

Md Abdul Halim

Post-Doctoral Fellow, Graduate Department of Forestry, University of Toronto
33 Willcocks Street, Toronto, Ontario, M5S 3B3, Canada

✉ abdul.halim@mail.utoronto.ca ☎ +1 (647) 608-0367 🌐 mdhalim.com | Updated: May 1, 2020

RESEARCH INTERESTS

Forest ecology & management, Biometeorology, Biogeochemistry, Climate change, Biochar, Remote sensing & GIS, Design cost-effective environmental sensor-logger systems.

EDUCATION

Faculty of Forestry, University of Toronto, Canada

Ph.D. *Sep 2013 - Nov 2019*

Thesis: Forest disturbances and climate feedbacks in a mixedwood boreal forest. (*Supervisor:* Dr. Sean Thomas).

Dept. of Forestry & Environmental Science, Shahjalal University of Science & Technology, Bangladesh

M.Sc. in Forestry (with distinction) *Jun 2005 - Jun 2006*

Thesis: Application of Artificial Neural Network in multispectral satellite image classification. (*Supervisor:* Dr. Swapan Sarker). (*Chancellor & Vice-chancellor Gold medallist for outstanding academic achievements*)

B.Sc. in Forestry (with distinction) *Jun 2001 - Jun 2005*

Project: Detection of vegetation cover change in West Bhanugach Reserved Forest using remote sensing and GIS techniques. (*Supervisor:* Dr. Romel Ahmed)

TEACHING EXPERIENCE

Graduate Department of Forestry, University of Toronto, Canada

Course instructor (Conservation of Tropical & Subtropical Forests) *Winter 2020*

Description — It is an extensive undergraduate course of class size ~200 focusing on the ecology and conservation of tropical and subtropical forests. I have partially designed and developed the syllabus and learning materials for this course in light of the Universal Design for Learning framework. I have taught this course both in physical classes and online platforms (due to COVID-19) using different active learning techniques. I have led a team of five TAs who helped me to run tutorials and grade assignments and final examinations. I also held office hours and provided weekly online support for classes.

Faculty of Forestry, University of Toronto, Canada

Teaching assistant (Conservation of Tropical & Subtropical Forests) (Undergraduate course) *2016 - 2019*

Teaching assistant (Applied Forest Ecology) (Graduate course) *2014 - 2019*

Description — These two are the key ecology courses offered at the Faculty of Forestry, University of Toronto, to cover various ecological, conservation, and management aspects of tropical, temperate, and boreal forests. As a TA, I was primarily responsible for running labs, tutorials, and field trips. My other responsibilities were to assist students in understanding difficult concepts and grade assignments and final examinations.

Dept. of Forestry & Environmental Science, Shahjalal University of Science & Technology, Bangladesh*Assistant professor* 2011 - 2013*Lecturer* 2009 - 2011

Description — Due to outstanding academic and publication records, I was offered a faculty position without a Ph.D. During my tenure at this university, I designed and developed three courses: *Tropical Forest Ecology* (undergraduate course), *Forestry and Climate Change* (graduate course), and *Remote Sensing and GIS* (undergraduate course). The average class size for these courses was ~40. As there was no TA, in addition to teaching, I graded assignments and final examinations for these courses. In addition to university-wide administrative duties, I served in curriculum design and thesis evaluation committees of the department. I also supervised ~30 undergraduate and M.Sc. research projects. One of the key challenges I tackled during this time was ensuring quality education without incurring too much cost on the university and students.

EDUCATIONAL LEADERSHIP & CURRICULUM DESIGN**Centre for Teaching Support & Innovation (CTSI), University of Toronto, Canada***Teaching fellow and trainer* 2018 - 2020

Description — Over the two years at the Teaching Assistants' Training Program (TATP), CTSI, I have not only received extensive pedagogical training but also supported science TAs across three campuses. As a part of the sciences training team, I have developed training sessions and resources for TAs, facilitated on-site departmental TA training sessions, and run microteaching sessions and workshops. I have also evaluated several teaching dossiers and in-class observations for TATP professional development certificate programs. I have also developed and facilitated workshops on open educational resources and effective science communications.

Professional development*Teaching in Higher Education* 2016

Description — Certified in the semester-long [Teaching in Higher Education \(THE500H\)](#) course offered at the University of Toronto, Canada.

