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QUALIFICATIONS AND MEMBERSHIPS

- 2014 **Graduate Certificate in Tertiary Education (GCTE)**, Victoria University, Australia
- 2012 **PhD (Water & Wastewater Engineering)**, Deakin University, Australia
- 2006 **MSc (Construction Project Management)**, University of Moratuwa, Sri Lanka
- 1996 **BSc (Civil Engineering)**, University of Peradeniya, Sri Lanka

PROFESSIONAL QUALIFICATIONS AND MEMBERSHIPS

- 2013 Member of Australian Water Association
- 2013 Member of Engineers Australia
- 2002 Corporate Member and a Chartered Engineer - The Institution of Engineers Sri Lanka
- 2001 Member of Society of Structural Engineers in Sri Lanka
- 1994 Construction Supervisors Training Programme - ICTAD/NAITA, Sri Lanka

RESEARCH INTERESTS

- Innovative Water and Wastewater Treatment Technologies
- Advance Biological Wastewater Treatment
- Membrane Separation Technologies including Membrane Bioreactors
- Recovery of Bioenergy and Resources from wastewater
- Solid Waste Management: Waste to Heat Technologies
- Project and Construction Management

APPOINTMENTS AND AWARDS

- 2023 Director - Industrial Training and Career Guidance Unit ITCGU, Faculty of Engineering, University of Peradeniya, Sri Lanka
- 2020 Guest Editor - Special Issue of the Journal "*Sustainability*" (a MDPI Journal)
- 2018 Principal Supervisor - VU Research (ISILC)
- 2016 Research Fellow - VU Research (Institute for Sustainable Industries & Liveable Cities - ISILC)
- 2014 Guest Editor - Bioresource Technology
- 2010 The best "Oral Presentation" award at the CESE International Conference, Cairns, QLD
- 2008 Offshore Consultant (Water/Wastewater and Project Management) - Puritas Limited, Sri Lanka

TEACHING APPOINTMENTS (HIGHER EDUCATION)

2016 – 2023	Senior Lecturer (Level C4) – Civil and Architectural Engineering, Victoria University
2013 – 2016	Lecturer (Level B6) – Building and Architectural Engineering, Victoria University
2012 – 2013	Lecturer (Level B1) – Civil Engineering – Victoria University
2011 – 2012	Sessional Lecturer – Civil and Environmental Engineering – Deakin University, Geelong, Australia
2009 – 2011	Sessional Lecturer – Civil and Environmental Engineering – James Cook University, Townsville, QLD, Australia

INDUSTRY EXPERIENCE

Townsville Water - Townsville City Council – Queensland, Australia

Senior Engineer (Permanent/ Part-time) - March to December 2010 (*Resigned from the position to relocate to Melbourne*)

Puritas Limited – Colombo, Sri Lanka

A subsidiary of Haycarb PLC and a member of the Hayleys Group of Companies, and a leading Water/Wastewater Company in Sri Lanka

Offshore Consultant (Designing and Managing Projects) – from December 2008 to December 2009

Project Manager/ Departmental Manager/ Section Head (Water and Wastewater Projects) – from 2005 to 2008

Senior Executive, Design Engineer (Water Infrastructure/ treatment plants) – from 2003 to 2005

Civil and Structural Engineer (Buildings and Hydraulic structures) - from 1997 to 2003

