Personal information

Name & Surname:	Harsha Chandima RATNAWEERA	CONTRACTOR
Born & Nationality	20.01.1962, Norwegian & Sri Lankan	
Address:	Bergslia 24, 0870 Oslo, Norway	
emails	harsha@nmbu.no; har999@gmail.com;	
Telephones	Mobile/WhatsApp: +47 9822 7777; Teams: +47 6723 1587	
Researcher ID etc ORCID: https://orcid.org/0000-0003-1456-2541		
	LinkedIn: https://www.linkedin.com/in/harsha-ratnaweera-3b00239/	
	GoogleSch: https://scholar.google.com/citations?user=boEL40oAAAAJ&hl=en	

Notable awards and assignments

- Fellow, European Academy of Sciences (2024-)
- Fellow, Norwegian Academy of Technological Sciences (2024-)
- Fellow, International Water Association (2020-)
- People's ambassador of the Shandong Province, China (2023-)
- Vice President, European Water Association (2023-)
- Director of the Board, International Water Association (2022-)

Educat	Education		
1992	Dr.Ing, Norwegian University of Science and Technology - NTNU, Trondheim, Norway		
1987	Master's (Hons) in Chemical Engineering, National Technical University of Ukraine – KPI, Kiev		

Other training	Other training		
2021	Virtual Exchange(VE)/ Collaborative Online International Learning (COIL), AACU, USA		
2006-2021	Various leadership, entrepreneurship training courses		
2013	Global Entrepreneurship Training Program, <u>Babson College</u> , Massachusetts, USA		
2012-2013	Teaching and Learning in Higher Education for Scientific Staff-PPUN400, NMBU.		
2007-2009	Project Management, PMI courses, Oslo		
1991-1992	Postgraduate course in Strategic Project Planning, NTNU, Norway		

Positions - cu	Positions - current and previous		
2012-	Professor, Norwegian Univ. of Life Sciences (NMBU), Ås (Norway)		
2001-2011	Adjunct Professor, Norwegian Univ. of Life Sciences (NMBU), Ås (Norway)		
2008-	Founder/Chairman of the Board, <u>DOSCON AS</u> , Oslo, Norway, subsidiaries in China and Sri Lanka		
1991-1998	Director of Innovation and International Projects (Researcher/Research Manager 1991-1998)		
1998-2011	Norwegian Institute for Water Research – NIVA, Oslo, Norway		
2004-2012	NIVA-Tech (CEO), BallastTech (Chairman), Geomor-NIVA & NIVA Chile (Board member)		
1998	Team leader, water and wastewater technology, <u>COWI</u> , Oslo, Norway		
1990-1991	Research Scientist, SINTEF Water group, Trondheim, Norway		

Positions - H	onorary appointments		
2022-	Honorary Professor, Mining-Metallurgical Institute of Tajikistan, Buston, Tajikistan		
2021-	Honorary Professor National University of Water and Env. Engineering, Rivno, Ukraine		
2018-	Honorary Professor, Inst. of Scientific Sust. Dev. & Ecology "Keremet", Bishkek, Kyrgyzstan		
2018 April	Visiting Researcher, University of Technology Sydney, Australia		
2018 Mar	Visiting Researcher, National University of Technology, Singapore		
2018 Aug	Visiting Researcher, Hokkaido University, Japan		
2018 Sep	Visiting Researcher, University of British Columbia, Canada		
2016-	Honorary professor, Ukrainian State University of Chemical Technology, Ukraine		
2013-	Visiting professor, Qingdao University of Technology, Qingdao, China		
2020-2021	Visiting professor, University of Indonesia		
2004-	Guest Professor, Inner Mongolia Agricultural University, Hohhot, P R China		

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Institutional responsibilities		
2012-	PI/Team leader, Process Analytics and Water Treatment Group, NMBU	
2014-2018	Head of Research, Faculty of Science & Tech., Norwegian University of Life Sciences	
2004-2011	One of the three top managers at the Norwegian Institute for Water Research - NIVA	

