Curriculum Vitae of **Md. Hafizur Rahman Bhuiyan**



Contact

Md. Hafizur Rahman Bhuiyan, PhD, ir.
Associate Professor
Department of Food Engineering and Technology
Bangladesh Agricultural University
Mymensingh-2202, Bangladesh
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Education

2019-2023: PhD in Bioresource Engineering
Integrated Food and Bioprocessing (IFB) laboratory
McGill University, Canada
Thesis: Mechanics of post-fry structural, thermal, and physicochemical changes in batter-coated food

2013-2015: Master of Science in Food Technology
IUPFOOD program (Interuniversity program)
Ghent University, Belgium & KU Leuven, Belgium
Result: Cum Laude
Merit position: Top 5%
Thesis: Beef quality determination by using a non-destructive hyperspectral laser technique

2010-2012: Master of Science in Food Engineering
Bangladesh Agricultural University, Bangladesh
CGPA: 3.914 in the scale of 4.00
Merit Position: 1st (FIRST)
Thesis: Development of functional beverage based on taste preference of men and women

2006-2010: Bachelor of Science in Food Engineering
Bangladesh Agricultural University, Bangladesh
CGPA: 3.890 in the scale of 4.00
Merit Position: 1st (FIRST)
Thesis: The construction and testing of a combined solar and mechanical cabinet dryer

Peer Reviewed Journal Publications

1. **Bhuiyan**, M. H. R., Yeasmen, N. & Ngadi, M.O. (2025). Effect of food hydrocolloids on 3D meat-analog printing and deep-fat-frying. *Food Hydrocolloids*, Volume 159. 110716 https://doi.org/10.1016/j.foodhyd.2024.110716

2. **Bhuiyan**, M. H. R., Yeasmen, N. & Orsat, V. (2025). Plant-proteins based 3D meat analog printing: A review. *Food Chemistry*, Volume 482. https://doi.org/10.1016/j.foodchem.2025.144157

3. **Bhuiyan**, M. H. R., Liu, N., Samaranayaka, A. & Ngadi, M.O. (2025). Characterization of pea composites and feasibility of heat-modulated meat analogs production. *Food Chemistry*, 463 (2). https://doi.org/10.1016/j.foodchem.2024.141282

4. **Bhuiyan**, M. H. R., Yeasmen, N. & Ngadi, M.O. (2025). Effects of the order of ingredients addition on meat analog formation. *Food and Bioprocess Technology*,18: 3044-3057. https://doi.org/10.1007/s11947-024-03650-3

5. **Bhuiyan**, M. H. R., Yeasmen, N. & Orsat, V. (2025). Assessment of food component distribution and structure by confocal laser scanning microscopy: A review. *Journal of Cereal Science, Volume 125*, 104256. https://doi.org/10.1016/j.jcs.2025.104256

6. Liberty, J. T., **Bhuiyan**, M. H. R., & Ngadi, M.O. (2025). Advancements in rapid and non-destructive approaches for quality assessment of fried foods and frying oil. *Journal of Food Composition and Analysis*, Volume 145,107839. https://doi.org/10.1016/j.jfca.2025.107839

7. Rahman, M.S., Shashi, S., Sultana, S, Yeasmen, N., **Bhuiyan**, M.H.R., Akter, F., Islam, M.A., & Alim, M.A. (2025). Effect of preservatives and storage conditions on the minimally processed jackfruit (*Artocarpus heterophyllus* Lam.) bulbs, *International Journal of Food Science and Technology*, 2025;, vvaf054, https://doi.org/10.1093/ijfood/vvaf054

8. **Bhuiyan**, M. H. R., Yeasmen, N. & Ngadi, M.O. (2024). Impact of hydrocolloids on 3D meat analog printing and cooking. *Food Structure*, 42. https://doi.org/10.1016/j.foostr.2024.100396

9. **Bhuiyan**, M. H. R & Ngadi, M.O. (2024). Thermomechanical transitions of meat-analog based fried foods batter coating. *Food Chemistry*, 447, https://doi.org/10.1016/j.foodchem.2024.138953