Haycarb PLC – Colombo, Sri Lanka

The World's leading manufacturer and marketer of coconut shell activated carbon

Manager (Engineering) - from 2005 to 2008

Group Civil and Structural Engineer – from August 1997 to December 2008

INDUSTRY EXPERIENCE

Books and Book Chapters

1. Danny Byrne, Ashok Sharma, Shobha Muthukumaran, and **Dimuth Navaratna** 2023, 'Smart buildings and their rating tools', In: Sustainable Civil Engineering Principles and Applications. Kanwar, VS, Shukla, SK, John, S and Kandra, HS, eds. CRC Press, Boca Raton, pp. 281-308.
2. Nandkishor More, Anjali Verma, Deepthi Wickramasinghe, Rajnish Gautam, **Dimuth Navaratna**, AVPR Jonnada, Ram Naresh Bharagava, 2022, 'Applications of Nanoparticles for Microbial Contaminants and Pathogens Removal from Wastewater', In: Nano-biotechnology for Wastewater Treatment, Rai, J.P.N., Saraswat, S. (eds). Water Science and Technology Library, vol 111. Springer.
3. Nandkishor More, Anjali Verma, Ram Naresh Bharagava, Arun S Kharat, Rajnish Gautam, Dimuth Navaratna, 2022, 'Sustainable Development in Agriculture by Revitalization of PGPR', In: Bioremediation: Green Approaches for a Clean and Sustainable Environment, Ram Naresh Bharagava, Sandhya Mishra, Ganesh Dattatraya Saratale, Rijuta Ganesh Saratale, Luiz Fernando Romanholo Ferreira (eds). CRC Press, pp. 127-142.

4. Gautam, RK, Navaratna, D, Muthukumaran, S, Singh, A, More N 2021, 'Humic Substances: Its Toxicology, Chemistry and Biology Associated with Soil, Plants and Environment', In: Humic Substances, Abdelhadi Makan (ed), p. 97.
5. Jegatheesan, J, Virkutyte, J, Shu, L, Allen, J, Wang, Y, Searston, E, Xu, Z, Naylor, J, Pinchon, S, Teil, C, **Navaratna, D**, and Shon H. K 2013, 'Removal of lower-molecular-weight substances from water and wastewater: challenges and solutions', Wastewater treatment: advanced processes and technologies (ISBN 9781439860441).
6. **Navaratna, D**, Shu, L & Jegatheesan, V 2010, 'Existence, impacts, transport and treatments of herbicides in great barrier reef catchments in Australia', Treatment of micropollutants in water and wastewater (eISBN 9781780401447), pp. 425-57.

Journal Articles

7. Ashok K Sharma, Peter Sanciolo, Amir Behroozi, Dimuth Navaratna, Shobha Muthukumaran 2023, 'Stormwater Harvesting Potential for Local Reuse in an Urban Growth Area: A Case Study of Melton Growth Area in the West of Melbourne', Water, vol. 15 (11), 2093.
8. Rajneesh Kumar Gautam, Akangbe Olubukola, Nandkishor More, Veeriah Jegatheesan, Shobha Muthukumaran, Dimuth Navaratna 2023, 'Evaluation of long-term operational and treatment performance of a high-biomass submerged anaerobic membrane bioreactor treating abattoir wastewater', Chemical Engineering Journal, vol. 463, p.142145.
9. Nyamutswa, LT. Collins, SF, Navaratna, D, Duke, MC 2023, 'Concept Demonstration and Future Developments of Sunlight Transmitting Nanophotocatalyst-Coated Substrates for Sustainable Low Pressure Water Filtration. The World Scientific Reference of Water Science: Volume 3 Current Status and New Technologies in Water Desalination: 419-457.
10. Olubukola, A, Gautam, RK, Kamilya, T, Muthukumaran, S, Navaratna, D 2022, 'Development of a dynamic model for effective mitigation of membrane fouling through biogas sparging in submerged anaerobic membrane bioreactors (SAnMBRs)', Journal of Environmental Management, vol. 323, p. 116151.
11. Najibullah Zafari, Ashok Sharma, Dimuth Navaratna, Varuni M Jayasooriya, Craig McTaggart, Shobha Muthukumaran, 2022, 'A Comparative Evaluation of Conceptual Rainfall-Runoff Models for a Catchment in Victoria Australia Using eWater Source' Water, vol. 14 (16), p. 2523.
12. Rajneesh Kumar Gautam, Robert Valente, Haitham Abbas, Anh Bui, Nandkishor More, Stephen Gray, Shobha Muthukumaran, Dimuth Navaratna, 2022, 'Recovery of biomethane from a submerged anaerobic membrane bioreactor treating domestic wastewater blended

with semi-solid organic wastes discharged from residential establishments', *Environmental Technology & Innovation*, vol. 27, p. 102763.

