

**Michelle (Chih-Hsien) Lin**

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Graduate Research Assistant (PhD candidate)

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**EDUCATIONS:**

- 2007-2009 Master of Science, Oceanography, National Taiwan University, Taipei, Taiwan. Thesis title: "Seasonal succession of phytoplankton pigment and its composition in Fei-Tsui reservoir." Advisor: Dr. Fuh-Kwo Shiah.
- 2004-2007 Bachelor of Science, Environmental Biology and Fishery Science, National Taiwan Ocean University, Keelung, Taiwan. Advisor: Dr. Kwo-Ping Chiang.

**WORK EXPERIENCES:**

- 2013-present University of Maryland Center For Environmental Science at Horn Point Laboratory  
Dr. Patricia Glibert— Graduate Research Assistant
- 2009-2013 Research Center for Environmental Changes, Academia Sinica, Nankang Taipei, Taiwan.  
Dr. Fuh-Kwo Shiah—Research Assistant
- 2005-2007 Environmental Biology and Fishery Science, National Taiwan Ocean University, Keelung, Taiwan. Dr. Kwo-Ping Chiang—Research Assistant
- 2004-2005 Environmental Biology and Fishery Science, National Taiwan Ocean University, Keelung, Taiwan. Dr. S.Y. Cheng—Teaching Assistant for college students: Course of Biology

**RESEARCH INTERESTS:**

My research interests are ecology of phytoplankton bloom, trophic interactions involving microorganisms and mixotrophic behavior among phytoplankton taxa. The main focus of my work includes environmental factors to affect mixotrophic behavior, quantifying their role in nutrient transfer through food web and an application of quantitatively understanding to simple mathematical modeling.

**AWARDS and HONORS:**

- 2017 A Bay and Rivers Scholarship/Ryan Saba Fellowship in the amount of \$1,000 for research needs
- 2016 Horn Point Laboratory Student Travel Award to Ocean Science Meeting
- 2015-2017 Horn Point Laboratory Assistantship: annual stipend of \$22,000, tuition (up to 10 credits per semester) and Maryland state health insurance
- 2013-2015 Taiwanese Government Study Aboard Scholarship Award (only for PhD degree)  
Ministry of Education: a stipend amount of US \$16,000 per year
- 2009 Dean's Award-Best Graduate Student Poster Presentation (College of Science, NTU)
- 2006 College Student Research Creativity Fellowship Award  
National Science Council, Taiwan from July 1<sup>st</sup>, 2006 to February 28, 2007

**PROJECT PARTICIPIATIONS:**

- 2013-presnet Harmful algae in Chesapeake Bay—A study focused on *Karlodinium veneficum* applying time

- series, physiological and modeling approaches
- 2007-2012 Time-series Observation and Research of Fei-Tsui Reservoir—Typhoon effects on plankton's activities and DOC Inventory in a subtropical reservoir
- 2010-2012 Ocean Acidification in the South China Sea: Comparative biogeochemistry in shallow-water tropical coral reef ecosystems in a naturally acidic marine environment
- 2010-2011 Preliminary Investigation of the Dongsha Atoll in the northern South China Sea
- 2008-2009 Impact of Typhoons on the Ocean in the Pacific (ITOP)—Effects of typhoons on phytoplankton and DOC dynamics in the western Pacific
- 2008-2009 Assessment of potential impacts of changing river flows and water quality on coastal zone primary productivity and human health in Taiwan: the Tanshui River Estuary
- 2007-2009 Long-term Observation and Research of the East China Sea; LORECES—Effect of riverine and atmospheric material on the biogeochemical function
- 2005-2007 Taiwan College Student Research Project—Effects of temperature and light on mixotrophic dinoflagellate in the coastal water of northeast Taiwan

#### RESEARCH SKILLS:

**HPLC (pigment analysis for phytoplankton community), HPSEC (for molecular weight distribution of organic carbon), Phyto-PAM II (Walz, Germany), Flow cytometer, Primary production ( $^{14}\text{C}$ ) and Bacterial production ( $^3\text{H}$ -thymidine), Algal culture (freshwater & marine spp.) using batch culture and chemostat culture, Flagellate taxonomy using epifluorescence microscope, POC & DOC analysis, Major nutrient analysis, and Programming experiences with MATLAB, R, SAS and MySQL.**