10. **Bhuiyan**, M. H. R & Ngadi, M. O. (2024). Air-frying of meat analog based parfried frozen batter coated foods. *Journal of Food Engineering*, Volume *367*, 111844, https://doi.org/10.1016/j.jfoodeng.2023.111844

11. **Bhuiyan**, M. H. R & Ngadi, M.O. (2024). Application of batter coating for modulating oil, texture and structure of fried foods: A review. *Food Chemistry*, Volume 453, 139655, (FOCH_139655). https://doi.org/10.1016/j.foodchem.2024.139655

12. **Bhuiyan**, M. H. R & Ngadi, M.O. (2024). Impact of batter coating, freezing and storage on meat-analog based parfried foods mass, structure and physicochemical changes. *Food and Bioprocess Technology*, https://doi.org/10.1007/s11947-024-03366-4

13. **Bhuiyan**, M. H. R & Ngadi, M.O. (2024). Post-fry oil distribution in batter coated fried foods. *LWT-Food Science and Technology*, Volume 194, https://doi.org/10.1016/j.lwt.2024.115819

14. **Bhuiyan**, M. H. R & Ngadi, M.O. (2024). Thermomechanical and physicochemical evolution of meat-analog based fried foods. *International Journal of Food Science & Technology*, https://doi.org/10.1111/ijfs.17245

15. **Bhuiyan**, M. H. R., Yeasmen, N. & Ngadi, M.O. (2024). Restructuring plant-derived composites towards the production of meat-analog based coated fried food. *Food Chemistry*, Volume 443, https://doi.org/10.1016/j.foodchem.2024.138482

16. **Bhuiyan**, M. H. R & Ngadi, M.O. (2024). Multifractal characterization of fried foods pore microstructure. *Food Bioscience*. https://doi.org/10.1016/j.fbio.2024.104518

17. **Bhuiyan**, M. H. R & Ngadi, M.O. (2024). Impact of batter solid-water ratio and frying time on meat-analog based coated fried food. *LWT-Food Science and Technology*, Volume 191, 115647, https://doi.org/10.1016/j.lwt.2023.115647

18. **Bhuiyan**, M. H. R., Yeasmen, N. & Ngadi, M.O. (2024). Multifractal analysis of meat-analog based coated fried foods texture profile. *Food Structure*, Vol. 39, 100363, https://doi.org/10.1016/j.foostr.2023.100363

19. **Bhuiyan**, M. H. R., Liu, N., Samaranayaka, A. & Ngadi, M.O. (2024). Prediction of pea composites physicochemical traits and techno-functionalities using FTIR spectroscopy. *LWT-Food Science and Technology*, Volume 208, https://doi.org/10.1016/j.lwt.2024.116667

20. Liberty, J. T., **Bhuiyan**, M. H. R., & Ngadi, M.O. (2024). Influence of hydrocolloids and flours on acoustic-mechanical and microstructural properties of battered deep-fat fried meat. *International Journal of Food Science & Technology*. http://doi.org/10.1111/ijfs.17301

21. Liberty, J. T., **Bhuiyan**, M. H. R., & Ngadi, M.O. (2024). Unravelling the nexus between structure, texture, and acoustic traits of fried chicken nugget. *International Journal of Food Science & Technology*. http://doi.org/10.1111/ijfs.17447

22. Liberty, J. T., **Bhuiyan**, M. H. R., & Ngadi, M.O. (2024). Assessing textural changes of breaded deep-fat fried chicken nuggets during post-frying holdings under infrared heat-lamp using acoustic-mechanical techniques. *International Journal of Food Science & Technology*. https://doi.org/10.1111/ijfs.17502

23. **Bhuiyan**, M. H. R., & Ngadi, M.O. (2023). Electromagnetic, air and fat frying of plant protein-based batter-coated foods. *Foods*, 12 (21), 3953. https://doi.org/10.3390/foods12213953

24. **Bhuiyan**, M. H. R & Ngadi, M. (2023). SR-FTIR microspectroscopy: Emerging 2D structural-chemical analytical technique for food quality and safety monitoring. *Food Bioscience*, Volume 56, 103392, https://doi.org/10.1016/j.fbio.2023.103392

