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Professional Appointments:

- 2021_08 Postdoctoral Fellow in Research Center for Environmental Changes, Academia Sinica
- 2016_08-2021_07 Postdoctoral Fellow in Department of Geosciences, National Taiwan University
- 2011_08-2016_06 Postdoctoral Research Fellow in Earth Observatory of Singapore, Nanyang Technological University
- 2011_04-2011_06 Postdoctoral Fellow in Department of Geosciences, National Taiwan University

Education:

- 2011 PhD. Institute of Geosciences, National Taiwan University (NTU), Taipei, TAIWAN (ROC)
Thesis Title: Oxygen Isotope and Ba/Ca Ratio Records in Coral Skeletons from Southern Taiwan and their Environmental Explanations. (Advisor: Prof. Yue-Gau Chen, Prof. Chuan-Chou Shen)
- 2000 M.S. Department of Geology, National Taiwan University (NTU), Taipei, TAIWAN (ROC)
Thesis Title: Organic Carbon Inferred Environmental Fluctuations during Late Quaternary, Southwestern Taiwan. (Advisor: Prof. Yue-Gau Chen)
- 1998 B.A. Department of Geology, National Taiwan University (NTU), Taipei, TAIWAN (ROC)

Research Experience & Training:

1. Multi-collector inductively coupled plasma mass spectrometry (MC-ICP-MS) (Finnigan Neptune & Neptune Plus, NTU & EOS), Inductively coupled plasma sector field mass spectrometry (ICP-SF-MS) (Finnigan Element & Element II, UMN & NTU), Quadruple inductively coupled plasma mass spectrometry (Q-ICP-MS) (Perkin Elmer, NTU)
2. High resolution gas mass spectrometry (IR-MS) (Finnigan Delta Plus & MAT 253, NTU)
3. Elemental analyzer (EA) (ThermoQuest EA1110, NTU)
4. Clean lab works (NTU, UMN, & EOS), CO₂ & N₂ extraction system (NTU)
5. Scuba-diving skill & coral-core drilling (NTU)

Honors:

- 2011 Honorary member of The Phi Tau Phi Scholastic Honor Society
2006 Scholarship of advanced research abroad for Ph.D. student by National Science Council

Publications:

