

Cheng-Sheng Lee

College of Tropical Agriculture and Human Resources
Department of Human Nutrition, Food and Animal Sciences
FTE Distribution: 100% R

Education

| <u>Degree</u> | <u>University</u> | <u>Major</u> |
|---------------|------------------------------------|-----------------|
| Bachelors | National Taiwan University, Taiwan | Fishery Biology |
| Master | National Taiwan University, Taiwan | Marine Biology |
| PhD | University of Tokyo, Japan | Aquaculture |

Professional Appointments

| <u>Title</u> | <u>Employer</u> | <u>Dates Employed</u> |
|--|---|---------------------------|
| Researcher and Director, Center for Tropical and Subtropical Aquaculture | | |
| Director, Center for Tropical and Subtropical Aquaculture | University of Hawai'i at Manoa Oceanic Institute, HPU | 2018-present 1997-2018 |
| Affiliate Faculty at MBBE | University of Hawai'i at Manoa | 1997-present |
| Affiliate Faculty at CAFNRM | University of Hawai'i at Hilo | 1997-2010 |
| Director, Aquaculture Interchange Program | Oceanic Institute | 1999-2010 |
| Assistant Vice President | Oceanic Institute | 1992-1997 |
| Research Scientist | Oceanic Institute | 1979-2018 |

Courses Taught

| <u>Course ID</u> | <u>Credits</u> | <u>Semester/Year</u> | <u>No of Students</u> |
|------------------|----------------|----------------------|-----------------------|
|------------------|----------------|----------------------|-----------------------|

Publications (reverse chronological order)

Books

- Lee, Cheng-Sheng, Chhorn Lim, Delbert M. Gatlin III, Carl D. Webster (Eds.). 2015. *Dietary Nutrients, Additives and Fish Health*. John Wiley & Sons, Inc. New Jersey, USA. 355pp.
- Lim, C., C.D. Webster, and C.-S. Lee, (editors). *Alternative Protein Sources in Aquaculture Diets*. The Haworth Press, Binghamton, NY, USA. 571 pp. 2008.
- Sato, Vernon T. and Cheng Sheng Lee. 2007. *Keeper of Molii Pond*. Oceanic Institute 147 pp.
- Lee, Cheng-Sheng and Patricia J. O'Bryen (Eds.). 2007. *Open Ocean Aquaculture—Moving Forward*. Oceanic Institute, Waimanalo, Hawai'i, USA. 78 pp.
- Leung, PingSun, Cheng-Sheng Lee, and Patricia J. O'Bryen (Eds.). 2007. *Species and System Selection for Sustainable Aquaculture*. Blackwell Publishing, Ames, Iowa, USA. 624 pp.
- McVey, James P., Cheng-Sheng Lee, and Patricia J. O'Bryen (Eds.). 2006. *Aquaculture and Ecosystems: An Integrated Coastal and Ocean Management Approach*. The World Aquaculture Society, Baton Rouge, Louisiana, USA. 240 pp.
- Lee, Cheng-Sheng (Ed.). 2006. *Design and Selection of Biological Filters for Freshwater and Marine Applications*. *Aquacultural Engineering* 34 (3): 141-416.
- Scarfe, A. David, Cheng-Sheng Lee, and Patricia J. O'Bryen (Eds.). 2005. *Aquaculture Biosecurity: Prevention, Control and Eradication of Aquatic Animal Disease*. Blackwell Publishing, Ames, Iowa, USA. 208 pp.