25. Shivani, M., **Bhuiyan**, M. H. R & Ngadi, M. (2023). Challenges and prospects of plant-proteins-based 3D printing. *Foods*,12 (24), 4490. https://doi.org/10.3390/foods12244490

26. Yeasmen, N., Sharma, N., **Bhuiyan**, M.H.R. & Orsat, V. (2023): Ultrasound as a techno-functional modifier in food frying and bioactive compounds extraction. *Food Reviews International*, https://doi.org/10.1080/87559129.2023.2204156

27. Akter, F., Islam, M. A., Yeasmen, N., **Bhuiyan**, M. H. R., Aziz, M.G., Alim, M.A. (2023). Development of protein rich biscuit utilizing Lablab bean seed: a sustainable management of underutilized plant protein in Bangladesh. *International Journal of Food Science and Technology*. https://doi.org/10.1111/ijfs.16405

28. **Bhuiyan**, M.H.R**.,** Hossain, M.A., & Yeasmen, N. (2022). Local-traditional foods of Bangladesh: A treasure to be preserved. *International Journal of Gastronomy and Food Science. Volume 30, 100602.* https://doi.org/10.1016/j.ijgfs.2022.100602

29. Kadir, N., Yeasmen, N., **Bhuiyan**, M.H.R., Khan, M.J., Iqbal, A. (2022). Osmotic and convective hot air drying of sweet gourd. *Food Science and Biotechnology.* https://doi.org/10.1007/s10068-022-01193-x

30. Yeasmen, N., **Bhuiyan**, M.H.R. & Orsat, V. (2021). Unravelling scientific research towards the green extraction of phenolic compounds from leaves: a bibliometric analysis. *International Journal of Food Science and Technology*, 4893–4906. https://doi.org/10.1111/ijfs.15215

31. Rokib, S. R., Yeasmen, N., **Bhuiyan**, M.H.R., Tasmim, T., Aziz, M.G., Alim, M.A., Islam, M.N. (2021). Hyphenated study on drying kinetics and ascorbic acid degradation of guava (*Psidium guajava* L.) fruit. *Journal of Food Process Engineering*, 44 (5), e13665. https://doi.org/10.1111/jfpe.13665

32. De Looverbosch, T.V., **Bhuiyan**, M.H.R., Verboven, P., Dierick, M., Loo, D.V., Beenbouwer, J.D., Sijbers, J., Nicolaï, B. (2020). Nondestructive internal quality inspection of pear fruit by X-ray CT using machine learning. *Food Control*, 113. https://doi.org/10.1016/j.foodcont.2020.107170

Seminar and Conference Presentations

1. Yeasmen, N., **Bhuiyan**, M.H.R., Gariepy, Y., Taherian, A.R., Dumont, M., Ramaswamy, H. & Orsat, V. (2025). Upcycling sugar beet waste: Natural pigment extraction, characterization, encapsulation, and stability assessment. *American Society of Agricultural and Biological Engineers (ASABE) annual international meeting*, July 2025, Canada.

2. **Bhuiyan**, M. H. R, Yeasmen, N. & Ngadi, M. (2024). Restructuring plant-derived composites towards the production of meat-analog based coated fried food. *Canadian Society for Bioengineering (CSBE) annual conference*, July 2024, Canada.

3. **Bhuiyan**, M. H. R & Ngadi, M. (2023). Thermomechanical transitions of fried food batter coating. *American Society of Agricultural and Biological Engineers (ASABE) annual international meeting*, July 2023, USA.

4. **Bhuiyan**, M. H. R & Ngadi, M. (2023). Air-frying of meat-analog based parfried-frozen batter coated foods. *Canadian Society for Bioengineering (CSBE) annual conference*, July 2023, Canada.

5. **Bhuiyan**, M. H. R & Ngadi, M. (2022). X-ray microtomography and multifractal analysis of internal pore structures of fried coated food product. *Canadian Society for Bioengineering (CSBE) annual conference*, July 2022, Canada.

