

Curriculum Vitae

Weerathunga Arachchige Veran Akalanka

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Education

09/2021-08/2024	Ph.D. in Oceanography. Department of Oceanography, National Sun Yat-sen University, Taiwan
09/2019-08/2021	Master of Science, Department of Oceanography, National Sun Yat-sen University, Taiwan
02/2014-01/2018	BSc. in Fisheries and Marine Sciences (Specialized in Oceanography and Marine Geology), Faculty of Fisheries and Marine Sciences & Technology, University of Ruhuna, Sri Lanka

Professional Experiences

Since 09/2019	Research Assistant, Department of Oceanography, National Sun Yat-sen university, Taiwan
10/2018-07/2019	Demonstrator (instructor level), Department of Oceanography and Marine Geology, Faculty of Fisheries and Marine Sciences & Technology, University of Ruhuna, Sri Lanka
05/2018-10/2018	Project Assistant, Marine Environment Protection Authority, Sri Lanka
02/2018-04/2018	Trainee Technical Member, National Oceanic Affairs Committee, Sri Lanka

First Author SCIE Article Publications

- **Weerathunga, V.**, Liu, L.L., Yuan, F.L., Xu, S.X., Kao, K.J. and Huang, W.J., 2024. Temporal variability of air-water gas exchange of carbon dioxide in clam and fish aquaculture ponds. *Science of The Total Environment*, p.170090.

- **Weerathunga, V.**, Hung, C.C., Dupont, S., Hsieh, H.H., Piyawardhana, N., Yuan, F.L., Kao, K.J., Huang, K.C. and Huang, W.J., 2023. Ocean acidification increases inorganic carbon over organic carbon in shrimp's exoskeleton. *Marine Pollution Bulletin*, 192, p.115050.
- **Weerathunga, V.**, Huang, W.J., Dupont, S., Hsieh, H.H., Piyawardhana, N., Yuan, F.L., Liao, J.S., Lai, C.Y., Chen, W.M. and Hung, C.C., 2021. Impacts of pH on the fitness and immune system of Pacific white shrimp. *Frontiers in Marine Science*, 8, p.748837.

Other Author SCIE Article Publications

- Piyawardhana, N., **Weerathunga, V.**, Chen, H.S., Guo, L., Huang, P.J., Ranatunga, R.R.M.K.P. and Hung, C.C., 2022. Occurrence of microplastics in commercial marine dried fish in Asian countries. *Journal of Hazardous Materials*, 423, p.127093.
- Hsieh, H.H., **Weerathunga, V.**, Weerakkody, W.S., Huang, W.J., Muller, F.L., Benfield, M.C. and Hung, C.C., 2021. The effects of low pH on the taste and amino acid composition of tiger shrimp. *Scientific Reports*, 11(1), p.21180.
- Kao, K.J., Huang, W.J., Chou, W.C., Gong, G.C. and **Weerathunga, V.**, 2023. Factors controlling the sea surface partial pressure of carbon dioxide in upwelling regions: A case study of the southern East China Sea before and after Typhoon Maria. *Journal of Geophysical Research: Oceans*, 128(2), p.e2022JC019195.

Manuscripts in Review/Preparation

- Drivers of carbonate chemistry in tropical lagoons in Indian Ocean under increasing anthropogenic pressure
- Global estimation of greenhouse gas emission from inland aquaculture ponds

Conference and Meeting Abstract Publications

- **Weerathunga, V.**, Kao, K.J., Yuan, F.L., Chou, W.C., Hung, C.C., Huang, W.J., 2024. Spatial Variations of Air-sea Gas Exchange of Carbon Dioxide in Tropical Western Pacific Surface Ocean During Typhoon Season. Asia Oceania Geosciences Society Meeting, Korea.
- Yuan, F.L., Kao, K.J., **Weerathunga, V.**, Chou, W.C., Huang, W.J., 2024. Spatiotemporal Variations of Partial Pressure of Carbon Dioxide in Chiku Lagoon During Summer. Asia Oceania Geosciences Society Meeting, Korea.

