

## Tharindu Prabatha Hewa Godella Waththage

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### EDUCATION

Degree	Institution	Dates	Subject Area
Doctor of Philosophy (Candidate) <sup>1</sup>	University of British Columbia, Canada	05/2017 – to date	Energy System Planning & Life Cycle Management
Bachelor of the Science of Engineering (Hons) <sup>2</sup>	University of Moratuwa, Sri Lanka	07/2009 – 03/2014	Mechanical Engineering

<sup>1</sup> Dissertation title: Moving Towards Net-Zero Buildings, A Framework for Intelligent Building Performance Enhancement with Life Cycle Thinking  
Supervisor: Dr. Kasun Hewage, University of British Columbia, BC, Canada

<sup>2</sup> Academic standing: First Class (Overall GPA: 3.80)

### Continuing Education / Training

1. Participation in Sexual Violence Prevention and Equity Workshop, University of British Columbia (2019)
2. Participation in Building Energy Modelling Workshop, University of British Columbia (2019)
3. Participation in the Invigilator Training Workshop, School of Engineering, University of British Columbia (2018)
4. Teacher training program (Practical Experience Credential) for Teaching Assistants, University of British Columbia (2017)
5. WHIMIS Training for Risk Management Services, University of British Columbia (2017)
6. Teacher training program for University Lecturers, University of Kelaniya, Sri Lanka (2016)

### EMPLOYMENT

Position	Organisation	Dates
Research Assistant	University of British Columbia	2017/05 - Present
Teaching Assistant	University of British Columbia, School of Engineering	2017/09 - Present
Teaching Assistant	University of British Columbia, Faculty of Management	2019/01 - Present
Lecturer	University of Moratuwa, Department of Mechanical Engineering	2015/08 - Present
Mechanical Engineer	Sutra Technologies, Sri Lanka	2014/03 – 2015/01
Mechanical Engineer	Ace Power Embilipitiya (Pvt) Ltd, Sri Lanka	2012/05 – 2012/11

### TEACHING EXPERIENCE

#### a) Courses taught and assisted at the University of British Columbia

Session	Course	Role	Hours	Class size
2018 Winter	ENGR 485 (201) – Heating, Ventilating, and Air Conditioning	Marker	22	68
2018 Winter	MGMT 422 (001) – Project Management	Teaching Assistant <sup>1</sup>	66	27
2018 Fall	ENGR 377 – Manufacturing Processes (Design Lab)	Teaching Assistant <sup>2</sup>	96	120
2018 Summer	APSC 252 – Thermodynamics and Heat Transfer	Teaching Assistant <sup>3</sup>	60	30
2018 Summer	APSC 252 – Thermodynamics and Heat Transfer	Teaching Assistant <sup>3</sup>	102	270

<sup>1</sup> Lab TA: Conducting lab sessions on MS Project; Marking assignments and exams

<sup>2</sup> Tutorial TA: Conducting tutorial classes; Preparation of assignments, exams, and marking rubrics under the supervision of the course instructor; Evaluating exams

<sup>3</sup> Tutorial TA: Conducting tutorial classes; Preparation of assignments and marking rubrics under the supervision of the course instructor; Evaluating exams

**b) Courses taught and assisted at the University of Moratuwa, Sri Lanka**

Year	Course	Role	Class size	Credits
2017	ME1100 – Mechanics of Materials I	Lecturer & practical coordinator	310	4
2017	ME4710 – Aircraft Technology	Lecturer & practical coordinator	75	3
2017	ME1052 – Fundamentals of Engineering Thermodynamics	Lecturer & practical coordinator	110	2
2017	ME2032 – Thermodynamics of Heat Engines & Work Transfer Devices	Practical coordinator	110	4
2017	ME2060 – Mechanics of Materials II	Lecturer & practical coordinator	310	4
2017	ME4632 – Automotive Engineering	Lecturer & practical coordinator	110	4
2016	ME2160 – Introduction to Automotive Engineering	Lecturer & practical coordinator	120	3
2016	ME4382 – Refrigeration & Air Conditioning	Practical Coordinator	100	4
2016	ME4202 – Design/Research Project	Lecturer	120	10
2016	ME1032 – Mechanics	Practical coordinator	900	2
2016	ME1822 – Basic Engineering Thermodynamics	Lecturer & practical coordinator	250	3
2016	ME2010 – Fluid Dynamics	Lecturer & practical coordinator	100	3
2016	ME3022 – Fluid Power Systems & Machinery	Practical coordinator	120	4
2016	ME4710 – Aircraft Technology	Lecturer & practical coordinator	80	3
2016	ME4242 – Energy Technology & Environment	Practical coordinator	50	3
2016	ME4442 – Heat and Mass Transfer	Practical coordinator	50	3
2016	ME1100 – Mechanics of Materials I	Lecturer & practical coordinator	300	4
2016	ME4710 – Aircraft Technology	Lecturer & practical coordinator	80	3
2016	ME1052 – Fundamentals of Engineering Thermodynamics	Lecturer & practical coordinator	120	2
2016	ME2032 – Thermodynamics of Heat Engines & Work Transfer Devices	Practical coordinator	120	4
2016	ME2060 – Mechanics of Materials II	Lecturer & practical coordinator	300	4
2016	ME4632 – Automotive Engineering	Lecturer & practical coordinator	120	4
2015	ME1100 – Mechanics of Materials I	Lecturer & practical coordinator	290	4