Open Educational Resources (OER)

Description — I am passionate and have the skillset to develop OER. I see OER as a means not only to optimize educational cost but also to facilitate "student-centric" education. At the CTSI, I developed and ran two workshops on OER.

EdTech (Educational Technology)

Description — I have a clear pedagogical understanding of how to use EdTech effectively to facilitate collaborative/cooperative learning in higher education.

AWARDS, GRANTS, & HONORS*Doctoral completion award* 2018 - 2019

Received from the Faculty of Forestry, University of Toronto to support my Ph.D. study.

Doctoral completion award 2017 - 2018

Received from the Faculty of Forestry, University of Toronto to support my Ph.D. study.

Student scholarship **2017**

Received from the Canadian Institute of Forestry to attend CIF 109th Annual General Meeting and Conference in Ottawa, Canada.

Graduate student award **2017**

Received from the Centre for Global Change Science, University of Toronto to attending the American Geophysical Union Fall Meeting 2017, New Orleans, USA, 11-15 December 2017.

The Rufford small grants for nature conservation **2016**

Received funding to support the project: [Tree species diversity as a driver of above ground tree carbon and soil carbon fluxes in the tropics: Implications for REDD+ in Bangladesh.](#)

Graduate student award **2016**

Received from the Centre for Global Change Science, University of Toronto to support the project: Effects of biochar on soil greenhouse gas fluxes along a gradient of tropical forest disturbance in Bangladesh. This fund also supported my International Field Camp course in Malaysia.

Crowd funding **2015**

Received funding to support the project: [Combating climate change with biochar in beautiful Bangladesh.](#)

Jeanne F. Goulding fellowship **2014**

A merit-based fellowship received from the University of Toronto as an additional support to my Ph.D. study.

Connaught international scholarship for doctoral students **2013 - 2017**

A prestigious scholarship, offered only to a handful of scholars, received from the University of Toronto to support my Ph.D. study.

Ontario Trillium Scholarship (OTS) **2013**

OTS is a provincially-funded initiative to support the best international students at the University of Toronto for doctoral studies. I had to reject this offer (accepted Connaught) since a student can hold only one major scholarship at a time.

The University Grant Commission (UGC), Bangladesh funding **2013 - 2014**

This grant supported the project: Relationship of forest canopy openness and canopy height with some selected soil chemical properties in a tropical forest of Bangladesh.

The University Grant Commission (UGC), Bangladesh funding **2012 - 2013**

Received two grants to support the following projects:

- 1) Relationship between folivory and some selected properties of leaves of abundant tree species at Ratargul Freshwater Swamp Forest, Bangladesh.
- 2) Modelling endangered plant species distribution in future climate scenarios in the Satchari National Park, Bangladesh.

The University Grant Commission (UGC), Bangladesh funding **2011 - 2012**

The UGC grant received supported the project: Study of forest cover dynamics and consequent global warming using remotely sensed data: A case study from Ratargul swamp forest, Bangladesh.

Shahjalal University of Science & Technology merit awards

2002 - 2006

This award is offered to the graduate and undergraduate students with outstanding results. I received a total of five awards during this period.

RESEARCH EXPERIENCE

Post-doctoral Fellow

Nov 2019 - Present

Institute: Department of Forestry, Daniels Faculty of Architecture, Landscape, and Design, University of Toronto, Canada.

Project: NSERC CREATE for Design of Living Infrastructure for Living Ecosystem.

Responsibilities: To take part and facilitate the CREATE training initiatives in the area of Environmental Sciences and Technologies to mitigate the impacts of rapid urbanization and climate change. I am also running and co-supervising experiments on greenroof greenhouse gas fluxes (CO_2 and CH_4) and energy balance.

Field assistant

Aug 2013 - Present

Institute: Thomas Lab, Department of Forestry, University of Toronto.

Project: Halliburton Forest Mega-Plot (Ontario), which is a long-term stand-level plot network for better scientific understanding and solving applied problems in temperate forest ecosystems.

Responsibilities: Assist in annual vegetation surveys and leaf litter collections.

Doctoral candidate

Sep 2013 - Nov 2019

Institute: Faculty of Forestry, University of Toronto.

Project: Forest Disturbances and Climate Feedbacks in a Mixedwood Boreal Forest.

