

# CURRICULUM VITAE

**1. Name** Thanh-Son DAO, PhD; Title: Assoc. Prof. (since March 2018)

**2. Professional address** Hochiminh City University of Technology (HCMUT), 268 Ly Thuong Kiet Street, District 10, Hochiminh City, Vietnam

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## 3. Education

1993 – 1997: BSc (in Biology). University of Sciences, VNU-HCM, Vietnam

2000 – 2005: MSc (in Biology, specialization on Ecology). University of Sciences, VNU-HCM, Vietnam

2007 – 2011: PhD (in Biology, specialization on Ecology), Humboldt University. PhD dissertation: *Toxicity of Cyanobacteria and Cyanobacterial Compounds from Tri An Reservoir, Vietnam, to Daphnids*

## 4. Working experiences

1997 – 2005: Researcher of Phytoplankton. Institute of Tropical Biology

2005 – 2014: Researcher of Phytoplankton, Ecotoxicology and Aquatic Ecology. Institute for Environment and Resources (IER), Vietnam; 2011 – 2013: Deputy head, Department of Environmental Toxicology; 2013 – 2014: Head of Department of Environmental Toxicology, IER

2014 – present: Lecturer, Faculty of Environment and Natural Resources, HCMUT, Vietnam; 2014 – Jan 2018: Coordinator of the English Program on the Natural Resources and Environmental Management, HCMUT

## 5. Expertise and research interests

Aquatic ecotoxicology of environmental pollutants (e.g. trace metals, pesticides, herbicides, antibiotics, plastic additives)

Toxic cyanobacteria, cyanotoxins and their toxicity

Biodiversity and ecology of phytoplankton

Water quality monitoring and assessment

## 6. Involved projects

Occurrence of microplastics, and their accumulation in and depuration from blue mussels from Vung Tau coastal water (2020 – 2021, Tc-MTTN-2020-02), Project Investigator. - cancellation of the project

Responses of phytoplankton and zooplankton upon exposures to plastic leachates and cadmium (2020 – 2021, C2020-20-41), Project Investigator.

Application of membrane photo-bioreactor for wastewater treatment coupling with algae biomass cultivation for production of biomaterials (2019 – 2022, Nafosted project no 105.99-2019.27), Project member.

Application of quantitative real-time PCR (Q-PCR) and molecular biology to study cyanotoxins and explore genetic diversity of cyanobacterial population in the Tri An Reservoir (2018 – 2020, Nafosted project no 106.04-2018.314), Project member.

Detrimental impacts of plasticizers on freshwater zooplankton (2019 – 2021, Nafosted project no 106.99-2019.39), Project Investigator.

Plastic in the aquatic environment: sources, transport, ingestion, contamination (2019 – 2021, funded by IRD, France), Project member.

Study on the effective in removal of microcystins, musty odor compounds geosmin and 2-MIB in cyanobacteria isolated from Dau Tieng and Tri An reservoirs by activated carbons derived from coconut shells (2016 – 2018, 106-NN.04-2015.72), Project member.

Cyanobacterial toxin contamination in surface water used for drinking water supplies and community health safety in Southern Vietnam (Tc-MTTN-2016-04), Project Investigator.

Toxicity of cyanobacterial toxins to micro-crustaceans (2015 – 2018, 106-NN.04-2014.69), Project Investigator.

Bioaccumulation of heavy metals and their effects on micro-crustaceans (2014 – 2017, B2014-48-01), Project Investigator.

Effects of cyanobacterial toxins from Xuan Huong Lake, Da Lat, on zebrafish, *Danio rerio* (2013 – 2014, C2013-24-01), Project member

Investigation on cyanobacteria, microcystins and their relationship with environmental parameters from Dau Tieng reservoir (2012 – 2014, B2012-24-01TD), Project Investigator.

Cyanotoxins and changing of cyanobacteria from Tri An Reservoir (2009 – 2011, B2009-24-03), Project Investigator.

