuwa, Sri Lanka.
9. Involved in the development of curriculum for the four-year full time Bachelor of Science in Engineering (Civil Engineering) degree program offered by SAIM as per the guidelines of Sri Lanka Quality Framework (SLQF) Level 6 and Engineering Program Accreditation Manual, Institution of Engineers, Sri Lanka (IESL) – (2016-2017)
10. Involved with the preparation of architectural plans, structural design, material purchasing and construction supervision of the 5 storey building (total project cost is approximately 200 million rupees), which is constructed for Faculty of Engineering, SAIM, Malabe, Sri Lanka (March 2016 - December 2017)
11. Member in the organizing committee and the coordinator of the Special Session on “Ancient Built Environment in Sri Lanka” of the International Research Symposium on Engineering Advancements (IRSEA) 2016, held by Faculty of Engineering, SAIM, Malabe, Sri Lanka (June 2016)

12. Member in the organizing committee and the coordinator of the “Math Relay” competition of the Science, Technology, Engineering and Management (STEM) 2015 event, held by Faculty of Engineering, SAIMT, Malabe, Sri Lanka (October 2015)
13. Involved with the structural design and construction supervision of the structure constructed for an external lift in the 4 storey Anatomy building (total project cost is approximately 10 million rupees), SAIMT, Malabe, Sri Lanka (January 2015-October 2015)
14. Member in the organizing committee of the Robotic’s Chalange 2015 event, held by Faculty of Engineering, SAIMT, Malabe, Sri Lanka (May 2015)
15. Member in the organizing committee of the Research Symposium on Engineering Advancements (RSEA) 2015, held by Faculty of Engineering, SAIMT, Malabe, Sri Lanka (April 2015)
16. Involved in the “THUNKAL DEKMA” National Exhibition and Forum held by - Institute for Construction Training and Development (ICTAD), Colombo, Sri Lanka (October 2010)
17. Involved in the “Exmo 2010” Exhibition held by- Faculty of Engineering, University of Moratuwa, Sri Lanka (September 2010)

## **PARTICIPATION OF COURSES, WORKSHOPS, SEMINARS, COMMITTEES AND TECHNICAL MEETINGS**

1. Seminar on “Indigenous Knowledge on Construction Industry in Sri Lanka”, organized by National Science Foundation, Ministry of Science, Technology and Research (10<sup>th</sup> November 2017)
2. Symposium on “Fire Design of Multi-Storey Buildings”, Organized by the Structural Design Institute, Sri Lanka at Construction Industry Development Authority (CIDA), Colombo, Sri Lanka (8<sup>th</sup> August 2017)
3. Seminar on “Finite Element Analysis Applications using midas FEA”, at Grand Oriental Hotel, Colombo, Sri Lanka (3<sup>rd</sup> May 2017)
4. Regional Tall Building Forum 2017, jointly organized by the Council on Tall Buildings and Urban Habitat (CTBUH) Sri Lanka and CTBUH India at Exhibition Convention Centre, Colombo, Sri Lanka (23<sup>rd</sup> February 2017)
5. Two day training programme titled “Latest Repair and Rehabilitation Technologies for Dams”, organized by National Committee on Large Dams & Aqua Foundation Academy, India (23<sup>rd</sup> and 24<sup>th</sup> January 2017)
6. Staff Development Programme (SDP) conducted by Quality Assurance & Accreditation Council, University Grants Commission (UGC) at SAIMT, Malabe, Sri Lanka (October 2015-August 2016)



7. Workshop on “Get Smarter with IT”, conducted by Quality Assurance & Accreditation Council, University Grants Commission (UGC) at SAITM, Malabe, Sri Lanka (July 2015)
8. Sessional Academic Programs, QUT, Brisbane, Australia (2011 July-2014 August)
9. Language Development Programs, QUT, Brisbane, Australia (2011 July-2012 July)
10. Academic Writing Circles, QUT, Brisbane, Australia (2011 July-2012 July)
11. Health & Safety Risk Management Tutorial (Project Work), QUT, Brisbane, Australia (October 2011)
12. Advanced Information Retrieval Skills (AIRS) program, QUT, Brisbane, Australia (August 2011)
13. Mentoring Programme 2007/2008, Department of Civil Engineering, University of Moratuwa (2007-2008)

### **CIVIL ENGINEERING CONSULTANCY WORK**

1. Structural assessment of the two Buildings at St’ Lucia Vidyalaya, Kotahena and Submission of a Structural Condition Survey Report (November 2020 to date)
2. Study on feasibility of expanding present building at fisheries ministry, Maligawatta with three additional floors (July 2020 – March 2021)
3. Investigation of Structural Soundness of Eight Storied Criminal Investigation Department (CID) Building at Colombo (February – September 2020)
4. Structural assessment and investigate the possibility constructing an auditorium at the roof top of the Five storey main building of the Sri Lanka Social Security Board, Rajagiriya (July –September 2019)
5. Structural assessment of the water tank, aggregate panels and the damaged pre-stressed beams at the roof level of the old building at the labour department, Narahenpita (August 2019 to date)
6. Member of the Technical Evaluation Committee of the Construction of the “Proposed Renovation of Entrance Glass Façade at Department of Census and Statistics”. (July 2019 to date)
7. Member of the Technical Evaluation Committee of the project of “Amendments to National Building Research Organization (NBRO) Head Office Building: Design, Supply and Installation of Glass Curtain Walls” (July 2019 to date)
8. Structural assessment of the Eight storey building at Gampaha Base Hospital, Gampaha (July – September 2019)
9. Structural assessment of “R. Premadasa” Cricket Stadium, Colombo Sri Lanka (June 2019)
10. Structural assessment of overhead tank and water collecting sump at Brandix factory, Ratmalana (June 2019)

11. Investigating the severity of vibrations occurred in the Hayleys Fabric PLC, Nartupana Estate, Neboda  
(November 2018)

I hereby **declare** that the above mentioned information is true to the best of my knowledge.

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University of Moratuwa  
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