**c) Courses taught and assisted at the Ocean University, Sri Lanka**

Year	Course	Role	Class size	Credits
2017	Industrial Hydraulics	Lecturer & practical coordinator	80	4
2016	Industrial Hydraulics	Lecturer & practical coordinator	50	4
2015	Industrial Hydraulics	Lecturer & practical coordinator	70	4

## SCHOLARLY AND PROFESSIONAL ACTIVITIES

**a) Research:**

- Currently employed as a research assistant working at the Life Cycle Management (LCM) laboratory (<http://lcml.engineering.ok.ubc.ca>) at the UBC Okanagan School of Engineering.
- Thesis:** Moving Towards Net-Zero Buildings, A Framework for Intelligent Building Performance Enhancement with Life Cycle Thinking
- PhD comprehensive exam completed in March 2019

**a) Project involvement at the University of British Columbia**

Project title	Project type	Period
FortisBC Smart Energy Chair – Mitacs Accelerate Project	Mitacs Accelerate project <sup>1</sup>	2019
Micro Carbon Capture and Utilization: A Canadian Solution for Low Carbon Heating with Natural Gas	Natural Sciences and Engineering Research Council of Canada - Collaborative Research and Development Grant (NSERC CRD)	2018
UBCO-FortisBC collaborative research partnership: Rehabilitation options analysis for dewatering systems in power generation facilities	Mitacs Accelerate project <sup>1</sup>	2017/2018
Energy Performance Improvement of Multi-Unit Residential Buildings in British Columbia	Research grant funded by Pacific Institute for Climate Solutions	2016-2019
Eco-efficiency Assessment Framework for Small Off-grid Renewable Energy Systems	Natural Sciences and Engineering Research Council of Canada – Engage Grant	2017

<sup>1</sup> Mitacs is a national, not-for-profit organization that builds partnerships that support industrial and social innovation in Canada. Mitacs works with universities, companies, and both federal and provincial governments, to develop programs in R&D management, skill development, and international research training.

**b) Invited presentations**

1. **Prabatha, T.**, (2018), Developing Net-Zero Buildings: A Framework for Intelligent Building Performance Enhancement with Life Cycle Thinking, A presentation at the Green Construction Workshop organized by the Green Construction Research and Training Center | UBCO, October 1, 2018.
2. **Prabatha, T.**, (2018), Energy Performance Improvement of Multi-Unit Residential Buildings in British Columbia, A presentation at the Pacific Institute for Climate Solutions, June 6, 2018.
3. **Prabatha, T.**, Hager, J., and Carneiro, B., (2018), Eco-efficiency Assessment Framework for Small Off-grid Renewable Energy Systems, A presentation to Silver Lake Forest Education Society and Stantec Inc., November 10, 2017.
4. **Prabatha, T.**, Hirushie, K., Ruparathna, R., Hewage, K., and Sadiq, R. (2018), Sustainable Water-Energy Nexus for Urban Neighborhood Development (UND), Green Development Workshop, District of Peachland, BC, May 24, 2017.

**c) Conference and event participation**

Conference or Event	Organisation	Role(s)	Location	Dates(s)
1st International Conference on New Horizons in Green Civil Engineering	University of Victoria	Presenter	Victoria, Canada	April 25 – 27, 2018
PICS student forum 2018	Pacific Institute for Climate Solutions	Participant	Vancouver, Canada	October 10-12, 2018
3MT Thesis Competition	School of Engineering, University of British Columbia	Presenter	Kelowna, Canada	February 23, 2018
Annual Engineering Graduate Students Society Symposium	University of British Columbia	Presenter	Kelowna, Canada	February 9, 2018
CSCE Annual Conference 2017	Canadian Society of Civil Engineers	Participant	Vancouver, Canada	May 31 – June 3, 2017

**d) Services to the university**

Organisational unit	Title / Nature of Duties	Dates
School of Engineering   UBCO	Judge – Capstone Final Showcase and Competition	April 04, 2019