Responsibilities: I organized annual field campaigns and actively participated in site selection and instrumentation for this project. Afterwards, I was primarily responsible for vegetation surveys, maintenance of micrometeorological towers, and data download. I also gathered large dataset from secondary sources and satellite images. I investigated the effect of stand age and disturbances on soil temperature, snow cover, albedo, greenhouse gas flux, and energy balance in a mixedwood boreal forest of northwestern Ontario, Canada.

Research assistant

2017 - 2019

Institute: Thomas Lab, Faculty of Forestry, University of Toronto.

Project: Restoration of Musselwhite mine tailings.

Responsibilities: This restoration project partially supported my Ph.D. study beyond the funded cohort. In this project, I was responsible for setting up micrometeorological towers, data collection, and maintenance of instruments to study the biophysical effects of biochar amendments to restore mine tailings.

Principal investigator

2016 - 2017

Institute: An independent project supported by the Rufford Small Grants.

Project: Tree species diversity as a driver of above-ground tree carbon and soil carbon fluxes in the tropics: Implications for REDD+ in Bangladesh.

Responsibilities: I wrote the grant proposal, secured funding, planned the experimental setup, and participated in all field campaigns. This project supported two undergraduate student projects in Bangladesh.

Co-principal investigator

2015 - 2016

Institute: An independent project supported by crowd funding.

Project: Combating climate change with biochar in beautiful Bangladesh.

Responsibilities: Participated in grant writing and funding campaign. I was primarily responsible for site selection, getting permission for site access, and experimental setup. I joined all the field campaigns. This grant supported five undergraduate student projects in Bangladesh.

Co-principal investigator

2011 - 2014

Institute: Department of Forestry & Environmental Science, Shahjalal University of Science & Technology (projects funded by the University Grant Commission of Bangladesh).

Projects:

- 1) Relationship of forest canopy openness and canopy height with some selected soil chemical properties in a tropical forest of Bangladesh.
- 2) Relationship between folivory and some selected physical and chemical properties of leaves of some selected tree species at Ratargul Fresh Water Swamp Forest, Bangladesh.
- 3) Modelling endangered plant species distribution in future climate scenarios in the Satchari National Park, Bangladesh.
- 4) Study of forest cover dynamics and consequent global warming using remotely sensed data: A case study from Ratargul swamp forest, Bangladesh.

Responsibilities: Participated in grant writing, experimental setup, and led field campaigns. These grants supported several undergraduate student projects in Bangladesh.

M.Sc. student

2005 - 2006

Institute: Department of Forestry & Environmental Science, Shahjalal University of Science & Technology, Bangladesh.

Project: Application of Artificial Neural Network in Multispectral Satellite Image Classification.

Responsibilities: I researched, wrote MATLAB codes, and wrote a thesis paper analyzing the feasibility of artificial neural network in classifying satellite images.

B.Sc. student

2003 - 2004

Institute: Department of Forestry & Environmental Science, Shahjalal University of Science & Technology, Bangladesh.

Project: Detection of Vegetation Cover Change in West Bhanugach Reserved Forest Using Remote Sensing and GIS Techniques.

Responsibilities: For this project, I worked at the Bangladesh Space Research and Remote Sensing Organization lab. I researched, analyzed satellite images, and wrote a term paper towards my B.Sc. degree.