Commission	s of trust in academic, public or private organisations
2022-	Director of the Board, International Water Association (IWA)
2016-	Member, Norwegian National Committee of IWA
2011-	Member, Management Committee - IWA Specialist Group "Particle Separation"
2023-	Vice President, European Water Association (EWA),
2019-	Member of the Management Council of EWA
2011-	Norwegian representative in the Council of the European Water Association (EWA)
2020-	Member of the Scientific Advisory Council, Aquateam, Norway
2020-	Member, Advisory Group, EU ERA-NET Water JPI
2008-2012	Member, Steering Group, Nile Basin Research Program, University of Bergen
2004-2012	Member of the Norwegian National Commission of UNESCO
2006-2008	Chairman of the Scientific Committee, Norwegian National Commission of UNESCO
2013-2015	Chairman of the Norwegian Forum for Development and Technology (Bistandsforum)

Fellowships, awards and prizes		
2020-	IWA Fellow – International Water Association	
2023	People's ambassador of the Shandong Province, China	
2020	Qingdao International Scientific Cooperation Award, China	
2012-2015	High-End Foreign Expert Fellowship, State Admin. of Foreign Experts Affairs, China	
2012-2015	High-End Foreign Expert Fellowship, Shandong Government, China	
2012-2017	High-End Foreign Expert, Fellowship from the Government of Qingdao, Chia	
1988-1991	First foreign national to receive a university fellowship, Norwegian Uni. of Sci. & Tech.	

Memberships	Memberships of academies/ scientific societies / networks		
2014-2018	Deputy Chairman, Norwegian Water Research Assoc.; Board member (2013-2016)		
2004-2012	Member of the Norwegian National Commission of UNESCO		
2006-2008	Chairman of the Scientific Committee, Norwegian National Commission of UNESCO		

Language proficiency			
Language	Reading	Writing	Speaking
English	Excellent	Excellent	Excellent
Norwegian	Excellent	Excellent	Excellent
Russian	Excellent	Good	Excellent
Sinhalese (mother tongue)	Excellent	Excellent	Excellent

Project mana	Project management experience (examples)		
2023-2025	Task Coordinator at NMBU, SMART4ENV: Enhancing Scientific Capacity of TUBITAK in Smart Env. Technologies for Climate Change Challenges. EU Horizon Europe, €1.5 mill		
2022-2025	Task Coordinator at NMBU, WaterLine: Transforming advanced water skilling through extended reality water emulative centres. EU Horizon Europe, €2,1 mill		
2022-2025	Coordinator at NMBU, Smart WB: Capacity Building in the field of Higher Education: Strand. Partnerships for transformation in higher education. Erasmus+, €0,72 mill		
2022-2024	Project Manager, MONLINE: Innovative water quality monitoring for on-line surveillance /process control. Innovation Norway & Jiangsu Science & Tech. Dept, China. €0.78 mill		
2022-2024	Concept Developer, Hybrid Sensors -Drinking Water. Res Council of Norway (RCN). €0.66 mill		
2021-2026	Project Manager, Protecting aquatic ecosystem and Human health from micropollutants, INTPART-RCN, €1.1 mill (NO, BR). PATCHER project		
2021-2023	Project Manager, Digitalisation of water industry by innovative education, Erasmus+ Knowledge Alliances, 12 partners (NO, DE, BG, CY, TR, RO). €1.1 mill <u>www.digiwater.org</u>		