## 7. Publications:

### ISI & Scopus journals

Pham, A.D., Le, T.P.D., Nguyen, V.T., Nguyen, P.T., **Dao, T.S.**, 2023. Responses of micro-crustacean, *Daphnia magna*, under trans-generational exposures to single-use plastic leachates. Case Studies in Chemical and Environmental Engineering 8: 100393. <https://doi.org/10.1016/j.cacee.2023.100393>.

Tran, V.Q., Nguyen, V.T., **Dao, T.S.**, 2022. Responses of micro-crustacean, *Daphnia magna*, across five generations continuously exposed to di-2-ethylhexyl phthalate in Mekong river water. Journal of the Polish Mineral Engineering Society 2022 (02), 77-84. <http://doi.org/10.29227/IM-2022-02-09>.

Vo, T.D.H., Pham, M.D.T., Dang, B.T., Tran, C.S., Le, T.S., Nguyen, V.T., Nguyen, T.B., Lin, C., Varjani, S., **Dao, T.S.**, Bui, T.V., Huynh, K.P.H., Bui, X.T., 2022. Influence of nitrogen species and biomass productivity in a microalgae-based bioreactor. Environmental Technology & Innovation 28: 102880. <https://doi.org/10.1016/j.eti.2022.102880>

Nguyen, T.D., Itayama, T., Ramaraj, R., Iwami, N., Shimizu, K., **Dao, T.S.**, Pham, T.L., Maseda, H., 2022. Physiological response of *Simocephalus vetulus* to five antibiotics and their mixture under 48-hour acute exposures. Science of the Total Environment 829: 154585. <https://doi.org/10.1016/j.scitotenv.2022.154585>

Nguyen, A.T., Nemery, J., Gratiot, N., **Dao, T.S.**, Le, T.M.T., Baduel, C., Garnier, J., 2022. Does eutrophication enhance greenhouse gas emission in urbanized tropical estuaries? Environmental Pollution 303: 119105. <https://doi.org/10.1016/j.envpol.2022.119105>

**Dao, T.S.**, Nguyen, V.T., Baduel, C., Bui, M.H., Tran, T.V., Pham, T.L., Bui, B.T., Dinh, K.V., 2022. Toxicity of di-2-ethylhexyl phthalate and tris(2-butoxyethyl) phosphate to a tropical micro-crustacean (*Ceriodaphnia cornuta*) is higher in Mekong River water than in standard laboratory medium. Environmental Science and Pollution Research. DOI: 10.1007/s11356-022-18993-7

Nguyen, V.T., Huynh, A.T., **Dao, T.S.**, 2022. Acute and chronic toxicity of mixture of bisphenol A and trace metals (Cd and Pb) to micro-crustacean, *Daphnia magna*. IOP Conf. Ser.: Earth Environ. Sci. 964: 012012. [Doi:10.1088/1755-1315/964/1/012012](https://doi.org/10.1088/1755-1315/964/1/012012)

Le, T.P.D., Nguyen, V.T., Bui, M.H., Huynh, T.N., Huynh, A.T., Tran, V.Q., Vo, T.M.C., Tran, T., **Dao, T.S.**, 2021. Single and binary effects of di-2-ethylhexyl phthalate and trace metals (Cd, Pb) on life-history traits of *Daphnia magna*. Environmental Quality Management <https://doi.org/10.1002/tqem.21835>