PUBLICATIONS

Journal Articles

22. Halim, M.A., Chen, H.Y.H., and Thomas, S.C. 2019. Stand age and species composition effects on surface albedo in a mixedwood boreal forest. *Biogeosciences* 16, 4357–4375, DOI: 10.5194/bg-16-4357-2019.
21. Thomas, S.C., Halim, M.A., Gale, N.V., and Sujeeun, L. Biochar enhancement of facilitation effects in agroforestry: early growth and physiological responses in maize-leucaena model system. *Agroforestry Systems*, 93(6): 2213-2225.
20. Halim, M.A., Chen, H.Y., Thomas, S.C. 2019. Stand age and species composition effects on surface albedo in a mixedwood boreal forest. *Biogeosciences Discussion*, DOI: 10.5194/bg-2018-501.
19. Halim, M.A., Thomas, S.C. 2018. A proxy-year analysis shows reduced soil temperatures with climate warming in boreal forest. *Scientific Reports*, DOI: 10.1038/s41598-018-35213-w.
18. Gale, N.V., Halim, M.A., Horsburgh, M., and Thomas, S.C. 2017. Comparative responses of early-successional plants to charcoal soil amendments. *Ecosphere* 8(10): e01933.
17. Deb, J.C., Salman, M.H.R., Halim, M.A., Chowdhury, M.Q., and Roy, A. 2014. Characterizing the diameter distribution of Sal plantations by comparing Normal, Lognormal, and Weibull distributions at Tilagarh Eco-park, Bangladesh. *Southern Forests* 76(4): 201-208.
16. Deb, J.C., Halim, M.A., Rahman, H.M.T., and Al-Ahmed, R. 2013. Density, diversity, composition, and distribution of street trees in Sylhet metropolitan city of Bangladesh. *Arboricultural Journal: The International Journal of Urban Forestry* 35(1): 1–14.
15. Deb, J.C., Halim, M.A., Ahmed, M.E. 2012. An allometric equation for estimating stem biomass of *Acacia auriculiformis* in the northwestern region of Bangladesh. *Southern Forests* 74(2): 103–113.
14. Sarker, S.K., Deb, J.C., Halim, M.A. 2011. A diagnosis of existing logging bans in Bangladesh. *International Forestry Review* 13(4): 461-475.
13. Chowdhury, M.S.H., Rahman, M.M., Koike, M., Muhammed, N., Salahuddin, K.M., Halim, M.A., Saha, N., Rana, M.P., and Islam, M.J. 2010. Small-scale mehedi (*Lawsonia inermis* L.) farming in the central Bangladesh: A promising NTFP-based rural livelihood outside the forests. *Small-scale Forestry* 9: 93-105.
12. Chowdhury, M.S.H., Koike, M., Muhammed, N., Halim, M.A., Saha, N., and Kobayashi, H. 2009. Use of plants in healthcare: a traditional ethno-medicinal practice in rural areas of southeastern Bangladesh. *International Journal of Biodiversity Science & Management* 5(1): 41-51.
11. Chowdhury, M.S.H., Halim, M.A., Muhammed, N., Koike, M., and Biswas, S. 2009. Indigenous knowledge in natural resource management by the hill people: A case of the *Mro* tribe in Bangladesh. *Forests, Trees and Livelihoods* 19: 129-151.
10. Halim, M.A., Shahid, A., Chowdhury, M.S.H., Sohel, M.S.I., Nahar, M.N., and Jhangir, N.M. 2008. Evaluation of landuse pattern change in West Bhanugach Reserve Forest, Bangladesh, using Remote Sensing and GIS Techniques. *Journal of Forestry Research* 19(3): 193-198.
9. Halim, M.A., Chowdhury, M.S.H., Muhammed, N., Rahman, M., and Koike, M. 2008. Sap Production from Khejur Palm (*Phoenix sylvestris* Roxb.) Husbandry: A Substantial Means of Seasonal Livelihood in Rural Bangladesh. *Forest, Trees and Livelihoods* 17: 305-318.

8. Chowdhury, M.S.H., Halim, M. A., Muhammed, N., Haque, F., and Koike, M. 2008. Traditional utilization of wild date palm (*Phoenix sylvestris* Roxb.) in rural Bangladesh: An approach to sustainable biodiversity management. *Journal of Forestry Research* 19(3): 245-251.
7. Akhter, S., Halim, M.A., Sohel, M.S.I., Sarker, S.K., Chowdhury, M.S.H., and Sonet, S.S. 2008. A review on the use of non-timber forest products in beauty- care in Bangladesh. *Journal of Forestry Research* 19(1):72-78.
6. Ahmed, R., Hasan, M.S., Halim, M.A., and Alam, M. 2008. State of urban nurseries in Bangladesh: A case study from the north-eastern region. *Small-scale Forestry* 3(4): 275-283.
5. Halim, M.A., Chowdhury, M.S.H., Wadud, A.I., Uddin, M.S., Sarker, S.K., and Uddin, M.B. 2007. The use of plants in traditional health care practice of the *Shaiji* community in southwestern Bangladesh. *Journal of Tropical Forest Science* 19(3): 168– 175.
4. Ahmed, R., Islam, A.N.M.F., Rahman, M., and Halim, M.A. 2007. Management and Economic Value of *Schumannianthus dichotoma* (Murta) on Rural Homesteads in the Sylhet Region of Bangladesh. *International Journal of Biodiversity Science and Management* 3(4): 252-258.
3. Chowdhury, M.S.H., Halim, M.A., Miah, M.D., Muhammed N., and Koike, M. 2007. Biodiversity use through harvesting faunal resources from forests by the *Mro* tribe in the Chittagong Hill Tracts, Bangladesh. *International Journal of Biodiversity Science and Management* 3: 1–7.
2. Chowdhury, M.S.H., Halim, M.A., Biswas, S., Haque, S.M.S., Muhammed, N., and Koike, M. 2007. Comparative evaluation of physical properties in soils of orange orchard and bushy forest in Chittagong hill tracts, Bangladesh. *Journal of Forestry Research* 18(3): 245-248.
1. Chowdhury, M.S.H., Biswas, S., Halim, M.A., and Haque, S.M.S. 2007. Comparative analysis of some selected macronutrients of soil in orange orchard and degraded forests in Chittagong Hill Tracts, Bangladesh. *Journal of Forestry Research* 18(1): 27-30.