- Huang, W.J., Kao, K.J., **Weerathunga, V.**, Yuan, F.L., Hung, C.C., Chou, W.C., 2024. Carbonate Dynamics in the Surface Philippine Sea, Summer 2023. Asia Oceania Geosciences Society Meeting, Korea.
- **Weerathunga, V.**, Liu, L.L., Yuan, F.L., Xu, S.X., Kao, K.J., Huang, K.C., Chen, W.M., Huang, W.J., 2023. Temporal variations of air-water carbon dioxide fluxes in tropical and subtropical clam and fishponds in Taiwan. Japan Geoscience Union Meeting, Japan.
- Kao, K.J., Huang, W.J., Chou, W.C., Gong, G.C., Tseng, H.C., **Weerathunga, V.**, 2023. The Variations of O₂/Ar-Net Community Production and Air-sea Carbon Dioxide Flux in the southern East China Sea before and after Typhoon Maria. Japan Geoscience Union Meeting, Japan.
- Yuan, F.L., Kao, K.J., **Weerathunga, V.**, Lai, C.Y., Lin, T.H., Chou, W.C., Huang, W.J., 2024. Seasonal Variations of Partial Pressure of Carbon Dioxide in Chiku Lagoon. Ocean Sciences Conference, Taiwan.
- **Weerathunga, V.**, Kao, K.J., Chou, W.C., C.C., Huang, Yuan, F.L., Hung, W.J., 2024. Spatial Dynamics of Carbon Dioxide Gas Exchange in the Surface of the Tropical Western Pacific Ocean. Ocean Sciences Conference, Taiwan.
- **Weerathunga, V.**, Yuan, F.L., Xu, S.X., Kao, K.J., Huang, K.C., Weng, J.S., Liu, L.L., Huang, W.J. 2022. Influences of source waters and acidic rain on pH and carbonate buffer capacity in aquaculture ponds. Taiwan Geosciences Assembly, Taiwan.
- Huang, W.J., Chen, W.M., Yuan, F.L., **Weerathunga, V.**, Lai, C.Y., Kao, K.J., Huang, K.C., Liao, J.S. 2021. How to measure temporal and spatial variations in the partial pressure of carbon dioxide at a lagoon? Ocean Sciences Conference, Taiwan.
- **Weerathunga, V.**, Huang, W.J., Hung, C.C., Dupont, S., Hsieh, H.H., Piyawardhana, N., Yuan, F.L., Kao, K.J., Huang, K.C., Lai, C.Y., Liao, J.S., Chen, W.M., 2021. Immunosuppression of Pacific White Shrimps under Future Ocean Acidification. Ocean Sciences Conference, Taiwan.
- **Weerathunga, V.**, Kuragodage, A.U., Piyawardhana, N., Gayashan, L.P.G.C., Shanika, J.M.A., 2019. Spatial Distribution and Interactions of Environment Components in Galle Coastal Region and its Inter-Relationship with Resource Users. International Research Conference, Uva Wellassa University, Sri Lanka.
- **Weerathunga, V.**, Kokuhennadige, H.N., 2018. Study of the temporal variation of nutrients in Southern coastal waters of Sri Lanka during the Southwest monsoon. National Aquatic

Resources Research and Development Agency (NARA) International Scientific Sessions, Sri Lanka.

Awards, Grants, and Scholarships

- Outstanding graduate student 2024 at department of Oceanography National Sun Yat-sen University, Taiwan
- Research grants for outstanding doctoral students 2023, National Sun Yat-sen University, Taiwan
- Grant for graduate students to participate in international academic conferences 2023, National Science and Technology Council, Taiwan
- Scholarship for outstanding domestic and international doctoral students 2021-2024, National Sun Yat-sen University, Taiwan
- Outstanding teaching assistant award 2023, National Sun Yat-sen University, Taiwan
- Poster competition 2nd place 2023, National Sun Yat-sen University, Taiwan
- Poster competition 2nd place 2021, Ocean Science meeting Taiwan
- International student scholarship 2019-2021, National Sun Yat-sen University, Taiwan

Experience and Skills

Research

- Fifty-eight cruise days aboard R/V NOR 1, R/V NOR 3, and R/V Legend, exploring the carbonate system dynamics in Taiwan Strait, east coast of Taiwan, and western Pacific Ocean.
- Conducted carbonate chemistry research in lagoons and aquaculture ponds.
- Conducted in-door experiments on the impacts of ocean acidification shrimps.

Instruments

- Total alkalinity titrator, dissolved inorganic carbon analyzer, spectrophotometric pH analyzer, underway $p\text{CO}_2 + \delta^{13}\text{CO}_2$ analyzer, underway $p\text{CO}_2$ system, ProOceanus submersible $p\text{CO}_2$ sensor, Equilibrator Inlet Mass Spectrometry

Software

- Python, R Studio, SPSS, Ocean Data View, QGIS, CO2Sys, Arduino, MS Word, MS Excel, MS PowerPoint

Conferences and Meeting Presentations

- Ocean Science Meeting Taiwan 2021, 2022, and 2023
- Japan Geoscience Union Meeting 2023
- Asia Oceania Geosciences Society Meeting 2024

Leadership and Community Services

- 2016/2017 Junior Treasure, Society of Oceanography and Marine Geology, Faculty of Fisheries and Marine Sciences & Technology, Sri Lanka
- 2015/2016 Student Representative, Faculty Board, Faculty of Fisheries and Marine Sciences & Technology, Sri Lanka
- 2015/2016 President, Student Union, Faculty of Fisheries and Marine Sciences & Technology, Sri Lanka
- 2014/2015 Vice President, Student Union, Faculty of Fisheries and Marine Sciences & Technology, Sri Lanka
- 2012/2013 Vice President, District 306A1 Leo Club of Matara Ruhunu Millennium, Sri Lanka