13. Tuhin Kamilya, Rajneesh Kumar Gautam, Shobha Muthukumaran, Dimuth Navaratna, Sandip Mondal, 2022, 'Technical advances on current research trends and explore the future scope on nutrient recovery from waste-streams: a review and bibliometric analysis from 2000 to 2020' *Environmental Science and Pollution Research*, vol. 29 (33), pp. 49632-49650.
14. Sanciolo, P, Rivera, E, Navaratna, D, Duke, MC, 2022, 'Food Waste Diversion from Landfills: A Cost-Benefit Analysis of Existing Technological Solutions Based on Greenhouse Gas Emissions' *Sustainability*, vol. 14 (11), p. 6753.
15. Gautam, RK, Kamilya, T, Verma, S, Muthukumaran, S, Jegatheesan, V, Navaratna, D 2022, 'Evaluation of membrane cake fouling mechanism to estimate design parameters of a submerged AnMBR treating high strength industrial wastewater', *Journal of environmental management*, vol. 301, p. 113867.
16. Nyamutswa, LT, Hanson, B, Navaratna, D, Collins, SF, Linden, KG, Duke, MC 2021, 'Sunlight-Transmitting Photocatalytic Membrane for Reduced Maintenance Water Treatment', *ACS ES&T Water* vol. 1 (9), pp. 2001-2011.
17. Nyamutswa, LT, Collins, SF, Navaratna, D, Duke, MC 2021, 'Light Transmitting Substrates for Convenient Solar Illumination of Nanophotocatalyst Coatings on Membranes for Low Pressure Water Filtration', *MATERIALS AND ENERGY (CM. В КНИГАХ) Учредители: World Scientific Publishing Co. Pte Ltd.*, vol. 17, pp. 459-489.
18. Nyamutswa, LT, Zhu, B, Collins, SF, **Navaratna, D** & Duke, MC 2020, 'Light conducting photocatalytic membrane for chemical-free fouling control in water treatment', *Journal of Membrane Science*, vol. 604, p. 118018.
19. Hakimi, MH, Jegatheesan, V & **Navaratna, D** 2020, 'The potential of adopting struvite precipitation as a strategy for the removal of nutrients from pre-AnMBR treated abattoir wastewater', *Journal of Environmental Management*, vol. 259, p. 109783.
20. Nyamutswa, LT, Zhu, B, **Navaratna, D**, Collins, S & Duke, MC 2018, 'Proof of Concept for Light Conducting Membrane Substrate for UV-Activated Photocatalysis as an Alternative to Chemical Cleaning', *Membranes*, vol. 8, no. 4, p. 122.
21. Ravishankar, H, Roddick, F, **Navaratna, D** & Jegatheesan, V 2018, 'Preparation, characterisation and critical flux determination of graphene oxide blended polysulfone (PSf) membranes in an MBR system', *Journal of Environmental Management*, vol. 213, pp. 168-79.