- Nguyen, T.D., Itayama, T., Ramaraj, R., Iwami, N., Shimizu, K., **Dao, T.S.**, Pham, T.L., Maseda, H., 2021. Chronic ecotoxicology and statistical investigation of ciprofloxacin and ofloxacin to *Daphnia magna* under extendedly long-term exposure. *Environmental Pollution* 291: 118095.
- Nguyen, A.T., **Dao, T.S.**, Strady, E., Nguyen, T.T.N., Aime, J., Gratiot, N., Nemery, J., 2021. Phytoplankton characterization in a tropical tidal river impacted by a megacity: the case of the Saigon River (Southern Vietnam). *Environmental Science and Pollution Research* 29(3), 4076-4092. <https://doi.org/10.1007/s11356-021-15850-x>
- Nguyen, A.T., Nemery, J., Gratiot, N., Garnier, J., **Dao, T.S.**, Thieu, V., Laruelle, G.G., 2021. Biogeochemical functioning of an urbanized tropical estuary: implementing the generic C-GEM (reactive transport) model. *Science of the Total Environment* 784, 147261.
- Nguyen, T.D., Ngo, X.Q., Pham, T.L., **Dao, T.S.**, 2020. Ecotoxicological investigation of cyanobacterial crude extracts to *Daphnia magna* under subchronic test conditions. *Turkish Journal of Zoology* 44, 498-507.
- Dinh, K.V., Nguyen, Q.T.T., Vo, T.M.C., Bui, T.B., **Dao, T.S.**, Tran, D.M., Doan, N.X., Truong, T.S.H., Wisz, M.S., Nielsen, T.G., Vu, M.T.T., Le, M.H., 2020. Interactive effects of extreme temperature and a widespread coastal metal contaminant reduce the fitness of a common tropical copepod across generations. *Marine Pollution Bulletin* 159, 111509.
- Bui, X.T., Vo, T.D.H., Nguyen, P.T., Nguyen, V.T., **Dao, T.S.**, Nguyen, P.D., 2020. Microplastics pollution in wastewater: characteristics, occurrence and removal technologies. *Environmental Technology & Innovation* 19, 101013.
- Vo, T.M.C., Bui, B.T., Wiegand, C., Dinh, K.V., **Dao, T.S.**, 2020. Responses of a tropical micro-crustacean, *Daphnia lumholtzi*, upon exposures to dissolved toxins and living cells of cyanobacteria. *Environmental Technology & Innovation* 19, 100973.
- Pham, T.L., **Dao, T.S.**, Pham, N.K.T., Bui, H.N., Ngo, T.T.H., Bui, M.H., 2020. Lipid production combined with removal and bioaccumulation of Lead (Pb) by the green alga *Scenedesmus* sp. *Polish Journal of Environmental Studies* 29(2), 1785-1791.
- Bui, T. **Dao, T.S.**, Faassen, E., Lurling, M., 2018. Cyanobacterial blooms and microcystins in Southern Vietnam. *Toxins* 10(11), 471. doi.org/10.3390/toxins1011047.
- Vo, T.M.C., Pham, N.H., Nguyen, T.D., Bui, M.H., **Dao, T.S.**, 2018. Development of *Daphnia magna* under exposure to ampicillin. *Architecture Civil Engineering Environment* 11(3), 147-152.
- Dao, T.S.**, Vo, T.M.C., Wiegand, C., Bui, B.T., Dinh, V.K., 2018. Transgenerational effects of cyanobacterial toxins on a tropical micro-crustacean *Daphnia lumholtzi* across three generations. *Environmental Pollution* 243 (B), 791-799.
- Bui, T., **Dao, T.S.**, Vo, T.G., Lurling, M., 2018. Warming affects growth rates and microcystin production in tropical bloom-forming *Microcystis* strains. *Toxins* 10 (3), 123. DOI:10.3390/toxins10030123
- Pham, T.L., Shimizu, K., **Dao, T.S.**, Motoo, U., 2017. First report on free and covalently bound microcystins in fish and bivalves from Vietnam: Assessment of risks to humans. *Environmental Toxicology and Chemistry* 36 (11), 2953-2957.
- Bui, M.H., Pham, T.L., **Dao, T.S.**, 2017. Prediction of cyanobacterial blooms in the Dau Tieng reservoir using artificial neural network. *Marine and Freshwater Research* 68 (11), 2070-2080.
- Pham, T.L., **Dao, T.S.**, Tran, N.D., Nimptsch, J., Wiegand, C., Motoo, U., 2017. Influence of environmental factors on cyanobacterial biomass and microcystin concentration in the Dau Tieng Reservoir, a tropical eutrophic water body in Vietnam. *International Journal of Limnology* 53, 89-100.
- Dao, T.S.**, Le, V.N., Bui, B.T., Dinh, K.V., Wiegand, C., Nguyen, T.S., Dao, C.T., Nguyen, V.D., To, T.H., Nguyen, L.S.P., Vo, T.G., Vo, T.M.C., 2017. Sensitivity of a tropical micro-crustacean (*Daphnia lumholtzi*) to trace metals tested in natural water of the Mekong River. *Science of the Total Environment* 571, 1360-1370.
- Pham, A.D., Nguyen, T.M.L., Nguyen, T.T.H., **Dao, T.S.**, 2017. Ecological health monitoring used for river ecosystems in Vietnam: challenges and prospects. *Proceedings of the 1<sup>st</sup> International Conference on Environmental Technology and Innovations, Hochiminh City.* 187 – 195.