6. **Bhuiyan**, M. H. R & Ngadi, M. (2021). Post-fry surface de-oiling enhance oil-reduction functionality of tempura batter coating. *American Society of Agricultural and Biological Engineers (ASABE) annual international meeting*, July 2021, USA.

7. **Bhuiyan**, M. H. R & Ngadi, M. (2021). Impact of batters' solid-water ratio and frying time on post-fry evolution of physicochemical properties of coated food. *Northeast Agricultural and Biological Engineering Conference (NABEC)*, July 2021, Canada.

8. **Bhuiyan**, M. H. R & Ngadi, M. (2020). Textural and thermal evolution during post-fry holding of batter coated foods. *American Society of Agricultural and Biological Engineers (ASABE) annual international meeting*, July 2020, USA.

9. **Bhuiyan**, M. H. R. (2021). Batter coating: A way to produce healthier fried food. McGill University, Canada.

10. **Bhuiyan**, M. H. R. (2020). Confocal Laser Scanning Microscopy: A way to see the unseen. McGill university, Canada.

11. **Bhuiyan**, M. H. R. (2020). Infrared thermography: A technique to see temperature. McGill University, Canada.

12. **Bhuiyan**, M. H. R. (2019). SR-FTIR microspectroscopy: A potential food analytical technique. McGill University, Canada

University Faculty Experience

2016-Cont.: Faculty member

Department of Food Engineering and Technology

Bangladesh Agricultural University, Bangladesh

Website: https://ftri.bau.edu.bd/teachers/FTRI1014

2012-2016: Faculty member

Department of Food Engineering and Technology

State University of Bangladesh, Bangladesh.

Course Taught at University

- Advanced Food Engineering (Graduate course, McGill University, Canada)
- Food Process Engineering (Undergraduate course, McGill University, Canada)
- Novel Food Processing Techniques (Graduate course, Bangladesh Agricultural University)
- Food Process Design (Undergraduate course, Bangladesh Agricultural University)
- Unit Operation in Food Industry (Undergraduate course, Bangladesh Agricultural University)
- Engineering Properties of Food Materials (Undergraduate course, Bangladesh Agricultural University)
- Food Packaging and Machinery (Undergraduate course, Bangladesh Agricultural University)
- Food Waste Management (undergraduate course, Bangladesh Agricultural University)
- Fruits and Vegetables Processing (Graduate course, State University of Bangladesh)
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University Student Co-/Supervision

- Graduate (national: 6, international: 2)
- Undergraduate (national: 7, international: 2)

University Research Project Investigation and Funding

- Co-research investigator (Co-RI), Use of spectroscopic tools in compositional and functionality testing of pea flours and proteins, National Research Council Canada (NRC), Canada. (fund: 20000 CAD)
- Co-principal investigator (Co-PI), Process parameters optimization of the mozzarella cheese production and by-products whey processing, Ministry of Education, Bangladesh. (fund:750000 BDT)
- Principal investigator (PI), Development of functional beverage, Ministry of Science Information and Communication Technology, Bangladesh. (fund: 54000 BDT)
- Principal investigator (PI), Ginger based food product development, State University of Bangladesh, Bangladesh. (fund: 15000 BDT)
- Principal investigator (PI), Fabrication of a combined solar and mechanical cabinet dryer, Bangladesh Agricultural University, Bangladesh. (fund: 30000 BDT)
- Co-principal investigator (Co-PI), Mushroom based food product development, Ministry of Science, Bangladesh. (fund: 250000 BDT)

University Curricula Development Experience

- Undergraduate internship program, Bangladesh Agricultural university, Bangladesh.
- Accreditation project report preparation, Bangladesh Agricultural university, Bangladesh.
- Undergraduate course schedule preparation, State University of Bangladesh, Bangladesh.

University Administrative Experience

- Head in Charge, Department of Food Engineering & Technology, Bangladesh Agricultural university, Bangladesh.
- Co-administrator, Shaheed Jamal Hossain Hall (students' dorm), Bangladesh Agricultural university, Bangladesh.
- Co-administrator, Isha Khan Hall (students' dorm), Bangladesh Agricultural university, Bangladesh.