- Lee, Cheng-Sheng, Patricia J. O'Bryen, and Nancy H. Marcus (Eds.). 2005. *Copepods in Aquaculture*. Blackwell Publishing, Ames, Iowa, USA. 269 pp.
- Lee, Cheng-Sheng (Ed.). 2003. *Aquaculture: Retrospective and Outlook*. An Aquaculture Summit. Asian Fisheries Society, Quezon City, Philippines and The World Aquaculture Society, Baton Rouge, Louisiana, USA. 314pp.
- Lee, Cheng-Sheng and Patricia J. O'Bryen (Eds.). 2003. *Biosecurity in Aquaculture Production Systems: Exclusion of Pathogens and Other Undesirables*. The World Aquaculture Society, Baton Rouge, Louisiana, USA. 293 pp.
- Lee, Cheng-Sheng and Patricia J. O'Bryen (Eds.). 2002. *Aquaculture Growout Systems — Challenges and Technological Solutions*. *Reviews in Fisheries Science* 10 (3&4): 391–620.
- Lee, C-S. and A. Ventura (editors). *Status of Aquaculture in China*. Proceedings of a Workshop hosted by The Oceanic Institute, Waimanalo, Hawaii, USA, 19-21 February 2002. 126 pp. 2003.
- Lee, Cheng-Sheng and Pat O'Bryen (Eds.). 2002. *Microbial Approaches to Aquatic Nutrition within Environmentally Sound Aquaculture Production Systems*. The World Aquaculture Society, Baton Rouge, Louisiana, USA. 187 pp.
- Lee, C-S. and E.M. Donaldson (editors). 2001. *Reproductive Biotechnology in Finfish Aquaculture*. *Aquaculture* 197: 1-319.
- Lee, C-S. and P.J. O'Bryen (editors). 2001. *Advanced Biotechnology in Hatchery Production*. *Aquaculture* 200: 1–250.
- Lee, Cheng-Sheng. *Aquaculture of milkfish (Chanos chanos)*. TML Aquaculture Series No. 1, Published by Tungkang Marine Laboratory, TFRI, Taiwan and The Oceanic Institute, Hawaii, U.S.A., 141 pp. 1995.
- Yung C. Shang, PingSun Leung, Cheng-Sheng Lee, Mao-Sen Su, and I Chiu Liao. (Eds). *Socioeconomics of Aquaculture, Proceedings of International Symposium '93*. TML Conference Proceedings No.4. Published by Tungkang Marine Laboratory, Taiwan Fisheries Research Institute, 380 pp. 1994.
- Cheng-Sheng Lee, Mao-Sen Su, and I Chiu Liao (Editors). *Finfish Hatchery in Asia*. Proceedings of Finfish Hatchery in Asia '91. TML Conference Proceedings No.3. Published by Tungkang Marine Laboratory, Taiwan Fisheries Research Institute 1993.
- H. Tanaka, F. Roger Uwate, J. V. Juario and C.-S. Lee (Eds). *Proceedings of the Regional Workshop on Milkfish Culture Development in the South Pacific*, Tarawa, Kiribati, 21-25 November 1988. Published by South Pacific Aquaculture Development Project, Food and Agriculture Organization of the United Nations, Suva, Fiji, 423 pp. 1990
- Crim, LW., C.S. Lee, R.E. Peter and N.M. Sherwood (Eds). *Induce Spawning of Asian Fishes*. *Journal of Aquaculture* 74 (1&2) 1-166 1988.
- Lee, C.-S., M. S. Gordon and W. O. Watanabe (Editors). *Aquaculture of Milkfish (Chanos chanos): State of the Art*. Published by The Oceanic Institute, Hawaii 1986.
- Lee, C.S. and I. C. Liao (Eds) *Reproduction and Culture of Milkfish*. Published by the Oceanic Institute, Hawaii, and Tungkang Marine Laboratory, Taiwan 1985.

Book Chapters

- Lee, Cheng-Sheng and Clyde S. Tamaru. 2022. *Mullet in Hawaii*. In: I C. Liao and E. M. Leano (eds.) “Mullet and its aquaculture”. Chapter 5: 51- 68. World Aquaculture Society, Asian Fisheries Society, National Taiwan Ocean University and the Fisheries Society of Taiwan.
- Kenneth M. Leber, Cheng-Sheng Lee, Nathan P. Brennan, Steve M. Arce, Clyde S. Tamaru, H. Lee Blankenship and Robert T. Nishimoto. 2016. *Stock Enhancement of Mugilidae in Hawai'i (USA)*. In: *Biology, Ecology and Culture of Grey Mullet (Mugilidae)* chapter 18, Taylor and Francis Group, LLC. 467-486.
- Weber, Gregory M., and Cheng Sheng Lee. 2014. *Current and Future Assisted Reproductive Technologies for Fish Species*. G.C. Lamb and N. DiLorenzo (eds.), *Current and Future Reproductive Technologies and World Food Production*, *Advances in Experimental Medicine and Biology* 752, 33-76.
- Lee, Cheng-Sheng, Chin-Fa Liu. 2010. *Milkfish (Family: Chanidae)*. In: Le Francois N., Jobling M., Carter C. and Blier P (Eds.) *Finfish Aquaculture Diversification: 200-215*. Chapter 10.

