

Note: Students who plan to enroll in the Master's program of the **Division of Marine Chemistry and Geology** should apply to the Department of Oceanography; students who plan to enroll in the Ph.D. program, must hold a Master's diploma in related fields, should apply to the **International Doctoral Program of Marine Science and Technology** in the application system.



Liu, James T., Professor (Ph.D., Stony Brook University, USA)

E-mail: james@mail.nsysu.edu.tw

Phone: 886-7-5255144

Expertise: Coastal Geology and Processes, Coastal Sediment Dynamics, Coupling between Physics and Biogeochemistry in River Plume Regimes

Research interests: Source-to-Sink Processes and Records across Space and Time

Selected publications (up to 5 papers; *corresponding author):

1. **Liu, J.T.**, Huang, B., Chang, Y. Du, X., Liu, X., Yang, R. J., Hsu, R.T., Lin, S., Hung, J.J., Lee, J., Su, C.C., & Chang, Y.-P. (2019) Three-dimensional coupling between size-fractionated chlorophyll-a, POC and physical processes in the Taiwan Strait in summer. *Progress in Oceanography*, 176, 102129. <https://doi.org/10.1016/j.pocean.2019.102129>
2. **Liu, J.T.**, Hsu, R.T., Yang, R.J., Wang, Y.P., Wu, H., Du, X., Li, A., Chien, S.C., Lee, J., Yang, S., Zhu, J., Su, C.C., Chang, Y., & Huh, C.-A. (2018) A comprehensive sediment dynamics study of a major mud belt system on the inner shelf along an energetic coast. *Scientific Reports*, 8(1), 4229. <https://doi.org/10.1038/s41598-018-22696-w>
3. Yang, R.J., **Liu***, J.T., Fan, D., Burr, G.S., Lin, H.-L., & Chen, T.-T. (2017) Land-sea duel in the late Quaternary at the mouth of a small river with high sediment yield. *Journal of Asian Earth Sciences*, 143, 59-76. <http://dx.doi.org/10.1016/j.jseaes.2017.03.028>
4. Lee, J., **Liu***, J.T., Hung, C.-C., & Du, X. (2016) River plume induced variability suspended particle characteristics. *Marine Geology*, 380, 219-230. <http://dx.doi.org/10.1016/j.margeo.2016.04.014>
5. **Liu, J.T.**, Hsu, R.T., Hung, J.J., Kao, S.J., Chang, Y.P., Huh, C.A., Wang, Y.H., Lee, C.L., & Yang, R.J. (2016) From the highest to the deepest: The Gaoping River-Gaoping Submarine Canyon dispersal system. *Earth-Science Reviews*, 153, 274-300. <http://dx.doi.org/10.1016/j.earscirev.2015.10.012>



Lin, Hui-Ling, Professor (Ph.D., University of Miami, USA)

E-mail: hllin@mail.nsysu.edu.tw

Phone: 886-7-5252000 ext. 5139

Expertise: Paleoceanography, Marine Geology

Research interests: Foraminifera, Stable Isotopes

Selected publications (up to 5 papers; *corresponding author):

1. Lui, H.-K., Chen, K.-Y., Chen, C.-T.A., Wang, B.-S., **Lin, H.-L.**, Ho, S.-H., Tseng, C.-J., & Chan, J.-W. (2018) Physical forcing-driven productivity and sediment flux to the deep basin of northern South China Sea: A decadal time series study. *Sustainability*, 10, 971. <https://doi.org/10.3390/su10040971>
2. Chen, C.-H. & **Lin, H.-L.** (2017) Applying benthic foraminiferal assemblage to evaluate the coral reef condition in Dongsha Atoll lagoon. *Zoological Studies*, 56:20. [doi:10.6620/ZS.2017.56-20](https://doi.org/10.6620/ZS.2017.56-20)
3. Yang, R. J., Liu, J. T., Fan, D., Burr, G. S., **Lin, H.-L.**, & Chen, T.-T. (2017) Land-sea duel in the late Quaternary at the mouth of a small river with high sediment yield, *Journal of Asian Earth Sciences*, 143, 59-76. <http://dx.doi.org/10.1016/j.jseaes.2017.03.028>
4. **Lin, H.-L.*** (2014) The seasonal succession of modern planktonic foraminifera: Sediment traps observation from southwest Taiwan waters. *Continental Shelf Research*, 84, 13-22. <https://doi.org/10.1016/j.csr.2014.04.020>
5. **Lin, H.-L.***, Sheu, D.-D., Yang, Y., Chou, W.-C., & Hung, G.-W. (2011) Stable isotopes in modern planktonic foraminifera: Sediment trap and plankton tow results from the South China Sea, *Marine Micropaleontology*, 79, 15-33. <https://doi.org/10.1016/j.marmicro.2010.12.002>