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and Norway. EEA Grants. €0.1 mill 2021-2023 Project Manager, Graduates for Climate Change adapted water management, 12 univ. from EU (NO, PL. DE), Asia (CN. LK, MN), Erasmus+ CBHE, €1 mill www.cc-water.net 2021-2023 Project Manager, EU MSCA project on Development of Hybrid Soft Sensor for on-line monitoring of contaminants of emerging concern in water. ECO-SOS. €0.25 mill 2020-2028 Project Manager, BEC program, Qingdao Univ. of Technology, China. Collaboration between QUT-NMBU, Funded by Ministry of Education, China. ►21 mill 2020-2026 Scientific Coordinator, Water ESSENCE - creating synergy to meet the global challenges. NORAD, €1.7 mill, (NO, GH, KE, UG, ET, SSU, RW) 2019-2021 Project Manager, R&D in process control. Norwegian Tax Authority. €0.3 mill 2019-2021 Project Manager, Closing the Water Cycle Gap with Harmonised Actions, ERANET Water JPI (NO, SE, PL, RO, IL, NL, SG, AU, US, CN) €2 mill http://www.waterharmony.net/wipi 2015-2023 Project Manager, International Partnership on membrane processes for Research & Educational excellence, INTPART-RCN, €1.1 mill, (US, CA, CN, JP, NO). MEMPREX-I/II. 2015-2019 Project Manager, Bloistic optimisation of sewers, treatment plant and recipients. RCN, € 0.4 mill 2014-2020 Scientific coordinator, Inst. Capacity Building in Water Mgmt & Climate Change Adaption, €3.1 mill, NOARD, 11 universities (NO, LK, BD, KR, UG, KE, ET, SS). www.wasoproject.org 2013-2015 International coordinator, UNECE- Protocol on Water and Health. Establishment of targets in Tajikistan, €0.15 mill (Independent consultant) 2013-2015 International coordinator, UNECE- Protocol on Water and Health. Establishment of targets in Kyrgyzstan, €0.15 mill (Independent consultant) 2019-2011 Team Leader, Devel. of National WW Mgmtt Plan for Mongolia, World Bank €0.12 mill 2009-2011 Team Leader, Revision-National Env. Action Plan (NEAP) in Mongolia, World Bank €0.12 mill 2009-2001 Team Leader, Revision-National Env. Action Plan (NEAP) in Mongolia, World Bank €0.12 mill 2024 [PAT, Munch, Germany 2025 Conference	2021-2023 Project M (NO, PL. I 2021-2023 Project M 2021-2023 Project M of contan 2020-2028 Project M QUT-NMI 2020-2026 Scientific NORAD, € 2019-2021 Project M (NO, SE, F 2015-2023 Project M 2015-2019 Co-Project M 2015-2019 Project M 2014-2020 Scientific mill, NOA 2013-2015 Internation Tajikistan 2013-2015 Internation Kyrgyzsta 2011-2021 Project M €1.1mill, 2009-2011 Internation 2009-2011 Internation 2009-2001 Team Lea 1999-2000 Team Lea 1999-2000 Team Lea 2024 Conferent 2024 Conferent 2024 Conferent 2024 Conferent Cold Clim 2019 Co-Organ 140 parti 2018 NATO Col	anager, Graduates for Climate Change adapted water management, 12 univ. from EU
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	2016 Chairman	of the organising committee, 1st EWA Conference on Water Management in Cold

Supervision of students			
Master's students	Ph.D. students	Post Docs	University/institution - Country
>35	13	4	Faculty of Science and Technology, NMBU

Other relevant professional experiences			
2012-	Initiated and coordinating a Global Educational and Research network of 100 universities and		
	research organisations from 54 countries on water – <u>www.WaterHarmony.net</u>		

Patents and inventions

April 2024 Page 3/11

2020	Invention patent: An intelligent and precise coagulant dosing control system based on multivariable control. Inventors: Wang Xiaodong; Yang Benliang; Harsha Ratnaweera. Chinese Patent No.: ZL 2020 1 0169710.2
2020	Invention patent: An intelligent chemical dosing system and control method. Inventors: Wang Xiaodong; Yang Benliang; Harsha Ratnaweera. Chinese Patent No.: ZL 2020 1 0269346.7
2020	Coagulant dosing controller for water treatment. Chinese Patent No.: ZL 2020 3 0091579.3, Designer: Wang Xiaodong; Yang Benliang; Harsha Ratnaweera
2020	Design patent: A multivariable control based intelligent and precise chemical dosing control software. Chinese copyright 2021SR1250931, Owner: Qingdao Doscon Environ. Tech Co., Ltd
2020	Design patent: An intelligent chemical dosing system and control software. Chinese copyright 2021SR1254943, Owner: Qingdao Doscon Environ. Tech Co., Ltd.