22. **Navaratna, D**, Shu, L & Jegatheesan, V 2017, 'Estimating design parameters for sustainable operation of a membrane bioreactor treating s-triazine herbicide', *International Biodeterioration & Biodegradation*, vol. 119, pp. 4-15.
23. Shu, L, Obagbemi, IJ, Liyanaarachchi, S, **Navaratna, D**, Parthasarathy, R, Aim, RB & Jegatheesan, V 2016, 'Why does pH increase with CaCl₂ as draw solution during forward osmosis filtration', *Process Safety and Environmental Protection*, vol. 104, pp. 465-71.
24. Jegatheesan, V, Pramanik, BK, Chen, J, **Navaratna, D**, Chang, C-Y & Shu, L 2016, 'Treatment of textile wastewater with membrane bioreactor: a critical review', *Bioresource Technology*, vol. 204, pp. 202-12.
25. **Navaratna, D**, Shu, L & Jegatheesan, V 2016, 'Evaluation of herbicide (persistent pollutant) removal mechanisms through hybrid membrane bioreactors', *Bioresource Technology*, vol. 200, pp. 795-803.
26. Marleni, N, Park, K, Lee, T, **Navaratna, D**, Shu, L, Jegatheesan, V, Pham, N & Feliciano, A 2015, 'A methodology for simulating hydrogen sulphide generation in sewer network using EPA SWMM', *Desalination and Water Treatment*, vol. 54, no. 4-5, pp. 1308-17.
27. Park, K, Lee, H, Phelan, S, Liyanaarachchi, S, Marleni, N, **Navaratna, D**, Jegatheesan, V & Shu, L 2014, 'Mitigation strategies of hydrogen sulphide emission in sewer networks-a review', *International Biodeterioration & Biodegradation*, vol. 95, pp. 251-61.
28. **Navaratna, D**, Shu, L & Jegatheesan, V 2014, 'Performance of a laboratory-scale membrane bioreactor consisting mixed liquor with aquatic worms under toxic conditions', *Bioresource Technology*, vol. 155, pp. 41-9.
29. **Navaratna, D**, Shu, L, Baskaran, K & Jegatheesan, V 2012a, 'Removal of Ametryn from wastewater using a hybrid membrane bioreactor (MBR)', in *Proceedings of the 2012 IWA World Water Congress*, pp. 1-.
30. **Navaratna, D**, Shu, L, Baskaran, K & Jegatheesan, V 2012b, 'Treatment of ametryn in wastewater by a hybrid MBR system: a lab-scale study', *Water Science and Technology*, vol. 66, no. 6, pp. 1317-24.
31. **Navaratna, D** 2012, 'Reducing herbicide discharge to sensitive environments using membrane bioreactors' (PhD Thesis), Deakin University.
32. **Navaratna, D**, Shu, L, Baskaran, K & Jegatheesan, V 2012, 'Model development and parameter estimation for a hybrid submerged membrane bioreactor treating Ametryn', *Bioresource Technology*, vol. 113, pp. 191-200.

33. **Navaratna, D**, Elliman, J, Cooper, A, Shu, L, Baskaran, K & Jegatheesan, V 2012, 'Impact of herbicide Ametryn on microbial communities in mixed liquor of a membrane bioreactor (MBR)', *Bioresource Technology*, vol. 113, pp. 181-90.
34. Jegatheesan, V, Shu, L, Phong, **Navaratna, D** & Neilly, A 2012, 'Clarification and concentration of sugar cane juice through ultra, nano and reverse osmosis membranes', *Membrane water treatment*, vol. 3, no. 2, pp. 99-111.
35. **Navaratna, D** & Jegatheesan, V 2011, 'Implications of short and long term critical flux experiments for laboratory-scale MBR operations', *Bioresource Technology*, vol. 102, no. 9, pp. 5361-9.
36. **Navaratna, D**, Shu, L, Baskaran, K & Jegatheesan, V 2011, 'Application of a hybrid MBR system to treat herbicides from agricultural runoffs', in *AGRO 2011: Proceedings of the 8th International IWA Symposium on Waste Management Problems in Agro-Industries*, pp. 235-42.
37. **Navaratna, D** & Jayawardane, A 2007, 'Total factor productivity in the building construction industry in Sri Lanka', *Engineer: Journal of the Institution of Engineers, Sri Lanka*, vol. 40, no. 1.
38. Jayawardane, A & **Navaratna, D** 2007, 'Total factor productivity in the building construction industry in Sri Lanka'.