Hung, Chin-Chang, Professor (Ph.D., Old Dominion University, USA)

E-mail: cchung@mail.nsysu.edu.tw

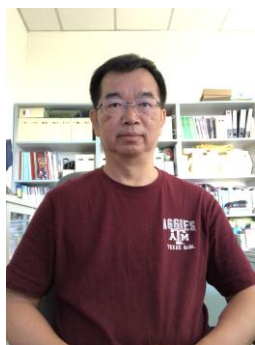
Phone: 886-7-5255490

Expertise: Marine Chemistry, Biogeosciences, Marine Environmental Chemistry

Research interests: Marine Carbon Cycle, Typhoon, Smart Aquaculture, Impacts of Ocean Acidification on Marine Organisms

Selected publications (up to 5 papers; *corresponding author):

1. Shih, Y.-Y., **Hung***, C.-C., Huang, S.-Y., Muller, F.L.L., & Chen Y.-H. (2020) Biogeochemical variability of the upper ocean response to typhoons and storms in the northern South China Sea. *Frontiers in Marine Science*, 7:151. <https://doi.org/10.3389/fmars.2020.00151>
2. Shih, Y.-Y., Lin, H.-H., Li, D., Hsieh, H.-H., **Hung***, C.-C., & Chen, C.-T.A. (2019) Elevated carbon flux in deep waters of the South China Sea. *Scientific Reports*, 9:1496. <https://doi.org/10.1038/s41598-018-37726-w>
3. Li, D., Chou, W.-C., Shih, Y.-Y., Chen, G.-Y., Chang, Y., Chow, C. H., Lin, T.-Y., & **Hung***, C.-C. (2018) Elevated particulate organic carbon export flux induced by internal waves in the oligotrophic northern South China Sea. *Scientific Reports*, 8:2042. <https://doi.org/10.1038/s41598-018-20184-9>
4. **Hung***, C.-C., Tsao, S.-C., Huang, K.-H., Jang, J.-P., Chang, H.-K., & Dobbs, F.C. (2016) A highly sensitive underwater video system for use in turbid aquaculture ponds. *Scientific Reports*, 6:31810. <https://doi.org/10.1038/srep31810>
5. **Hung***, C.-C., Chen, Y.-F., Hsu, S.-C., Wang, K., Chen, J.F., & Burdige, D.J. (2016) Using rare earth elements to constrain particulate organic carbon flux in the East China Sea. *Scientific Reports*, 6:33880. <https://doi.org/10.1038/srep33880>



Jiann, Kuo-Tung, Associate Professor (Ph.D., Texas A&M University, USA)

E-mail: ktjiann@fac.nsysu.edu.tw

Phone: 886-7-5252000 ext. 5160

Expertise: Trace Element Biogeochemistry, Trace Analysis of Natural Material, Estuarine and Coastal Processes

Research interests: Distribution and Process Involving Trace Elements, Terrestrial Influence of Trace Elements in the Ocean

Selected publications (up to 5 papers; *corresponding author):

