



Mr. Hewa Kattuge Sameera Madusanka

B.Sc. AgTech & Mgt, PGDM, MSTAT, MSc, PhD (reading)

M. I. Biol (SL), MIASSL, MSLIAG, M. IEPSL

Address: 21/33/8, Thissapura West, Uhana, Ampara

Contact: +94 77 771 2768

Email: hksm87@gmail.com / hksma@ou.ac.lk

1 Personal Details

Name with initials: H. K. S. Madusanka
Date of Birth: 26/11/1987
National Identity Card No: 873311533V
Civil Status: Married
ORCID: <https://orcid.org/0009-0003-7860-3119>
ResearchGate: https://www.researchgate.net/profile/H-K-S-Madusanka?ev=hdr_xprf
LinkedIn: <https://www.linkedin.com/in/sameera-madusanka-h-k-695436261/>

2 Professional Summary

I am a highly motivated, interdisciplinary academic uniquely positioned for the Lecturer role in Agriculture. My academic foundation, built upon a **B.Sc. in Agricultural Technology and Management**, has been rigorously expanded through multiple postgraduate qualifications, including an **M.Sc. in Environmental Science** and a recently completed **Master of Statistics**. Currently, my **Ph.D. in Agricultural Nanotechnology** is nearing completion. This extensive educational background enables me to approach agricultural sciences from a deeply analytical, technologically advanced, and environmentally conscious perspective.

My dedication to the academic field is actively demonstrated through my robust portfolio of university-level teaching and research. Building upon my foundational experience as a Demonstrator and Research Assistant, I currently serve as a **Visiting Lecturer across multiple institutions**, including the University of Sri Jayewardenepura, Horizon Campus, Aquinas College of Higher Studies, and the Open University of Sri Lanka. I am driven by an enduring desire to research, learn, and continuously push the boundaries of not just agricultural engineering, but a vast, interdisciplinary landscape that encompasses environmental sustainability, nanotechnology, and applied sciences. For me, teaching is far more than a profession; it is my utmost happiness—a profound opportunity to illuminate the minds of others and empower the next generation to shine.

3 Educational Qualifications

Bachelor of Science: Agricultural Technology and Management, University of Peradeniya (GPA 3.17, awarded date 04/11/2011)

Postgraduate Diploma: Management, Rajarata University of Sri Lanka (GPA 2.63, awarded date 06/09/2017)

Master of Science: Environmental Science, The Open University of Sri Lanka (GPA 3.15, awarded date 01/02/2021)

Masters: Statistics, University of Kelaniya (GPA 3.69, Result valid from 01/10/2025)

Doctor of Philosophy: Agricultural Nanotechnology, The Open University of Sri Lanka (Reading, ongoing)

3.1 Certificate / Diploma Level Qualifications

Diploma: English Language, National Youth Services Council (awarded date 31/12/2006)

Certificate: Computer Graphics and Animations, Information Technology Center, University of Peradeniya (awarded date 10/02/2010)

Certificate: Computer Hardware and System Administration, Information Technology Center, University of Peradeniya (awarded date 04/07/2010)

Certificate: Operation and Maintenance of Four-Wheel Tractors, Farm Mechanization Training Centre, Anuradhapura (awarded date 27/05/2011)

Certificate: Service Marketing, Sri Lanka Institute of Marketing (awarded date 2020)

4 Working Experience

Demonstrator: Department of Agriculture Engineering, University of Peradeniya (04/12/2011 to 25/04/2012)

Assistant Manager – Field Service: David Pieris Motor Company (Pvt) Ltd. (08/05/2012 to 31/03/2023)

Research Assistant: Department of Agricultural and Plantation Engineering, Faculty of Engineering Technology, OUSL (07/01/2023 to 31/12/2025)

Visiting Lecturer: University of Sri Jayewardenepura, Faculty of Urban and Aquatic Bioresources (14/07/2025 to 26/10/2025)

Visiting Lecturer: Aquinas College of Higher Studies, Faculty of Agriculture (24/06/2025 to 16/05/2026)

Visiting Lecturer: Department of Agricultural and Plantation Engineering, Faculty of Engineering Technology, OUSL (07/06/2026 to Present)

Visiting Lecturer: Horizon Campus, Faculty of Technology (28/04/2026 to Present)

5 Extra-Curricular Activities

1st Place in All island dance competition (Provincial): Ministry of Education (28/10/2001)

1st Place in Dancing Competition: The Mahapola Board of Management (02/09/2002)

3rd Place in Faculty day sport meet and cultural festival: Faculty of Agriculture, University of Peradeniya (November 2009)

6 Other Special Achievements

“Rohana Wickremasinghe” memorial award for the best final year research presentation: Department of Agricultural Engineering, University of Peradeniya (2011)

Winner of 3MT (Three Minute Thesis) competition IRC OUSL 2025: IRC OUSL 2025, Open University of Sri Lanka (OUSL) (2025)