Invited p	Invited presentations & Key notes- Examples from 2023 and 2022		
2023	Keynote at "MEMTEK 2023", Development trends in digital tools in membrane processes. 17-18 October 2023, Istanbul, Turkey		
2023	Chair, Opening session. <u>IWA Digital Water Summit</u> , Bilbao. 14-16 Nov 2023		
2023	Chair of the workshop on universities' role in achieving SDGs. <u>IWA World Development Congress</u> , 10-14 December 2023, Kigali, Rwanda.		
2023	Invited speaker, German Water Association (DWA)'s dialogue. Univ. – Industry partnerships on digitalization promoting SDGs in & beyond Europe. 19.09.2023. Berlin. Germany		
2023	Invited speaker, Ugandan Water Res. inst. on Univ-Industry partnership. Entebbe, 26.09.2023		
2023	Speaker and session chair: 28th Annual Conference of the IEEE Industrial Electronics Society, Achieving legislative requirements with digital tools. 11.09.2023. Sinaia, Romania		
2023	Speaker and workshop co-organiser: <u>UN Water conference</u> : Better governance of water in massive river systems. 24.03.2023. New York, USA		
2022	Invited speaker at the <u>ISWA/WEF/EWA Sendai conference</u> . <i>Identification of process disruptions using hybrid sensors</i> . 16.11.2022. Sendai, Japan		
2022	Keynote at the International forum on "Green economy is the main trend of the new decade", December 2022. South Kazakhstan University, Kazakhstan		
2022	Coordinator of the workshop on the facilitation of faster uptake of innovations, <u>IWA World Water</u> <u>Congress</u> , Copenhagen, September 2022		

Teaching	
Annually	2-year MSc program on Intelligent Water Technology, NMBU (new from 2024)
Annually	THT271: Water and wastewater treatment - Basics, 15 ECTS, NMBU, contributing lecturer
Annually	THT310: Water & wastewater treatment- Advanced, 10 ECTS, NMBU, course responsible
Annually	THT311: Special topics in w&ww treatment, 10 ECTS, NMBU, Course responsible
Annually	THT313: Water management in Changing Conditions, 5 ECTS, NMBU, Course responsible
Annually	THT201: Rapid methods in water quality analysis. 5 ECTS, NMBU. Contributing lecturer
Annually	KJM220: Water chemistry, 10 ECTS, NMBU, Contributing lecturer
2021-2022	Water treatment specialised course, National Technical University of Ukraine (lecturer)
2019-2021	Coordinator and lecturer, 12 webinars on aspects of water management for Eurasia.
2021-2028	Coordinator of the joint BSc program on water management between Qingdao University of Technology, China and NMBU, lecturer in several courses
2022	SUNY Stoney Brook- NMBU: Glocal Adaptation of Nanotech in Water. Co-coordinator
2019-2022	International Winter School on Arctic Water Mgmt, Harbin Institute of Technology, China
2018-2021	Postgraduate course on water management at Univ. of Peradeniya, Sri Lanka, lecturer

Evaluation committees for recruitment (selected)		
2024	Chair, expert committee- evaluation of B Plosz for Professor Oslo Metropolitan Univ., Norway	
2023	Evaluation of Elin Lavonen for the post of Adjunct Professor, Alto University, Finland	
2023	Evaluation of Ilkka Miettinen -Adjunct Professor, Alto University, Finland	