- Lee, Cheng-Sheng. 2006. Design and Selection of Biological Filters for Freshwater and Marine Applications. *Aquacultural Engineering* 34 (3): 141-142.
- Lee, C.-S. 2001. Feeding the world through aquaculture: Asian contributions — present and future. In: Liao, I C. (compiled) "Keynote addresses: 5th and 6th Asian Fisheries Forums (AFS Special Publication No. 11), pp. 63–77, Asian Fisheries Society, Manila, Philippines.

Technical Editor:

- Author and co-author for two books
- Co-Editor for 21 books/special publications, published by various publishers
- Guest Editor, *Journal of the World Aquaculture Society* 41:173-280. 2007
- Guest Editor, *Aquaculture Engineering* 34(3). 2006
- Guest Editor, *Aquaculture* 226(1-4). 2003
- Guest Editor, *Review in Fisheries Science* 10(3-4). 2002
- Guest Editor, *Aquaculture* 200(1–2). 2001
- Guest Editor, *Aquaculture* 197(1–4). 2001

Conference Proceedings

Refereed Journal Publications (Exclude 2000 and before)

- Beyerm L, C. Chan, P. Laporte, C.-S. Lee. 2023. Assessing high school students' perceptions and preferences for aquaculture versus wild-caught seafood: The case of O‘ahu, Hawai‘i. *J World Aquac Soc.* 2023;54:801–813.
- Lee, Cheng-Sheng. 2021. Sustain seafood resources in the U.S. affiliated Pacific islands- status and strategies. *Bull. Jap. Fish. Res. Edu. Agen.* No. 50, 67- 74.
- Lee, Cheng Sheng. 2019. Challenges and opportunities of IMTA in Hawaii and beyond. *Bull. Jap. Fish. Res. Edu. Agen.* No. 49, 129- 134.
- Sumirasa, Gede, Fuad Cholick, Taufik Ahmad, Katsumi Aida, Cheng-Sheng Lee, Harry Ako and Clyde S. Tamaru. Status of Milkfish Culture in Indonesia: An Example of What Happens with Technological Changes. *World Aquaculture* March 2019, 38-44.
- Ju, Zhi Yong, Dong-Fang Deng, Peter Hutchinson, Cecilia Viljoen, Justin Reinicke, David Horgen, Luke Howard & Cheng-Sheng Lee. 2016. Effects of diets on the shell pigmentation of abalone (*Haliotis discus hannai*) and identification of pigments in abalone shells. *Aquaculture Research* 47: 4004-4014.
- Wang, Heng, Thomas Iwar, Baoping Zhao, CS Lee, Jinzeng Yang. Aug 2010. Identification of Microsatellite DNA Markers for Pacific Threadfin Parentage Assignment. *Journal of World Aquaculture Society* Vol 41, No.4: 640-647.
- Kang, H.Y., P.Y. Yang, W.G. Dominy, C.S. Lee. 2010. Bioprocessing papaya processing waste for potential aquaculture feed supplement - Economic and nutrient analysis with shrimp feeding trial. *Bioresource Technology* 101 (2010) 7973-7979
- Hardy, Ronald W. and Cheng-Sheng Lee. 2010. Aquaculture feed and seafood quality. *Bulletin of Fisheries Research Agency* No. 31: 43-50
- Lee, Cheng-Sheng. 2009. Introduced Species and Aquaculture. *Bulletin of Fisheries Research Agency* No. 29: 69-78
- Lee, Cheng-Sheng. 2006. Design and Selection of Biological Filters for Freshwater and Marine Applications. *Aquacultural Engineering* 34 (3): 141-418.
- Lee, Cheng-Sheng and Patricia J. O‘Bryen (Eds.). 2003. Management of Aquaculture Effluents. *Aquaculture* 226 (1-4): 1-244.
- Moriwake, A., V. Moriwake, A.C. Ostrowski, and C.-S. Lee. 2001. Natural spawning of the bluefin trevally *Caranx melampygus* in captivity. *Aquaculture* 203: 159–164.

- Lee, Cheng-Sheng and Edward M. Donaldson. 2001. General discussion on “Reproductive biotechnology in finfish aquaculture.” *Aquaculture* 197: 303–320.
- Lee, C.-S. and A. C. Ostrowski. 2001. Current status of marine finfish larviculture in the United States. *Aquaculture* 200: 89–109.
- Lee, C.-S., Ellis, S. and K. L. Awaya. 2001. Giant clam farming in the U.S. affiliated Pacific Islands. *World Aquaculture* 32(3): 21–63.