1. **Jiann, K.-T.**, Wen, L.-S., & Wei, C.-L. (2014) Spatial and temporal distribution of trace metals (Cd, Cu, Ni, Pb, and Zn) in near-shore waters off the west coast of Taiwan. *Terrestrial, Atmospheric and Oceanic Sciences*, 25, 121-135. [DOI: 10.3319/TAO.2013.09.13.01\(Oc\)](https://doi.org/10.3319/TAO.2013.09.13.01(Oc))
2. **Jiann, K.-T.**, Santschi, P.H., & Presley, B.J. (2013) Relationships between geochemical parameters (pH, DOC, SPM, EDTA concentrations) and trace metal (Cd, Co, Cu, Fe, Mn, Ni, Pb, Zn) concentrations in river waters of Texas (USA). *Aquatic Geochemistry*, 19, 173-193. <https://doi.org/10.1007/s10498-013-9187-6>
3. **Jiann, K.-T.** & Wen, L.-S. (2012) Distribution and lability of dissolved iron in surface waters of marginal seas in southeastern Asia. *Estuarine, Coastal and Shelf Science*, 100, 142-149. <https://doi.org/10.1016/j.ecss.2012.01.006>
4. **Jiann, K.-T.** & Wen, L.-S. (2009) Intra-annual variability of distribution patterns and fluxes of dissolved trace metals in a subtropical estuary (Danshuei River, Taiwan). *Journal of Marine Systems*, 75, 87-99. <https://doi.org/10.1016/j.jmarsys.2008.08.002>
5. **Jiann, K.-T.**, Wen, L.-S., & Santschi, P.H. (2005) Trace metal (Cd, Cu, Ni and Pb) partitioning, affinities and removal in the Danshuei River estuary, a macro-tidal, temporally anoxic estuary in Taiwan. *Marine Chemistry*, 96, 293-313. <https://doi.org/10.1016/j.marchem.2005.03.001>



**Muller, François Lucien Leon, Associate Professor
(Ph.D., University of Rhode Island, USA)**

E-mail: fmuller@mail.nsysu.edu.tw

Phone: 886-7-5252000 ext. 5104

Expertise: Electroanalytical Chemistry of Seawater; Inorganic Trace Analysis of Seawater, Isolation and Analysis of Aquatic Colloids

Research interests: The main thrust of my recent work has been on land-ocean interactions, specifically the fate of land-derived carbon and trace metals as organic-rich plumes travel away from river mouths and mix with surrounding ocean waters. I am also interested in the development of analytical methods required to study biogeochemical processes along the land-ocean aquatic continuum where their characterisation is challenging owing to the inherent measurement difficulties and the intensification of processes.

Selected publications (up to 5 papers; *corresponding author):

1. **Muller, F.L.L.** (2018) Exploring the potential role of terrestrially derived humic substances in the marine biogeochemistry of iron. *Frontiers in Earth Science*, 6:159. <https://doi.org/10.3389/feart.2018.00159>
2. **Muller, F.L.L.** & Cuscov, M. (2017) Alteration of the copper-binding capacity of iron-rich humic colloids during transport from peatland to marine waters. *Environmental Science and Technology*, 51, 3214-3222. <https://doi.org/10.1021/acs.est.6b05303>
3. Cuscov, M. & **Muller, F.L.L.** (2015) Differentiating humic and algal surface-active substances in coastal waters by the pH-dependent adsorption behaviour. *Marine Chemistry*, 174, 35-45. <https://doi.org/10.1016/j.marchem.2015.05.002>
4. Batchelli, S., **Muller, F.L.L.**, Chang, K.-C., & Lee, C.-L. (2010) Evidence for strong but dynamic iron-humic colloidal association in humic-rich coastal waters. *Environmental Science and Technology*, 44, 8485–8490. <https://doi.org/10.1021/es101081c>



Chang, Yuan-Pin, Associate Professor (Ph.D., National Taiwan Ocean University, Taiwan)

E-mail: yuanppin.chang@mail.nsysu.edu.tw

Phone: 886-7-5252000 ext. 5161

Expertise: Marine Geology, Paleoceanography, Marine Micropaleontology, Organic Geochemistry

Research interests: Quaternary Climatic Changes, Source to Sink of Terrigenous Organic Matters, Event Layers in Marine Sediments

Selected publications (up to 5 papers; *corresponding author):

