This is RCEC website cv template and it will be updated annually.
Please follow the format as much as possible. No more than 5 pages.

Yue-Gau Chen (陳于高)

Research Center for Environmental Changes (RCEC), Academia Sinica
No. 128, Sec. 2, Academia Rd., Nankang, Taipei 11529, Taiwan ROC
Office Tel: +886-2-2787-5839; +886-2-27872530
Mobile: 0936880151
Email: ygchen@gate.sinica.edu.tw; ygchen@ntu.edu.tw
Lab website link: http://active.gl.ntu.edu.tw/

EDUCATION

1993	Ph.D.	Depart. of Geosciences, National Taiwan Univ., Taiwan ROC
1988	M.S.	Depart. of Geosciences, National Taiwan Univ., Taiwan ROC
1984	B.A.	Depart. of Geosciences, National Taiwan Univ., Taiwan ROC

EMPLOYMENT

2020/01 – present	Director	RCEC, Academia Sinica, Taiwan ROC
2019/06 – present	Distinguished Research Fellow	RCEC, Academia Sinica, Taiwan ROC
2018/08 – present	Executive Secretary	Center for Sustainability Science, Academia Sinica, Taiwan ROC
2018/06 – present	Joint Appointment Research Fellow	Inst. of Earth Sciences, Academia Sinica, Taiwan ROC
2019/06 – present	Joint Appointment Professor	Dept. of Geosciences, National Taiwan University, Taiwan ROC
2012/08 – 2019/05	Distinguished Professor	Dept. of Geosciences, National Taiwan University, Taiwan ROC
2017/01 – 2020/03	Visiting Professor	Earth Observatory Singapore, Nanyang Technology Univ., Singapore
2014/03 – 2016/07	Director General	Dept. of Natural Sciences and Sustainable Development, Ministry of Science and Technology, Taiwan ROC
2012/08 – 2014/02	Director General	Dept. of Natural Sciences, National Science Council, Taiwan ROC
2011/08 – 2012/07	Chairperson	Dept. of Geosciences, National Taiwan University, Taiwan ROC
2003 – 2012/07	Professor	Dept. of Geosciences, National Taiwan University, Taiwan ROC
1997 – 2003	Associate Professor	Dept. of Geosciences, National Taiwan University, Taiwan ROC

HONORS & AWARDS

Outstanding Research Awards of National Science Council, ROC, 2011-2014
Outstanding Research Awards of National Science Council, ROC, 2003-2006
Annual Research Awards of National Science Council, ROC, 1995, 1996, 1997, 1999, 2000
Award for Young Scientist, College of Science, NTU, 2002
Outstanding Teaching Award of National Taiwan Univ., 1999, 2003, 2009
Geological Society America (GSA) Fellow elected in 2008

PROFESSIONAL SERVICE

- 2017- : Member, Regional Advisory Committee, AOGS
- 2017- : Member, Publication Committee, AOGS
- 2017- : Member, National Committee of Future Earth, Taipei
- 2016- : Coordinator, Thematic Program Office for Collaboration Research Action: Disaster Risk Reduction and Resilience, Belmont Forum
- 2016- : Council member, Chinese Taipei Geophysical Society

RESEARCH INTEREST

(1) Paleoclimate and environmental changes by isotope geochemistry;
(2) Earth systems and sustainability sciences;
(3) Geochronology developments and their applications;
(4) Kinematics of seismogenic faults and seismic hazard mitigation.

RESEARCH HIGHLIGHTS

1. **A decadal-resolution record of Asian summer monsoon (ASM) around D-O 4**
   A high-resolution $\delta^{18}O$ record retrieved from a stalagmite from northern Vietnam demonstrates ASM variation in glacial time from 23 to 30ka. Our data show strong coherence with Chinese and North Indian speleothem, suggesting that the ASM has synchronously responded over a broad region, which can be also correlated to Dansgaard-Oeschger (D-O) events in the North Atlantic. Additionally, we observed that the onset timing and change pattern of D-O 4 varied spatially. It seems to be an earlier commencement and less abrupt at sites located with a connection to the modern Intertropical convergence Zone (ITCZ) than sites off the influence from ITCZ. It implies that the tropics may play a critical role in global climate system. Furthermore, this high-resolution record also clearly show a few centennial events with a duration of ~200 years, which probably correlates with the Suess cycle of solar activity.
   Reference: [21]. Nguyen et al., 2020.
2. **Reconstructing surface ocean circulation by coral recorded ^{129}I**
   The long-lived radionuclide ^{129}I is used as an environmental tracer. At present, the global ^{129}I in surface water is about 1-2 orders of magnitude higher than pre-1960 levels. Nuclear weapons testing was the primary^{129}I source in the Western Pacific in the latter part of the 20th Century.