7 Patent Applications

- Madusanka, H. K. S. (2024). **A Pressurized Air-Agitated Nanoparticle Spray Device for Agricultural Foliar Application.** Patent application submitted to the National Intellectual Property Office, Sri Lanka. (Application Number: 23834)
- Madusanka, H. K. S. (2025). **Haptic Stimulation Device for Diabetic Neuropathy and Varicose Veins.** Patent application submitted to the National Intellectual Property Office, Sri Lanka. (Application Number: 23835)

8 Publications

8.1 Books

- Hewa Kattuge, S. M. (2025). **Farm Machinery & Mechanization: An Engineering Logic**. Zenodo. <https://doi.org/10.5281/zenodo.17571252> ISBN 978-624-92891-0-9.
- Hewa Kattuge, S. M. (2025). **Statistics Jumpstart for Agricultural Research**. Zenodo. <https://doi.org/10.5281/zenodo.17697097> ISBN 978-624-92891-1-6.
- Hewa Kattuge, S. M. (2025). **Green Clinic**. Zenodo. <https://doi.org/10.5281/zenodo.17786929> ISBN 978-624-92891-2-3.
- Hewa Kattuge, S. M. (2026). **Sri Lanka's Garden Snakes: A Simple Guide**. Zenodo. <https://doi.org/10.5281/zenodo.19199900> ISBN 978-624-92891-3-0.

8.2 Book Chapter

- Hewa Kattuge, S. M. (2026). **Multifunctional Biogenic Metallic and Metal-Oxide Nanoparticles: A Comprehensive Review of Synthesis, Characterization, and Their Role in a Sustainable Bioeconomy**. Submitted for review to *IOBSL Thematic Publication 2026*.

8.3 Journals

- Madusanka, H.K.S., Aruggoda, A.G.B., Chathurika, J.A.S., & Weerakoon, S.R. (2024). **Effect of seed priming of green synthesized iron oxide magnetic nanoparticles using *Salvinia molesta* plant extract on seed germination and seedlings growth of tomato (*Solanum lycopersicum*)**. *International Journal of Advance Research and Innovative Ideas in Education*, 9(6), 2669–2686.
- Madusanka, H.K.S., Aruggoda, A.G.B., Chathurika, J.A.S., & Weerakoon, S.R. (2024). **Evaluating the impact of seed nano-priming with green-synthesized copper oxide nanoparticles using *Mimosa pigra* leaf extract on the germination and seedling growth of tomato (*Solanum lycopersicum*)**. *American Journal of Bioscience and Bioinformatics*, 3(1), 42–55. doi:10.54536/ajbb.v3i1.3959
- Madusanka, H.K.S., Aruggoda, A.G.B., Chathurika, J.A.S., & Weerakoon, S.R. (2024). **Evaluation of the antifungal effect of green synthesized metal oxide nanoparticles against plant pathogenic *Rhizoctonia* species**. *American Journal of Life Science and Innovation*, 3(2), 63–72. doi:10.54536/ajlsi.v3i2.4281
- Madusanka, H.K.S., Aruggoda, A.G.B., Chathurika, J.A.S., & Weerakoon, S.R. (2025). **Effect of *Mimosa pigra* conjugated zinc nanoparticles on seed germination and seedling growth of *Solanum lycopersicum***. *Current Science*, 129(3), 213–222. doi:10.18520/cs/v129/i3/213-222 [Impact Factor: 0.9, Q2/Q3]

Accepted

- Madusanka, H.K.S., Aruggoda, A.G.B., Chathurika, J.A.S., & Weerakoon, S.R. (2026). **Influence of thermal treatment on the physicochemical, biological, and ecotoxicological properties of plant-mediated metal and metal-oxide nanoparticles**. *Scientific Reports* (Accepted). [Impact Factor: 4.9, Q1]

Under review

- Madusanka, H.K.S., Aruggoda, A.G.B., Chathurika, J.A.S., & Weerakoon, S.R. (2025). **Evaluation of the antifungal effect of green synthesized metal oxide nanoparticles against plant pathogenic *Fusarium* species**. Manuscript submitted for review to the *Water SA*.

8.4 Conference Proceedings

- Madusanka, H. K. S., Aruggoda, A. G. B., Chathurika, J. A. S., & Weerakoon, S. R. (2024). **Antifungal effect of green synthesized zinc oxide nanoparticles against plant pathogens *Fusarium* spp.** Presented at RESCON 2024.