1. Wang, L.-C., Chou, Y.-M., Chen, H.-F., **Chang, Y.-P.**, Chiang, H.-W., Yang, T.-N., Shiau, L.-J., & Chen, Y.-G. (2020) Paleolimnological evidence for lacustrine environmental evolution and paleo-typhoon records during the late Holocene in eastern Taiwan. *Journal of Paleolimnology*, 41, 315-326. <https://doi.org/10.1007/s10933-008-9227-1>
2. Chien, C.-W., **Chang, Y.-P.**, & Yang, K.-M. (2020) *Cyclohelena formosaensis* gen. nov. et sp. nov.: a new benthic foraminifer from southern Taiwan. *Journal of Foraminiferal Research*, 50, 301-312. <https://doi.org/10.2113/gsjfr.50.3.301>
3. Deng, K., Yang, S., Bi, L., **Chang, Y.-P.**, Su, N., Frings, P., & Xie, X. (2019) Small dynamic mountainous rivers in Taiwan exhibit large sedimentary geochemical and provenance heterogeneity over multi-spatial scales. *Earth and Planetary Science Letters*, 505, 96-109. <https://doi.org/10.1016/j.epsl.2018.10.012>
4. Wang, L.-C., **Chang, Y.-P.**, Li, H.-C., Chen, S.-H., Wu, J.-T., Lee, T.-Q., & Shiau, L.-J. (2018) Revealing the vegetation, fire and human activities in the lowland of eastern Taiwan during Late Holocene. *Quaternary International*, 544, 32-40. <https://doi.org/10.1016/j.quaint.2018.08.003>
5. Li, D.-W., **Chang, Y.-P.**, Li, Q., Zheng, L., Ding, X., & Kao, S.-J. (2018) Effect of sea-level on organic carbon preservation in the Okinawa Trough over the last 91 kyr. *Marine Geology*, 399, 148-157. <https://doi.org/10.1016/j.margeo.2018.02.013>



Lin, Yu-Shih, Associate Professor (Ph.D., Bremen University, Germany)

E-mail : yushih@mail.nsysu.edu.tw

Phone : 886-7-5252000 ext. 5492

Expertise: Isotope Geochemistry, Organic Geochemistry

Research interests: Carbon Cycle of Shallow and Deep Hydrothermal Systems, Carbon Cycle of Marine Sediment

Selected publications (up to 5 papers; *corresponding author):

1. **Lin, Y.-S.**, Lin, H.-T., Wang, B.-S., Huang, W.-J., Lin, L.-H., & Tsai, A.-Y. (2020) Intense but variable autotrophic activity in a rapidly flushed shallow-water hydrothermal plume (Kueishantao Islet, Taiwan). *Geobiology*, <https://doi.org/10.1111/gbi.12418>
2. **Lin, Y.-S.**, Lee, J., Lin, L.-H., Fu, K.-H., Chen, C.-T.A., Wang, Y.-H., & Lee, I.-H. (2020) Biogeochemistry and dynamics of particulate organic matter in a shallow-water hydrothermal field (Kueishantao Islet, NE Taiwan). *Marine Geology*, 422, 106121. <https://doi.org/10.1016/j.margeo.2020.106121>
3. **Lin, Y.-S.**, Lin, H.-T., Wang, B.-S., Wu, S.-F., Wang, P.-L., Wei, C.-L., Lee, H.-F., Lan, T., Huang, W.-J., Chen, S.-C., Wang, Y., & Su, C.-C. (2019) Early diagenesis and carbon remineralization in young rift sediment of the Southern Okinawa Trough. *Terrestrial, Atmospheric and Oceanic Sciences*, 30, 633-647. <https://doi.org/10.3319/TAO.2019.01.10.01>
4. **Lin, Y.-S.**, Lui, H.-K., Lee, J., Chen, C.-T.A., Burr, G.S., Chou, W.-C., & Kuo, F.-W. (2019) Fates of vent CO₂ and its impact on carbonate chemistry in the shallow-water hydrothermal field offshore Kueishantao Islet, NE Taiwan. *Marine Chemistry*, 210, 1-12. <https://doi.org/10.1016/j.marchem.2019.02.002>
5. **Lin, Y.-S.**, Koch, B.P., Feseker, T., Ziervogel, K., Goldhammer, T., Schmidt, F., Witt, M., Kellermann, M.Y., Zabel, M., Teske, A., & Hinrichs, K.-U. (2017) Near-surface heating of young rift sediment causes mass production and discharge of reactive dissolved organic matter. *Scientific Reports*, 7, 44864. <https://doi.org/10.1038/srep44864>



Huang, Wei-Jen, Assistant Professor (Ph.D., University of Georgia, USA)

E-mail: wjhuang29@mail.nsysu.edu.tw

Phone: 886-7-5252000 ext. 5143

Expertise: Marine chemistry, Biogeochemistry

Research interests: Coastal Carbonate System, Lagoon Biogeochemistry
Air-sea Gas Exchanges