- Chiang H.W.**, Philibosian B.E., Meltzner A.J., Wu C.C., Shen C.C., Edwards R.L., Chuang C.K., Suwargadi B.W., Natawidjaja D.H. (submitted) Understanding spatial and temporal variability of initial $^{230}\text{Th}/^{232}\text{Th}$ in intertidal corals from Sumatran forearc islands.
- Nguyen D.C., Lee S.Y., Chen Y.G., **Chiang H.W.**, Shen C.C., Wang X.F., Doan L.D., Lin Y. (2022) Precipitation response to Heinrich Event-3 in a low-latitude region of Asia as recorded in a high-resolution speleothem record. *Journal of Asian Earth Sciences*: X 7, 100090.
- Lin H.T., **Chiang H.W.**, Yu T.L., Christl M., Liu J., Shen C.C. (2021) $^{236}\text{U}/^{238}\text{U}$ analysis of femtogram ^{236}U by MC-ICPMS. *Analytical Chemistry* 93, 8442-8449.
<https://doi.org/10.1021/acs.analchem.1c00409>
- Li T.Y., Wu Y., Shen C.C., Li J.Y., **Chiang H.W.**, Lin K., Tan L., Jiang X., Cheng H., Edwards R.L. (2021) High precise dating on the variation of the Asian summer monsoon since 37 ka BP. *Scientific Reports* 11, 9375.
<https://doi.org/10.1038/s41598-021-88597-7>
- Wang L.C., Chou Y.M., Chen H.F., Chang Y.P., **Chiang H.W.**, Yang T.N., Shiao L.J., Chen Y.G. (2021) Paleolimnological evidence for lacustrine environmental evolution and paleo-typhoon records during the late Holocene in eastern Taiwan. *Journal of Paleolimnology*. <https://doi.org/10.1007/s10933-020-00153-x>
- Chawchai S., Liu G., Bissen R., Scholz D., Riechelmann D.F.C., Vonhof H., Mertz-Kraus R., **Chiang H.W.**, Tan L., Wang X. (2020). Hydroclimate variability of western Thailand during the last 1400 years. *Quaternary Science Reviews* 241, 106423.
- Nguyen D.C., Chen Y.G., **Chiang H.W.**, Shen C.C., Wang X., Doan L.D., et al. (2020). A decadal-resolution stalagmite record of strong Asian summer monsoon from northwestern Vietnam over the Dansgaard–Oeschger events 2–4. *Journal of Asian Earth Sciences*: X 3, 100027. **(Co-corresponding author)**
- Liu G., Li X., **Chiang H.W.**, Cheng H., Yuan S., Chawchai S., et al. (2020). On the glacial-interglacial variability of the Asian monsoon in speleothem $\delta^{18}\text{O}$ records. *Science Advances* 12, eaay8189.
- Khider D., Emile-Geay J., McKay N. P., Gil Y., Garijo D., Ratnakar V., et al. (2019). PaCTS 1.0: A crowdsourced reporting standard for paleoclimate data. *Paleoceanography and Paleoclimatology* 34, 1570-1596.
- Chiang H.W.**, Lu Y., Wang X.F., Lin K., Liu X. (2019). Optimizing MC-ICP-MS with SEM protocols for determination of U and Th isotope ratios and ^{230}Th ages in carbonates. *Quaternary Geochronology* 50, 75-90.
- Phan T.T., Yamazaki A., **Chiang H.W.**, Shen C.C., Lam D.D., Watanabe T. (2019) Mekong River discharge and the East Asian monsoon recorded by a coral geochemical record from Con Dao Island, Vietnam. *Geochemical journal* 53, 1-7.
- Wu C.-C., Shen C.-C., Lo L., Hsin Y.-C., Yu K., Chang C.-C., Lam D.D., Chou Y.M., Liu Y., Pallister J., Song S.R., **Chiang H.W.**, Burr G.S. (2018). Pinatubo volcanic