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Chair of the expert committee – Adjunct professor in water chemistry, NMBU, Norway
Evaluation of the PhD thesis of Jannatul Rumky: Valorization of sludge, Lahiti University, Finland
EvaluatorPhD thesis, S Wang: Pyrolysis of Biodegradable Waste. KTH-Royal Inst of Tech, Sweden
Evaluation of the PhD thesis of V A Vijayageetha, Bharathiar University, India
Evaluation of Ming Li for promotion to Associate Professor, University of Michigan-Flint, USA
Chair of the expert committee- Associate Professor in Sustainable Urban Development, Water and Environmental Engineering, Oslo Metropolitan University
Chair of the expert committee- Professor in water transport systems, NMBU
Chair of the expert committee- evaluation of Tone Muthanna for Professor, NTNU
Chair of the evaluation of the PhD thesis of E Christensen, Use of zirconium and chitosan
coagulants for physicochemical water treatment. Norwegian School of Veterinary Science
Evaluator, PhD thesis of B Hønsvall: Env microorganisms – University of South Eastern Norway
Member of the evaluation committee- Asso. Professor in Hydraulic/Env. Engineering, NTNU
committees for project proposals (selected)
Mitacs Accelerate project: Proposal evaluator
4th National Plan for Research, Development and Innovation for the period 2022-2027,
Romanian Ministry of Research, Innovation and Digitization. Proposal evaluator
Fondecyt Research Project Competition 2024, National Research & Dev. Agency, Chile. Evaluator
Norwegian Research Council. Inland Regional Program: Proposal evaluator
EU CHIST-ERA program: Proposal evaluator

Other activities – expert witness, expert judge		
2013	Expert judge, legal proceedings on flood damage compensation between the Fredrikstad municipality and consortium of insurance companies (10 days)	
2023	Expert witness, legal proceedings on sea deposition of tailings from rutile mines, Førde, Norway	
2020	Expert statement, Norwegian parliament, vulnerability and environ. protection of Spitsbergen.	

Journals – editorial boards and reviewer			
2023	Editor	Digitalisation Aspects in the Water Sector – <u>Discover Water</u> . Springer Nature.	
2022	Editor	Special Issue "Recent Advances in WW Treatment and Transport". MDPI, IF=3.5	
2021	Editor	Journal of Ecological Engineering (JEE), IF=1.3	
2022	Guest editor	Journal of Water and Climate Change, IWA, IF=2.8	
2005-	Reviewer	Water Sci. & Tech, J. of Env. Chemical Eng., Env. Sci and Pollution Research, Water	
		Practice and Technology, Cleaner Production, Water Process Engineering,	
		Chemosphere, MDPI- Methods and Protocols, Separation and Purification Technology	

Publication matrices

h-index: 26; i10-index: 60; citations: 2407; peer reviewed publications>100

Selected peer-reviewed publications - Harsha Ratnaweera

Nair, A., Yavorska, V., Hykkerud, A., Ratnaweera, H.; A cloud-based infrastructure to deploy supervisory forecast models for predictive coagulant dosing control. Water Practice and Technology 2024; wpt2024091. doi: https://doi.org/10.2166/wpt.2024.091

Loganathan, P.; Kandasamy, J.; Ratnaweera, H.; Vigneswaran, S. Treatment Trends and Hybrid Methods for the Removal of Poly- and Perfluoroalkyl Substances from Water—A Review. Appl. Sci. 2024, 14, 2574. https://doi.org/10.3390/app14062574

Loganathan, P., Kandasamy, J., Ratnaweera, H. et al. Use of wastewater alum-coagulation sludge as a phosphorus fertiliser – a mini review. Environ Sci Pollut Res 31, 18412–18421 (2024). https://doi.org/10.1007/s11356-024-32497-6

Ratnaweera, H., Nair, A., Hykkerud, Q., Sivchenko, N., Ratnaweera, D. and Condrachi, L. (2023). Achieving legislative requirements in wastewater treatment using digital tools. IEEE 28th International Conference on

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Emerging Technologies and Factory Automation (ETFA), Sinaia, Romania, 2023, pp. 1-4. https://doi.org/10.1109/ETFA54631.2023.10275453

Wang, X., Chen, S., Bi, X., Chen, N., Yang, T., Wang, L., Maletskyi, Z., & Ratnaweera, H. (2023). Morphological image analysis of biofilm evolution with quantitative analysis in a moving bed biofilm reactor. Science of The Total Environment, 856, 159199. https://doi.org/10.1016/J.SCITOTENV.2022.159199

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I, the undersigned certify that, to the best of my knowledge and belief, this Curriculum Vitae correctly describes myself, my qualifications and experience.

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