Selected publications (up to 5 papers; *corresponding author):

1. **Huang, W.-J.**, Kao, K.-J., Lin, Y.-S., Chen, C.T.A., & Liu, J.T. (2020) Daily to weekly impacts of mixing and biological activity on carbonate dynamics in a large river-dominated shelf. *Estuarine, Coastal and Shelf Science*, 245:106914.
<https://doi.org/10.1016/j.ecss.2020.106914>
2. **Huang, W.-J.**, Cai, W.-J., Xie, X., & Li, M. (2019) Wind-driven lateral variations of partial pressure of carbon dioxide in a large estuary. *Journal of Marine Systems*, 195, 67-73.
<https://doi.org/10.1016/j.jmarsys.2019.03.002>
3. **Huang, W.-J.**, Cai, W.-J., Wang, Y., Lohrenz, S.E., & Murrell, M.C. (2015) The carbon dioxide system on the Mississippi River-dominated continental shelf in the northern Gulf of Mexico: 1. Distribution and air-sea CO₂ flux. *Journal of Geophysical Research Oceans*, 120, 1429-1445. <https://doi.org/10.1002/2014JC010498>
4. **Huang, W.-J.**, Cai, W.-J., Wang, Y., Hu, X., Chen, B., Lohrenz, S.E., Chakraborty, S., He, R., Brandes, J., & Hopkinson, C.S. (2015) The response of inorganic carbon distributions and dynamics to upwelling-favorable winds on the northern Gulf of Mexico during summer. *Continental Shelf Research*, 111, 211-222. <https://doi.org/10.1016/j.csr.2015.08.020>
5. **Huang, W.-J.**, Cai, W.-J., Castelao, R.M., Wang, Y., & Lohrenz S.E. (2013) Effects of a wind-driven cross-shelf large river plume on biological production and CO₂ uptake on the Gulf of Mexico during spring. *Limnology and Oceanography*, 58, 1727-1735.
<https://doi.org/10.4319/lo.2013.58.5.1727>



Lui, Hon-Kit, Assistant Professor (Ph.D., National Sun Yat-sen University, Taiwan)

E-mail: hklui@mail.nsysu.edu.tw

Phone: 886-7-5252000 ext. 5119

Expertise: Chemical Oceanography, Carbonate Chemistry, Carbon Cycle, Ocean Biogeochemistry

Research interests: Ocean Acidification, Deoxygenation, Coastal Hypoxia, Marine Pollution, Global Change

Selected publications (up to 5 papers; *corresponding author):

1. **Lui***, H.K., Chen*, C.T.A., Hou, W.P., Liau, J.M., Chou, W.C., Wu, C.R., Lee, J., & Choi, Y.Y. (2020) Intrusion of Kuroshio helps to diminish coastal hypoxia in the coast of northern South China Sea. *Frontiers in Marine Science*, 7:565952. <https://doi.org/10.3389/fmars.2020.565952>
2. **Lui***, H.K., Chen, K.Y., Chen, C.T.A., Wang, B.S., Lin, H.L., Ho, S.H., Tseng, C.J., Yang, Y., & Chan, J.W. (2018) Physical forcing-driven productivity and sediment flux to the deep basin of northern South China Sea: a decadal time series study. *Sustainability*, 10, 971. <https://doi.org/10.3390/su10040971>
3. Chen*, C.T.A., **Lui***, H.K., Hsieh, C.H., Yanagi, T., Kosugi, N., Ishii M., & Gong, G.C. (2017) Deep oceans may acidify faster than anticipated due to global warming. *Nature Climate Change*, 7, 890-894. <https://doi.org/10.1038/s41558-017-0003-y>
4. **Lui**, H.K. & Chen, C.T.A.* (2017) Reconciliation of pH_{25} and $\text{pH}_{\text{insitu}}$ acidification rates of the surface oceans: a simple conversion using only in situ temperature. *Limnology and Oceanography: Methods*, 15, 328-335. <https://doi.org/10.1002/lom3.10170>
5. **Lui**, H.K. & Chen, C.T.A.* (2015) Deducing acidification rates based on short-term time series. *Scientific Reports*, 5, 11517. <https://doi.org/10.1002/lom3.10170>