Since the 1990s, anthropogenic ^{129}I produced from industrial nuclear fuels reprocessing plants has been the primary source of ^{129}I in marine surface waters of the Atlantic and around the globe. Presented in this study are four coral ^{129}I time series records from: Con Dao (Vietnam), Xisha Islands (the South China Sea), Rabaul (Papua New Guinea) and Guam. The Con Dao record shows a sudden increase in 1959. The Xisha coral also shows similar peaking values but fluctuated with lows, probably reflecting local upwelling in the South China Sea. The Rabaul coral experienced relatively gradual increases in the 1970s, similar to a published record from the Solomon Islands. The Guam's values are generally higher but with two distinct large peaks, in 1955 and 1959. The 1955 peak and above mentioned Con Dao 1959 increase are likely from the 1954 Castle Bravo nuclear test; on the other hand, the 1959 peak can be attributed to the Operation Hardtack I test. The coral ^{129}I time series data provide a broad picture of the surface distribution and depth penetration of ^{129}I in the Pacific Ocean over the past 60 years.
Reference: [14]. Chang et al., 2016.

REPRESENTATIVE PUBLICATIONS (*: corresponding author)

1. Kuo, Y.T., Ayoub, F., Leprince, S., **Chen, Y.G.***, Avouac, J.P., Shyu, J.B.H., Lai, K.Y., Kuo, Y.J. (2014). Coseismic thrusting and folding in the 1999 Mw 7.6 Chi-Chi Earthquake: A high resolution approach by aerial photos taken from Tsaotun, Central Taiwan. ***J. Geophys. Res. - Sol. Ea.,*** 119(1), 645-660. **(IF: 3.350, ▲: 3)**

2. Simoes, M.*, **Chen, Y.G.**, Shinde, D. P., Singhvi, A. K. (2014). Lateral variations in the long-term slip rate of the Chelungpu fault, Central Taiwan, from the analysis of deformed fluvial terraces. ***J. Geophys. Res. - Sol. Ea.***, 119(4), 3740-3766. **(IF: 3.350, ▲: 4)**

3. Huang, S.Y.*, **Chen, Y.G.**, Burr, G.S., Jaiswal, M.K., Lin, Y.N., Yin, G., Liu, J., Zhao, S., Cao, Z. (2014). Late Pleistocene sedimentary history of multiple glacially dammed lake episodes along the Yarlung-Tsangpo River, southeast Tibet. ***Quaternary Research***, 82(2), 430-440. **(IF: 2.195, ▲: 8)**

4. Chen, C.Y., Lee, J.C.*, **Chen, Y.G.**, Chen, R.F. (2014). Campaigned GPS on Present-day crustal deformation in northernmost Longitudinal Valley preliminary results, Hualien Taiwan. ***TAO***, 25(3), 337-357. **(IF: 0.752, ▲: 10)**

5. Yang, T.N., Lee, T.Q., Lee, M.Y., Huh, C.A., Meyers, P.A.*, Lowemark, L., Wang, L.C., Kao, W.Y., Wei, K.Y., Chen, R.F., Chen, H.F., Chen, S.H., Wu, J.T., Shiau, L.J., **Chen, Y.G.**, Hsieh, Y.C. (2014). Paleohydrological changes in northeastern Taiwan over the past 2ky inferred from biological proxies in the sediment record of a floodplain lake. ***PPP***, 410, 401-411. **(IF: 2.578, ▲: 8)**