## ACADEMIC AWARDS AND HONOURS

Award	Institution	Year
Scholar of Pacific Institute for Climate Solutions	Pacific Institute for Climate Solutions, Canada	2017-2019
Research scholarship from Green Construction Research and Training Centre	University of British Columbia, Canada	2018
University Graduate Fellowship, University of British Columbia	University of British Columbia, Canada	2018
University Graduate Fellowship, University of British Columbia	University of British Columbia, Canada	2017
Queen Elizabeth Graduate Scholarship	Universities Canada	2017
Mahapola scholarship for students with Merit Pass in G.C.E. Advanced Level, Sri Lanka	Mahapola Scholarship Fund, Sri Lanka	2009-2013
Matara Bodhi Arakshaka Sabha Scholarship for the best 25 students in the district in G.C.E. Ordinary Level, Sri Lanka	Matara Bodhi Arakshaka Sabha Foundation, Sri Lanka	2005-2008
Mathematics Olympiad - High Distinction Sri Lankan Rank: 12	Olympiad Foundation, Sri Lanka	2008
Mathematics Olympiad - High Distinction	Olympiad Foundation, Sri Lanka	2007
SLUSA Colors for Rugby Football	University Sports Association, Sri Lanka	2012
University Colors for Rugby Football	University of Moratuwa, Sri Lanka	2010-2013
Award for the best research proposal at the Sri Lankan University Teacher Training Program	University of Kelaniya, Sri Lanka	2016
Award for the best portfolio at the Sri Lankan University Teacher Training Program	University of Kelaniya, Sri Lanka	2016

## PUBLICATIONS

### Journal Articles:

1. Gamalath, I., Hewage, K., Ruparathna, R., Karunathilake, H., **Prabatha, T.**, & Sadiq, R. (2018). Energy rating system for climate conscious operation of multi-unit residential buildings. *Clean Technologies and Environmental Policy* (**Impact factor: 3.331** | Springer). <http://doi.org/10.1007/s10098-018-1510-x>

### Journal Articles Under Review:

1. **Prabatha, T.**, Hager, J., Carneiro, B., Hewage, K., & Sadiq, R. (2018) Analyzing energy options for small scale off-grid communities: A case study for Canada, Submitted to *Applied Energy* (Elsevier), Manuscript ID: JCLEPRO-D-18-13598.
2. **Prabatha, T.**, Hirushie., K, Ruparathna, R., Hewage, K., & Sadiq, R. (2019) An integrated roadmap for real-time monitoring and continuous performance improvement for Canadian building stock, *Renewable and Sustainable Energy Reviews*. (Submitted | Manuscript ID: APEN-S-19-09516)
3. Hirushie., K., **Prabatha, T.**, Hewage, K., & Sadiq, R. (2019) Analyzing energy options for small scale off-grid communities: A case study for Canada, *Applied Energy* (Elsevier). (Submitted | Manuscript ID - APEN-S-16-07583.)

### Conference Articles:

1. **Prabatha, T.**, Ruparathna, R., Hewage, K., & Sadiq, R. (2018). Operational performance management of multi-unit residential buildings. In *1st International Conference on New Horizons in Green Civil Engineering (NHICE-01)* 2018. Victoria.

2. **Prabatha, T.**, Hirushie, K., Ruparathna, R., Sadiq, R., & Hewage, K. (2019) A building energy and health conditions monitoring strategy for Canadian building sector. In *7<sup>th</sup> International Construction Conference (7<sup>th</sup> ICC) 2019*. Montreal.
3. Hirushie, K., **Prabatha, T.**, Hewage, K., & Sadiq, R. (2019) Costs of Green Residences in Canada: An Economic and Environmental Analysis of Developing Renewable Powered Building Clusters. In *7<sup>th</sup> International Construction Conference (7<sup>th</sup> ICC) 2019*. Montreal.

#### **Book Chapters Under Review:**

1. Karunathilake, H., **Prabatha, T.**, Hewage, K., & Sadiq, R. (2018), *Developing a model for regional waste management, Soft computing theories and applications in environmental sciences and engineering with focus on fuzzy logic*, Wiley (Expected publication in 2019).
2. Karunathilake, H., **Prabatha, T.**, Shahnawaz, K., & Hewage, K. (2019), *Energy Use in Water Distribution Systems: A Life Cycle Thinking Perspective, Encyclopedia of Water: Science, Technology, and Society*, Wiley (Expected publication in 2019).

#### **Technical Reports:**

1. **Prabatha, T.**, Hager, J., Carneiro, B., Ruparathna, R., Karunathilake, H., Hewage, K., & Sadiq, R. (2017), *Eco-efficiency Assessment Framework for Small Off-grid Renewable Energy Systems – Final Report*, Submitted to Silver Lake Forest Education Society and Stantec, on October 10, 2017.
2. **Prabatha T.**, & Hewage K. (2018), *Energy performance improvement of multi-family residential buildings in British Columbia – 2<sup>nd</sup> Phase*, Submitted to the Pacific Institute of Climate Solutions (PICS), on June 12, 2018.

## **REFEREES**

### **Dr Kasun Hewage, PhD, PEng**

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