#### PUBLICATIONS:

- 2016 **C.H. Lin**, S. Accoroni, and P.M. Glibert. Mixotrophic dinoflagellate *Karlodinium veneficum* under variable nitrogen:phosphorus stoichiometry: feeding responses to prey and its effects on the eastern oyster (*Crassostrea virginica*). Aquatic Microbial Ecology. (submitted)
- 2016 M.F. Chow, F.K. Shiah, C.C. Lai, H.Y. Kuo, K.W. Wang, **C.H. Lin**, T.Y. Chen, Y. Kobayashi, C.Y. Ko. Evaluation of surface water quality using multivariate statistical techniques: a case study of Fei-Tsui Reservoir basin, Taiwan. Environmental Earth Sciences **75**:6
- 2013 C.C. Lai, Y.W. Fu, H.B. Liu, H.Y. Kuo, H.Y. Wang, **C.H. Lin**, J.H. Tai, G. Wong, K.Y. Lee, T.Y. Chen. Distinct bacterial production-DOC-primary production relationship and implications for biogenic C-cycling in the South China Sea Shelf. Biogeosciences Discussion **10**: 9069-9090
- 2010 Y. F. Tseng, T.C. Hsu, Y.L. Chen, S.J. Kao, J.T. Wu, J.C. Lu, C.C. Lai, H.Y. Kuo, **C.H. Lin**, Y. Yamamoto, T. Xiao and F.K. Shiah. Typhoon effects on DOC dynamics in a phosphate-limited reservoir. Aquatic Microbial Ecology **60** :247-260

#### MANUSCRIPTS:

- 2017 **C.H. Lin**, V. Lyubchich and P. M. Glibert. Trends in harmful algal species *Karlodinium veneficum* in the Chesapeake Bay using advanced time series approaches. Limnology and Oceanography (in prep.)
- 2017 **C.H. Lin** and P. M. Glibert. Growth and photosynthetic responses of mixotrophic *Karlodinium* to different concentrations of prey and prey species. Harmful algae (in prep.)

**PRESENTATIONS & MEETING PARTICIPATIONS:**

- 2016 The Ocean Sciences Meeting, New Orleans, Louisiana, USA. **C.H. Lin**, Stefano Accoroni and Patricia Glibert. “Mixotrophic dinoflagellate *Karlodinium veneficum* under variable nitrogen:phosphorus stoichiometry: feeding responses and effects on larvae of the eastern oyster (*Crassostrea virginica*).” (Poster presentation)
- 2012 The ASLO Aquatic Sciences Meeting, Lake Biwa, Otsu, Shiga, Japan. **C.H. Lin**, T.Y. Ho and F.K. Shiah. “Interannual variability of summer phytoplankton community structure in a subtropical oligotrophic reservoir.” (Oral presentation)
- 2010 The microbial view of marine biogeochemical cycles, Banyulus *sur* Mer, France. **C.H. Lin**, T.Y. Ho and F.K. Shiah. “Seasonal succession of phytoplankton composition in Fei-Tsui reservoir.” (Poster presentation)

**STUDENT VOLUNTEER PARTICIPATIONS:**

- 2015 The 100<sup>th</sup> Ecological Society of America Meeting, Baltimore, USA < A/V>
- 2012 The ASLO Aquatic Sciences Meeting, Lake Biwa, Otsu, Shiga, Japan <Reception and A/V>
- 2010 Taiwan Ocean Science Meeting, Taipei <Staff for website and its maintenance>

**OUTREACH PARTICIPATIONS:**

- 2016 Horn Point Lab display at the Clean Water Concert in Easton for the Chesapeake Bay Foundation—The introduction of plankton ecology to general public, typical child interactions
- 2015-2016 Horn Point Lab display at the Oxford Day in Oxford for the Chesapeake Bay Foundation—The introduction of environmental science to general public
- 2014-2016 Regular tours at Horn Point Lab—The tour guide to general public
- 2014-2015 Touch Tank Displays for Horn Point Lab —The tour guide to elementary school students
- 2009-2013 Annual Open House Activities, Academia Sinica, Nankang Taipei, Taiwan—The speaker: the introduction of aquatic microbial world to high school students.

**Certifications**

- 2012 The PADI Scuba Diving License
- 2007 The Red Cross Society of the Republic of China-Standard Water Safety Rescuer License