- Co-administrator, Shaheed Nazmul Ahsan Hall (students' dorm), Bangladesh Agricultural university.
- Assistant manager, BAU female sports team, Bangladesh Agricultural university, Bangladesh.
- Member Secretary, Feast organizing sub-committee, Shaheed Jamal Hossain Hall, Bangladesh Agricultural university, Bangladesh.

University quality enhancement experience

- Member, Undergraduate project evolution committee, Department of Nutrition and Food Technology, Jashore University of Science and Technology, Bangladesh.
- Member, 2nd year final exam-question moderation committee, Department of Food Engineering & Technology, Jashore University of Science and Technology, Bangladesh.

University Extension Experience

- Member, Students industrial attachment team, Bangladesh Agricultural University, Bangladesh
- Member, Nutrition club, Bangladesh Agricultural University, Bangladesh
- Member, Organizing committee, Food industry delegation team, Bangladesh Agricultural University
- Member, Organizing committee, Students "extension field trip" Bangladesh Agricultural University

Scientific Journal Reviewed

Publisher	Journal	Number of Article
Elsevier	*Food Chemistry*	25
Elsevier	*Food Hydrocolloids*	23
Elsevier	*Journal of Food Engineering*	10
Elsevier	*Food Research International*	4
Elsevier	*LWT-Food Science and Technology*	3
Elsevier	*Food Bioscience*	4
Elsevier	Cleaner Environmental Systems	1
Elsevier	Meat Science	2
Elsevier	Algal Research	1
ACS Publications	*Journal of Agricultural and Food Chemistry*	1
Nature	*Scientific Reports*	3
Springer-Nature	*Journal of Food Measurement and Characterization*	6
Springer-Nature	*Discover Food*	3
Springer-Nature	*European Food Research and Technology*	2
Springer-Nature	*Journal of Polymers and the Environment*	1
Springer-Nature	*Food Biophysics*	1
Springer-Nature	*Biomass Conversion and Biorefinery*	2
Springer-Nature	*Food and Bioprocess Technology*	2
Taylor & Francis	*Food Reviews International*	1
Wiley	*Crop Science*	1
Wiley	*Starch*	3
Wiley	*Journal of Food Processing and Preservation*	4
Taylor & Francis	*Cogent Food & Agriculture*	1
Taylor & Francis	*Journal of Sustainable Forestry*	1
Taylor & Francis	*International Journal of Food Properties*	1

Research Experience

- 2024-2025: Post-doctoral Fellow, Laboratory of Process and Quality, McGill University, Canada
- 2023-2023: Post-doctoral Associate, Integrated Food and Bioprocessing Lab., McGill University, Canada
- 2019-2023: Research assistant, Department of Bioresource Engineering, McGill University, Canada
- 2021-2021: Research assistant, Swisscontact, Switzerland
- 2016-2018: Research intern, Department of Biosystems, KU Leuven, Belgium
- 2014-2015: Graduate assistant, Department of Biosystems, KU Leuven, Belgium
- 2010-2012: Graduate assistant, Bangladesh Agricultural University, Bangladesh
- 2010-2010: Research intern, AKIJ Food & Beverage Ltd., Savar, Bangladesh
- 2010-2010: Research intern, Igloo Ice-cream Ltd., Dhaka, Bangladesh
- 2009-2010: Research assistant, Bangladesh Agricultural University, Bangladesh

Scientific Training Participation

1. Confocal laser scanning microscopy, McGill university, Canada
2. X-ray microtomography, McGill university, Canada
3. Workplace hazardous materials information system, McGill University, Canada
4. Image editing, KU Leuven, Belgium
5. Writing scholarship and grant proposal, KU Leuven, Belgium
6. Academic English writing course, Leuven Language Institute, KU Leuven, Belgium
7. Scientific report writing, Graduate Training Institute, Bangladesh Agricultural University, Bangladesh
8. Summer school, Faculty of Bioscience Engineering, Ghent University, Belgium
9. Data analysis, Graduate Training Institute, Bangladesh Agricultural University, Bangladesh