6. Le Béon, M., Suppe, J., Jaiswal, M.K., **Chen, Y.G.**, Ustaszewski, M.E. (2014) Deciphering cumulative fault slip vectors from fold scarps: Relationships between long-term and coseismic deformations in central Western Taiwan. ***J. Geophys. Res.-Sol. Ea.***, 119(7), 5943-5978. **(IF: 3.350, ▲: 9)**

7. Kirstein,L.A.*, Carter, A., **Chen, Y.G.** (2014) Impacts of arc collision on small orogens: new insights from the Coastal Range detrital record, Taiwan. ***Journal of the Geological Society***, 171(1), 5-8. **(IF: 3.037, ▲: 0)**

8. Hsu, Y.J.*, Chang, Y.S., Liu, C.C., Lee, H.M., Linde, A.T., Sacks, S.I., Kitagawa, G., **Chen, Y.G.** (2015). Revisiting borehole strain, typhoons, and slow earthquakes using quantitative estimates of precipitation-induced strain changes. ***J. Geophys. Res. - Sol. Ea.***, 120(6), 4556-4571. **(IF: 3.350, ▲: 10)**

9. Yu, T.L., Wang, B.S., You, C.F.*, Burr, G. S., Chung, C.H., **Chen, Y.G.** (2015). Geochemical effects of biomass burning and land degradation on Lanyu Islet, Taiwan. ***Limnology and Oceanography***, 60(2), 411-418. **(IF: 3.383, ▲: 1)**

10. Wu, T.S.*, Jain, M., Guralnik, B., Murray, A.S., **Chen, Y.G.** (2015). Luminescence characteristics of quartz from Hsuehshan Range (Central Taiwan) and implications for thermochronometry. ***Radiation Measurements.***, 81, 104-109. **(IF: 1.442, ▲: 3)**

11. Chen, G.H.*, Xu, X.W., Wen, X.Z., **Chen, Y.G.** (2016). Late Quaternary Slip-rates and Slip Partitioning on the Southeastern Xianshuihe Fault System, Eastern Tibetan Plateau. ***Acta Geologica Sinica-English Edition.***, 90(2): 537-554. **(IF: 1.708, ▲: 5)**

12. Hsu, W.H., Byrne, T.B., Ouimet, W., Lee, Y.H., **Chen, Y.G.***, Soest, M., Hodges, K. (2016). Pleistocene onset of rapid, punctuated exhumation in the eastern Central Range of the Taiwan orogenic belt. ***Geology***, 44(9) 719-722. **(IF: 4.635, ▲: 12)**

13. Kuo, Y.T., Ku, C.S., **Chen, Y. G.***, Wang, Y., Lin, Y.N.N., Chuang, R.Y., Hsu, Y.J., Taylor, F.W., Huang, B.S., Tung, H. (2016). Characteristics on Fault coupling along the Solomon megathrust based on GPS observations from 2011 to 2014. ***Geophys. Res. Lett.***, 46(13) 5819-8526. **(IF: 4.212, ▲: 1)**

14. Chang, C.C.*, Burr, G. S., Jull, A.J.T., Russell, J.L., Biddulph, D., White, L., Prouty, N.G., **Chen, Y.G.**, Shen, C.C., Zhou, W.J., Lam, D.D. (2016) Reconstructing surface ocean circulation with ^{129}I time series records from corals. ***J. Environ. Radioact.*** 165, 144-150. **(IF: 2.310, ▲: 8)**

15. Chao, W.A.*, Wu, Y.M., Zhao, L., Chen, H.E., **Chen, Y.G.**, Chang, J.M., Lin, C.M. (2017). A first near real-time seismology-based landquake monitoring system. ***Scientific Reports*** 7, srep 43510. **(IF: 4.259, ▲: 11)**

16. Yu, T.L., Wang, B.S., Shen C.C.*, Wang, P.L. Frank T.Y., Burr, G.S., **Chen, Y.G.** (2017) Improved analytical techniques of sulfur isotopic composition in nanomole quantities by MC-ICP-MS. ***Analytica Chimica Acta***, 988, 34-40. **(IF: 4.95, ▲: 7)**