Extension Publications

Creative Works (i.e., Extension Videos, Websites, Blogs, Creative Designs and Exhibitions, etc.)

Leadership Roles (Committees, Boards, Advisory, etc.)

Graduate Students (Most recent year only)

| <u>Category</u> | <u>Number of Students</u> | <u>Number that Graduated</u> |
|-----------------------------|---------------------------|------------------------------|
| Chair of Master Committees | | |
| Chair of PhD Committees | | |
| Member of Master Committees | | |
| Member of PhD Committees | | |

Grant Support (Excluded 2015 and before)

Title of Grant: FY23 Regional Aquaculture Center—Center for Tropical and Tropical Aquaculture
 Source of Grant: National Institute of Food and Agriculture
 Dollar Value: \$948,086
 Dates of Grant: 9/1/2023-8/31/2027
 Role (PI, CoPI): PI

Title of Grant: FY22 Regional Aquaculture Center—Center for Tropical and Tropical Aquaculture
 Source of Grant: National Institute of Food and Agriculture
 Dollar Value: \$949,556
 Dates of Grant: 9/1/2022-8/31/2026
 Role (PI, CoPI): PI

Title of Grant: FY21 Regional Aquaculture Center—Center for Tropical and Tropical Aquaculture
 Source of Grant: National Institute of Food and Agriculture
 Dollar Value: \$968,000
 Dates of Grant: 9/1/2021-8/31/2025
 Role (PI, CoPI): PI

Title of Grant: Assessing Economic Feasibility of Aquaculture Feed Production in Hawaii
 Source of Grant: US Department of Commerce
 Dollar Value: \$226,763
 Dates of Grant: 12/1/2020-11/30/2024

Role (PI, CoPI): PI

Title of Grant: FY20 Regional Aquaculture Center—Center for Tropical and Tropical Aquaculture
Source of Grant: National Institute of Food and Agriculture
Dollar Value: \$924,280
Dates of Grant: 9/1/2020-8/31/2025
Role (PI, CoPI): PI

Title of Grant: Assessing Public Perceptions of Aquaculture and the Broader Impacts of K-12
Aquaculture Education
Source of Grant: US Department of Commerce
Dollar Value: \$165,582
Dates of Grant: 9/1/2019-12/31/2023
Role (PI, CoPI): PI

Title of Grant: FY19 Regional Aquaculture Center—Center for Tropical and Tropical Aquaculture
Source of Grant: National Institute of Food and Agriculture
Dollar Value: \$929,280
Dates of Grant: 9/1/2019-8/31/2023
Role (PI, CoPI): PI

Title of Grant: FY18 Regional Aquaculture Center—Center for Tropical and Tropical Aquaculture
Source of Grant: National Institute of Food and Agriculture
Dollar Value: \$929,280
Dates of Grant: 9/1/2018-8/31/2023
Role (PI, CoPI): PI

Title of Grant: FY17 Regional Aquaculture Center—Center for Tropical and Tropical Aquaculture
Source of Grant: National Institute of Food and Agriculture
Dollar Value: \$743,424
Dates of Grant: 9/1/2017-8/31/2021
Role (PI, CoPI): PI

Title of Grant: FY16 Regional Aquaculture Center—Center for Tropical and Tropical Aquaculture
Source of Grant: National Institute of Food and Agriculture
Dollar Value: \$739,960
Dates of Grant: 9/1/2016-8/31/2021
Role (PI, CoPI): PI

Presentations at Conferences (Excluded 2015 and before)

Title: Feasibility Assessment of A Local Feed Mill for Aquaculture in Hawai'i
Authors (put an asterisk on the presenter): Andini D. Ekaputri*, PingSun Leung, Stuart T. Nakamoto,
Armando García-Ortega, Shannon Sand, Shaun Moss, and Cheng Sheng Lee
Name of Conference: Aquaculture America 2023
Date of Presentation: 2023

Title: Ocean Food Security in Hawaii
Authors (put an asterisk on the presenter): Cheng Sheng Lee*
Name of Conference: Aloha 'Aina Academy 2021: Ocean Food Systems
Date of Presentation: 2021

Title: Assessing Public Perceptions of Aquaculture and the Broader Impacts of K-12 Aquaculture Education
Authors (put an asterisk on the presenter): Cheng Sheng Lee*, Catherine Chan and Leiana Opunui*
Name of Conference: QAR Research Symposia: Exploring New Aquaculture Opportunities and Social/Economic/Behavioral Needs in Aquaculture
Date of Presentation: 2021