- eruption exacerbated an abrupt coral mortality event in 1991 summer. *Geophysical Research Letters* 45, doi.org/10.1029/2018GL079529.
- Majewski J.M., Switzer A.D., Meltzner A.J., Parham P.R., Horton B.P., Bradley S.L., Pile J., **Chiang H.W.**, Wang X.F., Ng C.T., Tanzil J., Müller M., Mujahid A. (2018) Holocene relative sea-level records from coral microatolls in Western Borneo, South China Sea. *The Holocene* 28, 1431-1442.
- Shyu J.B.H., Wang C.C., Wang Y., Shen C.C., **Chiang H.W.**, Liu S.C., Min S., Aung L.T., Than O., Tun S.T. (2018) Upper-plate splay fault earthquakes along the Arakan subduction belt recorded by uplifted coral microatolls on northern Ramree Island, western Myanmar (Burma). *Earth and Planetary Science Letters* 484, 241-252.
- Li X., Liu Y., Hsin Y.C., Liu W., Shi Z., **Chiang H.W.**, Shen C.C. (2017) Coral record of variability in the upstream Kuroshio Current during 1953–2004. *Journal of Geophysical Research – Ocean* 122, 6936-6946.
- Wang X.F., Edward R.L., Auler A.S., Cheng H., Kong X.K., Wang Y., Cruz F.W., Dorale J.A., **Chiang H.W.** (2017) Hydroclimate changes across the Amazon lowlands over the past 45,000 years. *Nature* 541, 204-207.
- Philibosian B., Sieh K., Avouac, J.P., Natawidjaja D.H., **Chiang H.W.**, Wu C.C., Shen C.C., Daryono M.R., Perfettini H., Suwargadi B.W., Lu Y.B., Wang X.F. (2017) Earthquake Supercycles on the Mentawai Segment of the Sunda Megathrust in the 17th Century and Earlier. *Journal of Geophysical Research - Solid Earth*, doi: 10.1002/2016JB013560.
- Meltzner A.J., Sieh K., **Chiang H.W.**, Wu C.C., Tsang L.L.H., Shen C.C., Hill E.M., Suwargadi B.W., Natawidjaja D.H., Philibosian B.E., Briggs R.W. (2015) Time-varying interseismic strain rates and similar seismic ruptures on the Nias-Simeulue patch of the Sunda megathrust. *Quaternary Science Reviews* 122, 258-281.
- Sieh K., Daly P., McKinnon E.E., Pilarczyk J.E., **Chiang H.W.**, Horton B., Rubin C.M., Shen C.C., Ismail N., Vane C.H., Feener R.M. (2014) Penultimate predecessors of the 2004 Indian Ocean tsunami in Aceh, Sumatra: Stratigraphic, archeological, and historical evidence. *Journal of Geophysical Research - Solid Earth* 120, doi:10.1002/2014JB011538.
- Philibosian B.E., Sieh K., Avouac J.P., Natawidjaja D.H., **Chiang H.W.**, Wu C.C., Perfettini H., Shen C.C., Daryono M.R., Suwargadi B.W. (2014) Rupture and variable coupling behavior of the Mentawai segment of the Sunda megathrust during the supercycle culmination of 1797 to 1833. *Journal of Geophysical Research - Solid Earth* 119, 9, 7258-7287.
- Fujino S., Sieh K., Meltzner A.J., Yulianto E., **Chiang H.W.** (2014) Ambiguous correlation of precisely dated coral detritus with the tsunamis of 1861 and 1907 at Simeulue Island, Aceh Province, Indonesia. *Marine Geology* 357, 384-391.
- Major J., Harris R., **Chiang H.W.**, Cox N., Shen C.C., Nelson S.T., Prasetyadi C., Rianto A. (2013) Quaternary hinterland evolution of the active Banda Arc: Surface uplift and neotectonic deformation recorded by coral terraces at Kisar, Indonesia. *Journal of Asian Earth Science* 73, 149-161.
- Wang Y., Shyu J.B.H., Sieh K., **Chiang H.W.**, Wang C.C., Aung T., Lin Y.N.N., Shen C.C., Min S., Than O., Lin K.K., Tun S.T. (2013) Permanent upper plate