17. Fellin, M.G.*, Chen, C.Y., Willett, S.D., Christl., M., **Chen, Y.G.** (2017). Erosion rates across space and timescales from a multi-proxy study of rivers of eastern Taiwan. ***Global and Planetary Change***, 157,174-193. **(IF: 3.915, ▲: 3)**

18. Chang, Q., Lee, J.C.*, Hunag, J.J., Wei, K.Y., **Chen, Y. G.**, Byrne, T. B. (2018). Identifying the source of fluvial terrace deposits using XRF scanning and Canonical Discriminant Analysis: A case study of the Chihshang terraces, eastern Taiwan. ***Geomorpholog.***, 308, 204-214. **(IF: 2.958, ▲: 1)**

19. Ku, C.S.*, Kuo, Y.T., Chao, W.A., You, S.H., Huang, B.S., **Chen, Y.G.**, Taylor, F.W., and Wu, Y.M. (2018). "A First-Layered Crustal Velocity Model for the Western Solomon Islands: Inversion of the Measured Group Velocity of Surface Waves Using Ambient Noise." ***Seismological Res. Lett.***, 89, 2274-2283. **(IF: 3.734, ▲: 0)**

20. Chen, C.T.*, Chan, Y. C., Beyssac, O., Lu, C.Y., **Chen, Y.G.**, Malavieille, J., Kidder, S.B., Sun, H.C. (2019). "Thermal History of the Northern Taiwanese Slate Belt and Implications for Wedge Growth During the Neogene Arc-Continent Collision " ***TECTONICS***. 38(9) 3335-3350 **(IF: 3.975, ▲: 0)**

21. Nguyena, D.C., **Chen, Y.G.***, Chiang, H.W.*, Shen, C.C., Wang, X., Doan, L.D., Yuan, S., Lone, M.A., Yu, T.L., Lin, Y., Kuo,Y.T. (2020) A decadal-resolution stalagmite record of strong Asian summer monsoon from northwestern Vietnam over the Dansgaard–Oeschger events 2–4. ***JAES*** (in press) **(IF: 2.988, ▲: 0)**

Others (Invited Talks，Keynote speech et al.)

Invited Talks

- 2010, Invited speaker, Insight of New Earthquake Geology: based on Fault Kinematics, Inst. Geology, CEA, Beijing, China
- 2010, Invited speaker, Insight of Earthquake Geology: based on Fault Kinematics, Fujian Bureau of CEA, Fuzhou, Fujian, China
- 2011, Invited speaker, Earthquake enriched earthquake sciences: the case of 1999 Chi-Chi Taiwan earthquake, Inst. Geol. and Geophys, Chinese Academy of Science, Beijing, China
- 2011, Invited speaker, The key issues of the earthquake geology: Fault kinematics, Dept. Earth Sciences, Hong Kong Univ.
- 2011, Invited speaker, Temporal and spatial approaches on fault kinematics and their seismic hazard mitigation implications, Active Fault and Earthquake Research Center, AIST, Tsukuba, Japan 2012
- 2017, Invited speaker, CRA: Disaster Risk Reduction and Resilience, Belmont Forum, Asian-Pacific Info-Day, Taipei
- 2017, Invited speaker, Mega-thrust Fault in Subduction Zones, Solomon Islands, Inst. Crustal Dynamics, CEA, Beijing
- 2018, Invited speaker, Collaborative research projects: meteorology and earthquake/tsunami early warning in Solomon Islands and related educational opportunities, Solomon Islands National University, Honiara
- 2018, Invited speaker, An opportunity: the developing call of CRA, Disaster Risk Reduction and Resilience, 2018 AOGS, Honolulu
- 2018, Invited speaker, Introduction to the Belmont Forum and its mission, GLP, Taipei
- 2018, Invited speaker, From Science to Sustainability: by Cases of Global Change and Devastating Disaster, RCEC, Academia Sinica

- 2019, Invited Keynote, Technology for Disaster Reduction: from Past to Future, Outcome Demonstration Symposium for Program on Applying Science and Technology for Disaster Reduction, Executive Yuan, Taiwan ROC
- 2019, Invited Keynote, Building Sustainable Society by Using Information and Communication Technology: Lessons from Disaster Management, PNC, Singapore