Peer-Reviewed Book Chapters

1. Mukul, S.A., Halim, M.A., Herbohn, J. 2020. Forest carbon stock and fluxes: distribution, biogeochemical cycles, and measurement techniques. In Book: W. Leal Filho et al. (eds.), *Life on Land, Encyclopedia of the UN Sustainable Development Goals*. Publisher: Springer Nature Switzerland AG.

Conference Papers/Posters/Talks

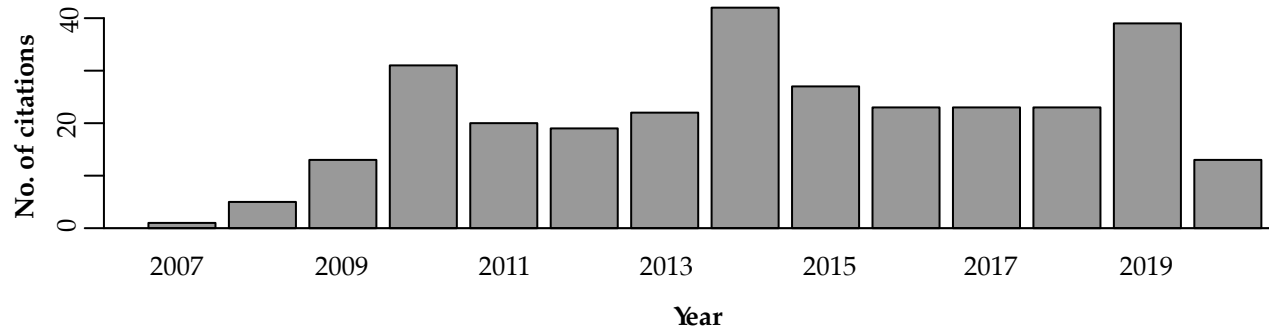
9. Halim M.A. et al. 2020. [Green Roofs and Greenhouse Gases: Carbon dioxide and Methane Fluxes in Relation to Vegetation and Substrate](#). Poster Presented in TRIECA Annual Conference, Toronto, Canada, 25 March 2020.
8. Hasan, M.A., Halim, M.A. 2019. [Land sparing enhances bird diversity and abundance in eastern Bangladesh](#). Poster presented in Nepal Owl Festival, Jalapa, Khotang, Nepal, 1-2 February 2019.
7. Halim, M.A., Thomas, S.C. 2017. [Surface albedo in relation to disturbance and early stand dynamics in the boreal forest: Implications for climate models](#). Poster presented at The American Geophysical Union Fall Meeting, New Orleans, USA, 11-15 December, 2017.
6. Gale, N., Halim, M.A., Thomas, S.C. 2017. [Biochar and Ecosystem Restoration: Plant Ecophysiological Responses](#). Poster presented at The American Geophysical Union Fall Meeting, New Orleans, USA, 11-15 December, 2017.