Scientific Lecture Participation

1. Sensory and biochemical factors determining flavor liking and off-flavor perception in mandarins, October 2017, KU Leuven, Belgium
2. Lowering temperature after harvest: not only a delay of fruit ripening, September 2017, Belgium
3. Assessing mango fruit quality & quantity in orchard, July 2017, KU Leuven, Belgium
4. Factors affecting commercial adoption of new postharvest technologies, March 2017, Belgium
5. Postharvest research: the view from the shaky islands, December 2016, KU Leuven, Belgium
6. Obesity as environmental issue, April 2014, Public Health & P. Care, KU Leuven, Belgium
7. Food adulteration and its remedy, October 2015, State University of Bangladesh, Bangladesh
8. The world food preservation center: a global partnership to reduce food waste, 2014, KU Leuven, Belgium
9. Crop and soil monitoring for precision agriculture, October 2014, KU Leuven, Belgium
10. Antioxidant extraction from Jackfruit seed, 2010, Bangladesh Agricultural University

Competitive Scholarship/Fellowship/Award Received

1. McGill Graduate Excellence Award, 2019-2023, McGill University, Canada
2. IDB-McGill PhD Scholarship, 2019-2022, McGill University, Canada
3. McGill DFW award, 2019-2022, McGill University, Canada
4. Natural Science and Engineering Research Council of Canada student assistantship, 2019-2023, Canada
5. GREAT Conference Travel Award, 2022, McGill University, Canada
6. VLIR-UOS International Master Scholarship, 2013-2015, Ghent University, Belgium
7. Vandemoortele Healthy Food Award, 2015, Ghent University, Belgium
8. Dr. Nazmul Haque Memorial Trust Gold Medal-2014, Bangladesh Agricultural University, Bangladesh
9. Prof. Dr. Md. Shahidul Hoque Gold Medal-2010, Bangladesh Agricultural University, Bangladesh
10. University Prize, 2010, Bangladesh Agricultural University, Bangladesh
11. NSICT fellowship-2011, Ministry of Science Information and Communication Technology, Bangladesh
12. German Academic Exchange Service Scholarship (DAAD) offered for PhD (2019-2023), Germany
13. Erasmus Mundus SEFOTECHNut Scholarship offered for MS (2013-2015), KU Leuven, Belgium
14. Deakin University PRS scholarship offered for PhD (2018-2022), Australia

Professional Membership and Affiliation

1. Member, American Society of Agricultural and Biological Engineers (ASABE), USA.
2. Member, Institute of Food Technologist (IFT), USA.
3. Member, Canadian Society for Bioengineering (CSBE), Canada.
4. Member, Northeast Agricultural and Biological Engineers (NABEC), Canada.
5. Member, Post Graduate Student Society (PGSS), McGill University, Canada.
6. Alumni, IUPFOOD, Ghent University and KU Leuven, Belgium.
7. Associate Editor, Scholars Journal of Agriculture and Veterinary Science, India.
8. Member, The Institution of Engineers, Bangladesh (IEB), Bangladesh.
9. Member, Bangladesh Agricultural University Teacher's Association (BAUTA), Bangladesh.
10. Member, Democratic Teacher's Forum, Bangladesh Agricultural University, Bangladesh.

Co-curricular Activities and Social Involvement

1. Councilor, Department of Bioresource Engineering, McGill University, Canada.
2. Member, Scholarship and student aid advisory committee, McGill University, Canada.
3. Member, "Gold key" award committee, McGill University, Canada.
4. Member, Bangladeshi student organization at MacDonald campus, McGill University, Canada.
5. Member, Organizing team of Christmas Party of BREE department, McGill University, Canada.
6. Member, BADHAN (voluntary blood donating org.), Bangladesh Agricultural University, Bangladesh.
7. Instructor, Debating Society, Bangladesh Agricultural University, Bangladesh.
8. Member, Disaster Management Force, Bangladesh Agricultural University, Bangladesh.