- Dang, M.T., Pham, A.D., **Dao, T.S.**, Lapcik, V., 2017. Benthic macroinvertebrates from Dongnai estuaries in Southern Vietnam. Proceedings of the 1<sup>st</sup> International Conference on Environmental Technology and Innovations, Hochiminh City. 203 – 208.
- Dao, T.S.**, Nguyen, T.P.L., Vo, T.K.T., 2017. Toxicity of cyanobacterial extract from *Cylindrospermopsis raciborskii* and potential solutions for mitigation the cyanobacterial mass development in Xuan Huong Lake, Da Lat City, Vietnam. Proceedings of the 1<sup>st</sup> International Conference on Environmental Technology and Innovations, Hochiminh City. 213 – 217.
- Dao, T.S.**, Wiegand, C., Nimptsch, J., 2016. Dynamics of cyanobacteria and cyanobacterial toxins and their correlation with environmental parameters in Tri An Reservoir, Vietnam. Journal of Water and Health, 14 (4), 699-712.
- Pham, T.L., Shimizu, K., Kanazawa, A., Gao, Y., **Dao, T.S.**, Utsumi, M., 2016. Microcystin accumulation and biochemical responses in the edible clam *Corbicula leana* P. exposed to cyanobacterial crude extract. Journal of Environmental Sciences 44, 120-130.
- Bui, T.K.L., Do-Hong, L.C., **Dao, T.S.**, Hoang, T.C., 2016. Copper toxicity and the influence of water quality of Dongnai River and Mekong River waters on copper bioavailability and toxicity to three tropical species. Chemosphere 144, 872-878.
- Pham, T.L., **Dao, T.S.**, Shimizu, K., Yu, G., Do-Hong, L.C., Sugiura, N., Utsumi, M., 2016. Isolation and characterization of microcystin-producing cyanobacteria from Dau Tieng Reservoir, Vietnam. Nova Hedwigia 101 (1-2), 3-20.
- Pham, T.L., Shimidu, K., **Dao, T.S.**, Do-Hong, L.C., Utsumi, M., 2015. Microcystin uptake and biochemical responses in the freshwater clam *Corbicula leana* P. exposed to toxic and non-toxic *Microcystis aeruginosa*: evidence of tolerance to cyanotoxins. Toxicology Reports 2, 88-98.
- Dao, T.S.**, Ortiz-Rodriguez, R., Do-Hong, L.C., Wiegand, C., 2013. Non-microcystin and non-cylindrospermopsin producing cyanobacteria affect the biochemical responses and behavior of *Daphnia magna*. Journal of International Review of Hydrobiology 98, 235-244.
- Duong, T.T., Le, T.P.Q., **Dao, T.S.**, Pflugmacher, S., Rochelle-Newall, E., Hoang, T.K., Vu, T.N., Ho, C.T., Dang, D.K., 2013. Seasonal variation of cyanobacteria and microcystins in the Nui Coc Reservoir, Northern Vietnam. Journal of Applied Phycology 25, 1065-1075.
- Ortiz-Rodriguez, R., **Dao, T.S.**, Wiegand, C., 2012. Transgenerational effects of microcystin-LR on *Daphnia magna*. The Journal of Experimental Biology 215, 2795 – 2805.
- Dao, T.S.**, Cronberg, G., Nimptsch, J., Do-Hong, L.C., Wiegand, C., Toxic cyanobacteria from Tri An Reservoir, Vietnam, 2010. Nova Hedwigia 90, 433-448.
- Dao, T.S.**, Do-Hong, L.C., Wiegand, C., 2010. Chronic effects of cyanobacterial toxins on *Daphnia magna* and their offspring, 2010. Toxicon 55, 1244-1254.