- Madusanka, H. K. S., Aruggoda, A. G. B., Chathurika, J. A. S., & Weerakoon, S. R. (2024). **Evaluation of the antifungal effect of green synthesized copper oxide nanoparticles against *Fusarium* species.** Presented at SLAAS Scientific Sessions 2024.
- Madusanka, H. K. S., Aruggoda, A. G. B., Chathurika, J. A. S., & Weerakoon, S. R. (2024). **Effect of green synthesized zinc oxide nanoparticles using *Mimosa pigra* leaf extract on root growth of tomato (*Solanum lycopersicum*) seedlings.** In *Proceedings of the 6th National Symposium on Agriculture (NSA 2024)*: “Resilient Agriculture – A Tool for Reviving the Sri Lankan Economy” (p. 3).
- Madusanka, H. K. S., Aruggoda, A. G. B., Chathurika, J. A. S., & Weerakoon, S. R. (2024). **Effect of green synthesized iron oxide nanoparticles on seed germination of tomato (*Solanum lycopersicum*).** In *OUSL Research Repository*. OUSL. Retrieved from http://repository.ou.ac.lk/bitstream/handle/94ousl/2568/IRC-OUSL2024_122_Madusanka.pdf?sequence=1&isAllowed=y
- Madusanka, H. K. S., Aruggoda, A. G. B., Chathurika, J. A. S., & Weerakoon, S. R. (2025). **Green-synthesized silver nanoparticles: Impact on tomato seed germination and early seedling growth.** Presented at the *iPURSE 2025*, University of Peradeniya, Sri Lanka. <https://doi.org/10.63967/AULT4918> p. 253.
- Madusanka, H. K. S., Aruggoda, A. G. B., Chathurika, J. A. S., & Weerakoon, S. R. (2025). **Correlation analysis of germination percentage and early growth parameters of tomato (*Solanum lycopersicum*) under seed nano-priming with green-synthesized CuO nanoparticles.** *IRC-OUSL 2025 – International Research Conference*, Open University of Sri Lanka.
- Amarapathi, A. M. S. S., Madusanka, H. K. S., & Aruggoda, A. G. B. (2025). **Green synthesis of nickel nanoparticles from *Panicum maximum* leaf extract, characterization, and its effect on early seedling growth *in vitro*.** In *Proceedings of the International Conference on Innovation and Emerging Technologies (ICIET 2025)* (p. 237). <https://iciet.sjp.ac.lk/conference-proceedings/>
- Madusanka, H. K. S., Aruggoda, A. G. B., Chathurika, J. A. S., & Weerakoon, S. R. (2025). **Green synthesis of zinc nanoparticles using *Mimosa pigra* for photocatalytic methylene blue degradation.** In *Proceedings of the 81st Annual Sessions of the Sri Lanka Association for the Advancement of Science (SLAAS) 2025 - Part I*. University of Moratuwa.
- Amarapathi, A. M. S. S., Madusanka, H. K. S., & Aruggoda, A. G. B. (2025). **Green synthesis and characterization of Nickel Oxide nanoparticles using *Tithonia diversifolia* leaf extracts and their potential applications in seed germination enhancement.** In *Proceedings of the 81st Annual Sessions of the Sri Lanka Association for the Advancement of Science (SLAAS) 2025 - Part I*. University of Moratuwa.

Accepted to Present

- Madusanka, H. K. S., & Aruggoda, A. G. B. (2026). **ShinyStat: An integrated web-based platform for one-way ANOVA and publication-ready XRD and UV–Vis visualization.** In *Proceedings of the ISAE 2026*.
- Jayasuriya, J. A. M. S., H. K. S., Aruggoda, A. G. B., Chathurika, J. A. S., & Weerakoon, S. R. (2026). **Synergistic effect of solar irradiation and phytochemical corona on the photocatalytic degradation of methylene blue using green-synthesized copper nanoparticles.** In *Proceedings of the iPURSE 2026*.

Submitted for review

- Silva, S. I. U. , Madusanka, H. K. S., & Aruggoda, A. G. B. (2026). **Phytochemical-assisted green synthesis of silver nanoparticles with potent antibacterial activity against *Escherichia coli*.** In *Proceedings of the IRC-OUSL 2026*.
- Madusanka, H. K. S., & Aruggoda, A. G. B. (2026). **Hybrid navigation framework for academic campuses: Integrating manually curated mesh networks with serverless GeoJSON architecture.** In *Proceedings of the IRC-OUSL 2026*.

9 Academic Service & Peer Review

- **Reviewer**, *Asian Journal of Biology* (2024).
- Verified Peer Reviewer Record available via Web of Science Researcher Profile.

10 Memberships

- Young Scientists Forum (YSF)— Annual Membership — (Membership No: YSM/AM/23/37)
- Sri Lanka Association for the Advancement of Science (SLAAS) — Membership (Membership No: 12096/B)
- Institute of Biology, Sri Lanka (IOBSL) — Corporate Membership (Membership No: 2026/963)
- Institute of Applied Statistics, Sri Lanka (IASSL) — Life Membership — (Membership No: LM2604611)
- Sri Lanka Institute of Agriculture (SLIAg) — Professional (Lifetime) — (Membership No: MSLIAg/381)
- Institute of Environmental Professionals Sri Lanka (IEPSL) — Corporate Members — (Membership No: M01326)
- Sri Lankan Society for Microbiology (SSM) — Annual Members — (Membership No: SSM 496)

Non-Related Referees

Prof. (Mrs.) Shyma R. Weerakoon
Director
Research Unit
The Open University of Sri Lanka
Nawala, Nugegoda
E-mail : srwee@ou.ac.lk
Contact No: +94 70 333 3922

Prof. (Mrs.) Buddhika Aruggoda
Dept. of Ag. & Plantation Engineering
Faculty of Engineering Technology
The Open University of Sri Lanka
Nawala, Nugegoda
E-mail : agbar@ou.ac.lk
Contact No: +94 71 899 8920



Signature of Applicant

August 5, 2026
Date