5. Gale, N., Halim, M.A., Thomas, S.C. 2015. Charcoal soil amendments increase growth, physiological, and reproductive performance in early successional temperate pioneers. *Contributed Talk (COS 90-6), 100th meeting of Ecological Society of America, Baltimore, USA, August 9-14, 2015.*
4. Halim, M. A., Bieser, J., Thomas, S.C. 2014. Influences of land-use change on radiative forcing in city of Toronto during 2001-2011. *Poster presented at The 2nd Annual Ontario Climate Consortium Symposium, London, ON, Canada, May 14, 2014.*
3. Gale, N., Halim, M. A., Thomas, S.C. 2014. Restoring (urban) landscapes with pyrogenic carbon. *Poster presented at The 2nd Annual Ontario Climate Consortium Symposium, London, ON, Canada, May 14, 2014.*
2. Halim, M. A., Thomas, S.C. 2014. Quantitative tools for modeling coarse woody debris dynamics. *Poster presented at the UseR 2014 Conference at University of California, LA, USA, July 1-3, 2014.*
1. Halim, M.A., Deb, J.C., Sarker, S.K., and Chowdhury, M.Q. 2011. Allometric model for estimating stem biomass of Karach (*Pongamia pinnata*) in Ratargul Freshwater Swamp Forest, Bangladesh. *Paper presented at the First Bangladesh Forestry Congress, Bangladesh Forest Department, Ministry of Environment and Forest, Dhaka, Bangladesh. (Proceedings: 61-62p).*

Articles/Book Chapters Under Preparation/Review/Accepted

8. Halim, M.A., Rahman, H.M.T., Filewod, B., and Thomas, S.C. 2021. Scientific framework and institutional challenges of implementing climate-smart boreal forest management. Accepted in Book: Rahman, H.M.T and Pigford, A. (eds.). *Institutional Diversity and Environmental Sustainability (Edited Volume)*. Publisher: The CRC Press, Florida.
7. Halim, M.A., Bieser, J., Thomas, S.C. 2020. Stand age effects on soil carbon dioxide and methane fluxes in post-harvest and post-fire stands in a mixedwood boreal forest. *Global Change Biology*.
6. Halim, M.A., Shannon, B., Wagner-Riddle, C., Thomas, S.C. 2020. A low-cost Bowen ratio system to measure evapotranspiration using vertical profiling method. *Agricultural and Forest Meteorology*.
5. Halim, M.A., Gale, N.V., Thomas, S.C. 2020. Factors driving soil CO₂, CH₄, and water vapor fluxes from a semi-evergreen forest in Bangladesh. Accepted in Book: Mukul S.A. (ed.). *Managing Forests for Biodiversity, Carbon and Livelihoods in Bangladesh*. Publisher: Springer Nature (Berlin/New York).
4. Halim, M.A., Vantellingen, J., Gorgolewski, A.S., Rose, W., Drake, J., Margolis, L., and Thomas, S.C. 2020. Greenhouse gases and green roofs: CO₂ and CH₄ fluxes in relation to vegetation and substrate. *Building and Environment*.
3. Karim, M.R., Halim, M.A., Gale, N.V., and Thomas, S.C. 2020. Biochar enhances soil fertility in degraded managed systems in northeastern Bangladesh: short-term effects on physicochemical properties. *Australian Journal of Soil Research*.
2. Biswas, S., Halim, M.A., Gale, N., and Thomas, S.C. 2020. Biochar enhances seed germination and early growth of five agricultural crops. *Plant and Soil*.
1. Halim, M.A., Ali, S.T., Thomas, S.C. 2020. Growth response of some tropical leguminous and non-leguminous tree species biochar additions in a nursery trial. *Plant and Soil*.

Number of Citations



REVIEWER FOR JOURNAL ARTICLES

International Forestry Review

Biogenesis: Jurnal Ilmiah Biologi, Indonesia

Journal of Forestry Research

Journal of Applied Ecology

Air Quality, Atmosphere & Health

Journal of Tropical Forest Science

STUDENTS SUPERVISED

Undergraduate Projects:

- 19) Akib Hasan. 2019. *Land sparing enhances bird diversity and abundance in eastern Bangladesh*. Shahjalal University of Science & Technology, Bangladesh. (co-supervised as an external graduate faculty).
- 18) Md. Rezaul Karim. 2019. *Biochar enhances soil fertility in degraded managed systems in northeastern Bangladesh: short-term effects on physicochemical properties*. Shahjalal University of Science & Technology, Bangladesh. (co-supervised as an external graduate faculty).
- 17) Shonchita Biswas. 2019. *The effects of biochar of *Acacia auriculiformis* on seed germination and early growth performance of five agricultural crops*. Shahjalal University of Science & Technology, Bangladesh. (co-supervised as an external graduate faculty).
- 16) Syed Tuhin Ali. 2017. *Growth responses of tropical leguminous and non-leguminous tree species to biochar additions in a nursery trial*. Shahjalal University of Science & Technology, Bangladesh. (co-supervised as an external graduate faculty).
- 15) S. M. Lovely Akther. 2013. *Modelling spatial distribution of plant species richness in a biodiversity hotspot of Bangladesh*. Shahjalal University of Science & Technology, Bangladesh.
- 14) Md Haque. 2013. *Modelling the distribution of threatened plant species in the northeastern region of Bangladesh*. Shahjalal University of Science & Technology, Bangladesh.
- 13) Golam Mustafa Chowdhury. 2013. *Influence of canopy gap and height on the abundance and richness of plant species in old-growth and plantation forests of Lawachara National Park (LNP), Bangladesh*. Shahjalal University of Science & Technology, Bangladesh.
- 12) Murshida Jahan. 2013. *Plant species-area relationship of Lawachara National Park, Bangladesh*. Shahjalal University of Science & Technology, Bangladesh.
- 11) Sanjib Chowdhury. 2013. *Distribution of DBH and Height of three dominant tree species in plantation and old-growth forests of Lawachara National Park, Bangladesh*. Shahjalal University of Science & Technology,

Bangladesh.

- 10) Nabila Hasan. 2012. *Status and performance of soil seed bank of Techtona grandis at Khadim Nagar National Park*. Shahjalal University of Science & Technology, Bangladesh.
- 9) Merina Akhter. 2012. *Status and performance of soil seed bank of Xylia Dolabriformis at Khadim Nagar National Park*. Shahjalal University of Science & Technology, Bangladesh.
- 8) Farzana Akhter. 2012. *Status and performance of soil seed bank of Dipterocarpus turbinatus at Khadim Nagar National Park*. Shahjalal University of Science and Technology, Bangladesh.
- 7) Shukla Sinha. 2012. *Ethno-medicinal Knowledge of the Manipuri (Bishnupriya) Community in the Sylhet region of Bangladesh*. Shahjalal University of Science & Technology, Bangladesh.
- 6) Ami Akhtar. 2011. *Measuring public perception on global warming: a willingness-to-pay (WTP) approach from the bus passengers' of northeastern Bangladesh*. Shahjalal University of Science & Technology, Bangladesh.
- 5) Md. Kamrul Islam. 2011. *Deadwood in relation to national park management of Bangladesh*. Bangladesh. Shahjalal University of Science & Technology, Bangladesh.
- 4) Farzana Ferdous. 2011. *Likelihood of using different parameters of living trees as the indicators of naturalness at Khadimnagar National Park (KNP), Bangladesh*. Shahjalal University of Science & Technology, Bangladesh.
- 3) Mahedi Hassan. 2011. *Microhabitat in relation to national park management in Bangladesh*. Shahjalal University of Science & Technology, Bangladesh.
- 2) Rubel Hasan. 2011. *Estimation of some canopy structural parameters and light-environment using hemispherical photographs in a natural forest of Bangladesh*. Shahjalal University of Science & Technology, Bangladesh.
- 1) Salman Habib. 2011. *Relationship between folivory and some selected physical and chemical properties of leaves of some selected tree species at Ratargul Fresh Water Swamp Forest, Bangladesh*. Shahjalal University of Science & Technology, Bangladesh.

Graduate Projects:

- 11) Farhana Bintay Hye. 2019. *Can biochar increase crop performance in arsenic-contaminated tropical soils?* Shahjalal University of Science & Technology, Bangladesh. (co-supervised as an external graduate faculty).
- 10) Nabila Hasan. 2013. *Spatial distribution of plant species richness in a national park of Bangladesh*. Shahjalal University of Science & Technology, Bangladesh.
- 9) Farzana Akhter. 2013. *Relationship between forest canopy openness and canopy height with some selected soil chemical properties in a tropical forest of Bangladesh*. Shahjalal University of Science & Technology, Bangladesh.
- 8) Shukla Sinha. 2013. *Tree-habitat association in a tropical forest of Bangladesh*. Shahjalal University of Science & Technology, Bangladesh.
- 7) Debashish Roy. 2011. *Relationship between canopy openness and tree species diversity of an old-growth patch at Lawachara National Park, Bangladesh*. Shahjalal University of Science & Technology, Bangladesh.
- 6) Md Arif Ferdous. 2011. *Quantification of vertical strata and structural dominance in Rema-Kalenga Wildlife Sanctuary*. Shahjalal University of Science & Technology, Bangladesh.
- 5) Tutul Saha. 2011. *Relationship of undergrowth coverage with available understory light condition measured with hemispherical photographs in Lawachara National Park*. Shahjalal University of Science & Technology, Bangladesh.