**Others:** More than 70 publications (mostly in English) on regional and Vietnamese journals and proceedings

- Books:** (1) Dang, D.K., Duong, T.T., Nguyen, T.T.L., **Dao, T.S.**, Le, T.P.Q., Do-Hong, L.C., 2014. Toxic Freshwater Cyanobacteria (*in Vietnamese*). Natural Science and Technology Publisher. 327 pp;
- (2) Do-Hong, L.C., Bui, L.T.K., **Dao, T.S.**, 2014. Ecotoxicology (*in Vietnamese*). The Vietnam National University - Hochiminh City Publisher, 378 pp.
- (3) **Dao, T.S.**, Phan, Q.H., Vo, T.M.C., Le, T.P.D., 2022. Impacts of Plastic Leachate on Life Traits of Micro-Crustacean Across Two Generations. In: Sheraz, S., Singh, R., (Eds) Innovative Approaches for Sustainable Development: Theories and Practices in Agriculture. Springer, pp 311-327. [10.1007/978-3-030-90549-1\\_20](https://doi.org/10.1007/978-3-030-90549-1_20)

## 8. Conference contribution

More than 80 presentations in conferences on Environment, Ecology and Toxicology (e.g. SETAC, ICHA, ...)

The 5<sup>th</sup> International Symposium on Environmental Analytical Chemistry (ISEAC 5 – Asia), Hochiminh City, Vietnam. 17 – 20 May 2017. Organizing committee

The 2<sup>nd</sup> Green Technologies for Sustainable Water Conference, CMC, Vietnam. 1–5 Dec. 2019. Organizing committee

The 1<sup>st</sup> symposium on Water Sustainability and Green Technologies (WSGT 2022). HCMC, Vietnam. 25–26/11/2022. Organizing committee

## **9. Supervision & internationally educational collaboration**

Having been supervising 16 MSc and 40 BSc students since 2012

Since 2015

Co-supervising a PhD student (Mr. Ba-Trung Bui) conducting his PhD project in Wageningen University, the Netherland (Prof. Miquel Lüring is the main supervisor; email: [miquel.lurling@wur.nl](mailto:miquel.lurling@wur.nl)).

Co-supervising a PhD student (Mr. Truong-An Nguyen) conducting his PhD project in Grenoble University, France (Prof. Julien Némery is the main supervisor; email: [julien.nemery@gmail.com](mailto:julien.nemery@gmail.com)). Successful defense in Dec 2021.

Since January 2018: invited lecturer by Loyola University Chicago (LUC director, Vietnam Center: Dr. Richard Albright; email: [ralbright@luc.edu](mailto:ralbright@luc.edu))

## **10. Scientific association membership**

International Society for the Study of Harmful Algae (ISSHA): 2009 – 2012

Society of Environmental Toxicology and Chemistry (SETAC): 2009 – 2014; 2023 - present

Suan Sunandha Science and Technology Journal (SSSTJ, Thailand): Editorial board since Dec. 2018

## **11. Referee work**

Environmental Pollution; Chemosphere; Environmental Science and Management; Science of the Total Environment; Environmental Monitoring and Assessment; Current Pollution Reports; Environmental Technology & Innovation; Environmental Science and Pollution Research; Aquatic Toxicology; Frontiers in Marine Science; Journal of Environmental Science and Health – Part A; Regional Studies in Marine Science; Algal Research; Ecotoxicology and Environmental Safety; Journal of GeoScience Engineering; Suan Sunandha Science and Technology Journal (SSSTJ, Thailand); Journal of Vietnamese Environment; Vietnam Journal of Science and Technology; VNU Journal of Science and Technology Development; Vietnam Journal of Science, Technology and Engineering (VJSTE); ...