Title: Aquaculture in Fisheries Management Plan
Authors (put an asterisk on the presenter): Cheng Sheng Lee*
Name of Conference: Indo-Pacific Maritime Security Exchange
Date of Presentation: 2021

Title: Environment and Seafood Quality
Authors (put an asterisk on the presenter): Cheng Sheng Lee
Name of Conference: Special lecture for Hainan Tropical Ocean University delegation
Date of Presentation: 2020

Title: Sustain seafood resources in the U.S. affiliated Pacific islands- status and strategies
Authors (put an asterisk on the presenter): Cheng Sheng Lee
Name of Conference: US-Japan Natural Resources panel meeting
Date of Presentation: 2019

Title: Natural Resources Utilization in Hawaii and U.S. affiliated Pacific islands
Authors (put an asterisk on the presenter): Cheng Sheng Lee
Name of Conference: Sanya Forum_Smart Ocean and Future Agriculture, China
Date of Presentation: 2019

Title: Lessons from a 40-year Research Career
Authors (put an asterisk on the presenter): Cheng Sheng Lee
Name of Conference: Special lecture at Chinese Culture University in Taiwan
Date of Presentation: 2019

Title: NIFA Pacific Regional Aquaculture Center: Exploration Of Aquaculture Opportunities In US Affiliated Pacific Islands
Authors (put an asterisk on the presenter): Cheng Sheng Lee
Name of Conference: World Aquaculture society annual meeting
Date of Presentation: 2019

Title: General (esp. Marine) Aquaculture
Authors (put an asterisk on the presenter): Cheng Sheng Lee
Name of Conference: USDA ARS webinar to the public
Date of Presentation: 2018

Title: Aquaculture and Seafood Quality
Authors (put an asterisk on the presenter): Cheng Sheng Lee
Name of Conference: Special lecture for Hainan Tropical Ocean University delegation.
Date of Presentation: 2018

Title: CTSA, Aquaculture and You
Authors (put an asterisk on the presenter): Cheng Sheng Lee
Name of Conference: Public talk to Maui community
Date of Presentation: 2017

Title: IMTA and Sustainable Aquaculture
Authors (put an asterisk on the presenter): Cheng Sheng Lee
Name of Conference: IMTA international symposium in Busan, Korea.
Date of Presentation: 2017

Title: Aquaculture Education in 21st Century.
Authors (put an asterisk on the presenter): Cheng Sheng Lee
Name of Conference: Special lecture for Hainan Tropical Ocean University delegation.
Date of Presentation: 2017

Title: Challenges and opportunities of IMTA in Hawai'i and beyond
Authors (put an asterisk on the presenter): Cheng Sheng Lee
Name of Conference: US-Japan Natural Resources panel meeting
Date of Presentation: 2017

Title: Aquaculture in Hawaii-Status and Opportunities
Authors (put an asterisk on the presenter): Cheng Sheng Lee
Name of Conference: US-Korea Intergrated Multi-Trophic Aquaculture
Date of Presentation: 2016

Title: Knowing your seafood
Authors (put an asterisk on the presenter): Cheng Sheng Lee
Name of Conference: Chinese Scholar Association in Hawai'i annual meeting
Date of Presentation: 2016

Title: A Concerted Effort for Seafood Security in Hawai'i and U.S. Affiliated Pacific islands
Authors (put an asterisk on the presenter): Cheng Sheng Lee
Name of Conference: Pacifichem 2015
Date of Presentation: 2015

Title: Aquaculture for Food Security
Authors (put an asterisk on the presenter): Cheng Sheng Lee
Name of Conference: US-Korea Integrated Multi-Trophic Aquaculture in Korea
Date of Presentation: 2015

Title: Hawai'i aquaculture and seed production
Authors (put an asterisk on the presenter): Cheng Sheng Lee
Name of Conference: Flinders University, Australia
Date of Presentation: 2014

Title: Marine shrimp farming R and D in the U.S.A
Authors (put an asterisk on the presenter): Cheng Sheng Lee
Name of Conference: 9th world's Chinese symposium on crustaceans, China
Date of Presentation: 2014

Title: Prospects of Fishery in the U.S.-affiliated Pacific islands Economy
Authors (put an asterisk on the presenter): Cheng Sheng Lee
Name of Conference: 3rd Asia-Pacific Coral Reef Symposium in Taiwan.
Date of Presentation: 2014