- 4) Fokruddin Ali Ahmed. 2010. *Determining economically sustainable landuse practice in high Barind Tract: A case study from Porsha upazila*. Shahjalal University of Science & Technology, Bangladesh.
- 3) Asad Ali. 2010. *Quantitative structure of urban homegardens in Sylhet City Corporation*. Shahjalal University of Science & Technology, Bangladesh.
- 2) Emran Hossain. 2010. *Arsenic contamination in drinking water and impact on human health: A case from southeastern Bangladesh*. Shahjalal University of Science & Technology, Bangladesh.
- 1) Suma Dutta. 2010. *Assessment of naturalness in Khadim Nagar National Park*. Shahjalal University of Science & Technology, Bangladesh.

INVITED TALK

Tri-campus TA Day, University of Toronto *28 Aug 2019*

Location: Bahen Centre for Information Technology, University of Toronto

Topic: Your teaching persona as an international TA.

Guest lecture in Forests and Global Processes (M.Sc. course) *30 Sep 2016*

Location: ES 4001, Faculty of Forestry, University of Toronto.

Topic: Impacts of fire and logging on biogeophysical and chemical cycles in relation to global warming

SKILLS

Technical

Programming language: Proficient user of C (intermediate), Python (intermediate), and R (advanced).

Remote sensing, GIS, & image processing: ERDAS IMAGINE, ENVI, ArcGIS, QGIS, OpenCV, TensorFlow.

Electronics: Working experience in embedded electronics and designing cost-effective environmental monitoring systems (sensors, loggers, wired and wireless communication).

Organizational

Chief executive officer (CEO) *Jan 2020 - Present*

Description — Co-founder and CEO of [CredoSense Inc.](#) — a startup company specialized in designing cost-effective cutting-edge environmental sensor-datalogger systems.

Research-stream student & alumni representative *Sep 2018 - Aug 2019*

Description — An elected position at the Forestry Graduate Students' Association at the Faculty of Forestry, University of Toronto, Canada.

Assistant hall provost *Jan 2010 - Jun 2012*

Description — As a part of administrative duty I managed students' ($n = 750$) residence at the Shahjalal University of Science & Technology, Bangladesh.

Treasurer *Jan 2012 - Dec 2012*

Description — A voluntary selected-position at the Bangladesh Professional Forestry Students' Association (BPFSA), Shahjalal University of Science & Technology, Bangladesh.

*Executive member**Jan 2003 - Jan 2005*

Description — A selected position at the Shahjalal University Professional Photographers' Association (SUPA), Bangladesh.

Others

WHMIS: Workplace Hazardous Material Information System (WHMIS) Certified.

First aid: Certified in Wilderness & Remote First Aid CPR/AED (Level C) from the Canadian Red Cross.

Drivers license: Ontario G.

PROFESSIONAL MEMBERSHIPS

American Geophysical Union *2017 - Present*

Ontario Professional Foresters' Association (OPFA) *2014 - Present*

Bangladesh Professional Forestry Students' Association (BPFSA) *2001 - Present*

MEDIA COVERAGE OF RESEARCH

Crowd-funded research work on biochar profiled on [UofT News](#) *2016*

My Ph.D. research as a Connaught Fellow featured on the [Edge Magazine, University of Toronto](#) *2014*

REFERENCES

Dr. Sean Thomas Professor Graduate Dept of Forestry University of Toronto email: sc.thomas@utoronto.ca ph: +1 (416) 978 - 1044	Dr. Adam Martin Assistant Professor Dept of Physical & Environmental Sciences University of Toronto email: adam.martin@utoronto.ca ph: +1 (416) 978 - 7805
Dr. Jing Chen Professor Dept of Geography & Program in Planning University of Toronto email: jing.chen@utoronto.ca ph: 1+ (416) 978 - 7085	Dr. Michal Kasprzak Assistant Director Centre for Teaching Support & Innovation University of Toronto email: michal.kasprzak@utoronto.ca ph: +1 (416) 556 - 1515