- deformation in western Myanmar during the great 1762 earthquake: Implications for neotectonic behavior of the northern Sunda megathrust. *Journal of Geophysical Research - Solid Earth* 118, 3, 1277-1303.
- Philibosian B.E., Natawidjaja D.H., Sieh K., **Chiang H.W.**, Shen C.C., Suwargadi B.W., Hill E.M., Edwards R.L. (2012) An ancient shallow slip event on the Mentawai segment of the Sunda megathrust, Sumatra. *Journal of Geophysical Research - Solid Earth* 117, B05401.
- Meltzner A.J., Sieh K., **Chiang H.W.**, Shen C.C., Suwargadi B.W., Natawidjaja D.H., Philibosian B.E., Briggs R.W. (2012) Persistent termini of 2004- and 2005-like ruptures of the Sunda megathrust. *Journal of Geophysical Research - Solid Earth* 117, B04405.
- Yang T.N., Lee T.Q., Meyers P.A., Song S.R., Kao S.J., Löwemark L., Chen R.F., Chen H.F., Wei K.Y., Fan C.W., Shiao L.J., **Chiang H.W.**, Chen Y.G., Chen M.T. (2011) Variations in monsoonal rainfall over the last 21 kyr inferred from sedimentary organic matter in Tung-Yuan Pond, southern Taiwan. *Quaternary Science Reviews* 30, 3413-3422.
- Li T.Y., Shen C.C., Li H.C., Li J.Y., **Chiang H.W.**, Song S.R., Yuan D.X., Lin Cris D.J., Gao P., Zhou L.P., Wang J.L., Ye M.Y., Tang L.L., Xie S.Y. (2011) Oxygen and Carbon isotopic systematics of aragonite speleothems and water in Furong Cave, Chongqing, China. *Geochimica et Cosmochimica Acta* 75, 4140-4156.
- Chiang H.W.**, Shen C.C., Chen Y.G., Fan T.Y. (2010) Change of the ENSO-related $\delta^{18}\text{O}$ -SST correlation from coral skeletons in northern South China Sea: A Possible Influence from the Kuroshio Current. *Journal of Asian Earth Science* 39, 684-691.
- Meltzner A.J., Sieh K., **Chiang H.W.**, Shen C.C., Suwargadi B.W., Natawidjaja D.H., Philibosian B.E., Briggs R.W., Galetzka J. (2010) Coral evidence for earthquake recurrence and an A.D. 1390-1455 cluster at the south end of the 2004 Aceh-Andaman rupture. *Journal of Geophysical Research - Solid Earth* 115, B10402.
- Shen C.C., Li K.S., Sieh K., Natawidjaja D., Cheng H., Wang X., Edwards R. L., Lam D. D., Hsieh Y.T., Fan T.Y., Meltzner A. J., Taylor F.W., Quinn T.M., **Chiang H.W.** (2008) Variation of initial $^{230}\text{Th}/^{232}\text{Th}$ and limits of high precision U-Th dating of shallow-water corals. *Geochimica et Cosmochimica Acta* 72, 4201-4223.
- Shen C.C., Chiu H.Y., **Chiang H.W.**, Chu M.F., Wei K.Y., Steinke S., Chen M.T., Lin Y.S., and Lo L. (2007) High precision measurements of Mg/Ca and Sr/Ca ratios in carbonates by cool plasma inductively coupled plasma quadrupole mass spectrometry. *Chemical Geology* 236, 339-349.
- Lin Y.S., Wei K.Y., Lin I.T., Yu P.S., **Chiang H.W.**, Chen C.Y., Shen C.C., Mii H.S., Chen Y.G. (2006) The Holocene *Pulleniatina* Minimum Event revisited: Geochemical and faunal evidence from the Okinawa Trough and upper reaches of the Kuroshio current. *Marine Micropaleontology* 59, 153-170.
- Chiang H.W.**, Chen Y.G. (2005) Organic Carbon Inferred Environmental Fluctuations during Late Quaternary, Southwestern Taiwan. *Terrestrial Atmospheric Oceanic Science* 16, 1121-1132.

Conference Abstracts:

- Chiang H.W.**, Lu Y, Muhammad R.F., Wang X.F., Lim T.T. (2019) Hydroclimate

- variability in the Malay Peninsula over the past 3000 years recorded by stalagmites. *Goldschmidt Conference*, Barcelona, Spain, Abstract.
- Chiang H.W., Wang Y., Shyu. J.B.H., Wang C.C., Lin Thu Aung, Oo Than, Wang X.F., Phyto Maung Maung, Soe Min, Soe Thura Tun (2018) Decadal to centennial variabilities of the Indian summer monsoon during the past five centuries driven by both external and internal forcings. *Asia Oceania Geosciences Society*, Hawaii, USA, Abstract.
- Chiang H.W., Shyu J.B.H., Wang C.C., Liu, S.C., Shen, C.C., Wang X.F. (2016) Holocene marine reservoir correction for Lanyu Island, Taiwan: evidence of enhancing El Niño activity over the last 6,000 years. *Goldschmidt Conference*, Yokohama, Japan, Abstract.
- Chiang H.W., Wang Y., Shyu. J.B.H., Wang C.C., Lin Thu Aung, Phyto Maung Maung, Oo Than, Soe Thura Tun, Shen C.C. (2014) Holocene marine reservoir correction (ΔR) variability in the eastern Bay of Bengal. *Asia Oceania Geosciences Society*, Sapporo, Japan, Abstract.
- Chiang H.W., Shyu. J.B.H., Wang Y., Wang C.C., Lin Thu Aung, Wang X.F., Phyto Maung Maung, Oo Than, Soe Thura Tun (2014) Coral-based hydrological variability in the eastern Bay of Bengal during the Little Ice Age. *GEOSEA XIII*, Yangon, Myanmar, Abstract.
- Chiang H.W., Wang Y., Shyu. J.B.H., Wang C.C., Lin Thu Aung, Phyto Maung Maung, Oo Than, Soe Thura Tun, Shen C.C. (2013) Holocene marine reservoir correction (ΔR) variability in the eastern Bay of Bengal. *Goldschmidt Conference*, Florence, Italy, Abstract.
- Chiang H.W., Shen C.C., Meltzner A.J., Philibosian B.E., Sieh K., Wang X.F. (2012) Spatial and temporal distribution of initial $^{230}\text{Th}/^{232}\text{Th}$ in Sumatran corals and its influence on accurate dating young corals. *AGU Fall Meeting*, San Francisco, USA, Abstract.
- Chiang H.W., Shen C.C., Meltzner A.J., Philibosian B.E., Sieh K., Wang X.F., Edwards R.L. (2012) Variability of initial $^{230}\text{Th}/^{232}\text{Th}$ in modern and fossil microatolls from Sumatra. *Asia Oceania Geosciences Society*, Singapore, Abstract.
- Chiang H.W., Chang C.C., Shen C.C., Chen Y.G., Lam D.D., Ngai N.D. (2011) Environmental significances of Ba/Ca ratios in coral skeletons from Nanwan, southern Taiwan and Son Tra, central Vietnam. *Asia Oceania Geosciences Society*, Singapore, Abstract.
- Chiang H.W., Harris R.A., Prasetyadi C., Shen C.C., Cox N.L., Chen Y.G. (2010) Th-230 Dates of MIS 5e Coral Terraces in Kisar Island, Eastern Indonesia. *EGU General Assembly 2011*, Vienna, Austria, Abstract.
- Chiang H.W., Harris R.A., Prasetyadi C., Shen C.C., Cox N.L., Chen Y.G. (2009) Th-230 Dates of MIS 5e Coral Terraces in Kisar Island, Eastern Indonesia. *Asia Oceania Geosciences Society*, Singapore, Abstract.
- Chiang H.W., Chen Y.G., Shen C.C. (2009) Asynchronous skeletal Mg/Ca, Sr/Ca, and U/Ca variations in a modern coral *Porites* from Nanwan, southern Taiwan. *Annual Conference of Chinese Geological Society*, Abstracts.
- Chiang H.W., Chen Y.G., Shen C.C. (2008) Asynchronous skeletal Mg/Ca, Sr/Ca, Ba/Ca and U/Ca seasonal cycles in a multi-decades of modern coral *Porites* from Nanwan, southern Taiwan. *AGU Fall Meeting*, San Francisco, USA, Abstract.

Chiang H.W., Chen Y.G., Shen C.C. (2008) Two types of Ba/Ca signals preserved in coral skeletons from southern Taiwan. *Annual Conference of Chinese Geological Society*, Abstracts.

Chiang H.W., Shen C.C., Chen Y.G., Fan T.Y. (2005) Environmental variations and O/C isotopic compositions in Nanwan coral skeletons, southernmost Taiwan. *Annual Conference of Chinese Geological Society*, Abstracts.

Chiang H.W., Shen C.C., Chen Y.G., Chiu H.I. (2004) Sea Surface Temperature and Rainfall Responses in Coral Skeletons with Constraints of Geochemical Proxies. *The Xth Workshop of Quaternary Geology of Taiwan*, Abstract.

Chiang H.W., Shen C.C., Chen Y.G., Fan T.Y. (2004) A preliminary study of seasonal variation during past twenty years by geochemical records in coral skeletons, Nanwan. *Annual Conference of Chinese Geological Society*, Abstracts.

Chiang H.W., Shen C.C., Chen Y.G., Chiu H.I. (2004) Thermal, hydrological, and biological signals with constraints of geochemical records in coral skeletons, southern Taiwan. *AGU Fall Meeting*, San Francisco, USA, Abstract.

Chiang H.W. and Chen Y.G. (2003) Late Pleistocene environmental fluctuations in Taiwan southwestern plain with constraints of the analyses on organic carbon. *AGU Fall Meeting*, San Francisco, USA, Abstracts.

Grants Received:

2013-2015 EOS project (Coral-based Climate Variability in the Eastern Bay of Bengal during the Medieval Climate Anomaly and Little Ice Age)

Professional Membership:

American Geophysical Union

European Association of Geochemistry