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Personal Experiences:

Aug 2004 - Present: Associate Professor, Department of Earth Sciences, National Central University
Feb 2005 - Aug 2005: Visiting Professor, Center for Computational Sci. & Eng., University of California at Davis
Aug 2001 - Jul 2004: Assistant Professor, Department of Earth Sciences, National Central University
Aug 1999 - Jul 2001: Postdoctoral fellow, Institute of Earth Sciences, Academia Sinica
Aug 1998 - Jul 1999: Instructor, General Physical Laboratory, Department of Physics, National Central University
Feb 1996 - Feb 1998: Assistant, Chinese Geophysical Society

Educations:

Ph.D., Graduate Institute of Geophysics, National Central University, 1998.
B.Sc., Department of Earth Sciences, National Central University, 1994.

Membership of Academic Societies:

Member, Chinese Geophysical Society (R.O.C.)
Member, American Geophysical Union

Specialty: Earthquake Physics (Pattern Informatics & Region-Time-Length Analyses); Nonlinear Physics; Mineral Physics (Brillouin spectroscopy); Geo-electromagnetic Exploration (Magnetotellurics)

Publication list of Chien-chih Chen

* : SCI journals ; ▲ : citation times ; SCI : SCI impact factor

NSC xx-xxxx-x-xxx-xxx : grant sources

- 1 Chen, C.S., and **Chen, Chien-Chih**, 1995. Effective method to map the coastal geology: TEM. *Journal of Engineering Environment*, 14: 29-37. (November 1995) (in Chinese with English abstract)
- 2 Chen, C.S., and **Chen, Chien-Chih**, 1997. Geoelectrical surveys of southwestern Taiwan. *Terr. Atmos. Ocean. Sci.*, 8: 443-460.
- 3* **Chen, Chien-Chih**, and Chen, C.S., 1998. Preliminary result of magnetotelluric soundings in the fold-thrust belt of Taiwan and possible detection of dehydration. *Tectonophysics*, 292: 101-117. (NSC 84-2111-M-008-041; NSC 86-2116-M-008-005) (▲ : 6; SCI: 1.732)
- 4 Chen, C.S., **Chen, Chien-Chih**, and Chou, K., 1998. Deep electrical structure of Taiwan as inferred from magnetotelluric observations. *Terr. Atmos. Ocean. Sci.*, 9: 51-68. (NSC 84-2111-M-008-041; NSC 86-2116-M-008-005) (▲ : 5)
- 5 **Chen, Chien-Chih**, Chen, C.S., and Sun, L.C., 1998. The possible causes of the crustal low resistive zone for the Western Foothills, Taiwan. *Terr. Atmos. Ocean. Sci.*, 9: 279-285. (NSC 84-2111-M-008-041; NSC 86-2116-M-008-005 and NSC 87-2116-M-008-005) (▲ : 1)
- 6* **Chen, Chien-Chih**, and Xu, S.Z., 1999. Comment on ‘One-dimensional magnetotelluric inversion using an adaptation of Zohdy’s resistivity method’ by B.A. Hobbs and C.C. Dumitrescu. *Geophysical Prospecting*, 47: 603-606. (NSC 88-2116-M-008-017) (▲ : 1; SCI: 0.789)
- 7* **Chen, Chien-Chih**, and Chen, C.S., 2000. Preliminary report on the Sanyi-Puli seismic zone conductivity anomaly and its correlation with velocity structure and seismicity in the Northwestern Taiwan. *Earth, Planets and Space*, 52: 377-381. (May 2000) (NSC 89-2811-M-001-0016; NSC 88-2116-M-008-005) (▲ : 2; SCI: 0.822)
- 8 Chen, C.S., and **Chen, Chien-Chih**, 2000. Magnetotelluric soundings of the source area of the 1999 Chi-Chi earthquake in Taiwan: evidence for fluids at the hypocenter. *Terr. Atmos. Ocean. Sci.*, 11: 679-688. (September 2000) (NSC 89-2116-M-008-006) (▲ : 3)
- 9* **Chen, Chien-Chih**, and Wang, J.H., 2001. The relation of the Grüneisen parameter to the fractal dimension. *Physica B*, 299: 194-197. (May 2001) (NSC

- 89-2811-M-001-0016) (**▲: 2; SCI: 0.609**)
- 10* **Chen, Chien-Chih**, Liu, L.G., Lin, C.C., and Yang, Y.J., 2001. High-pressure phase transition in CaSO₄. *J Phys Chem Solids*, 62: 1293-1298. (July 2001) (NSC 89-2811-M-001-0016) (**▲: 3; SCI: 1.140**)
- 11* **Chen, Chien-Chih**, Lin, C.C., Liu, L.G., Sinogeikin, S.V., and Bass, J.D., 2001. Elasticity of single-crystal calcite and rhodochrosite by Brillouin spectroscopy. *American Mineralogist*, 86: 1525-1529. (November 2001) (NSC 89-2116-M-001-034) (**▲: 8; SCI: 1.811**)
- 12* **Chen, Chien-Chih**, and Chen, C.S., 2002. Sanyi-Puli conductivity anomaly in NW Taiwan and its implication for the tectonics of the 1999 Chi-Chi, Taiwan, earthquake. *Geophys. Res. Lett.*, 29(8), 1166, doi: 10.1029/2001GL013890. (April 2002) (NSC 90-2116-M-008-007; NSC 91-2116-M-008-011) (**▲: 0; SCI: 2.378**)
- 13 **Chen, Chien-Chih**, Chen, C.S., and Shieh, C.F., 2002. Crustal electrical conductors, crustal fluids and 1999 Chi-Chi, Taiwan, earthquake. *Terr. Atmos. Ocean. Sci.*, 13: 367-374. (September 2002) (NSC 90-2116-M-008-007; NSC 91-2116-M-008-011) (**▲: 0**)
- 14 Chen, C.S., and **Chen, Chien-Chih**, 2002. Deep electromagnetic images of conducting zones in the Chi-Chi (Taiwan) earthquake. *Journal of the Chinese Institute of Engineers*, 25: 483-490. (September 2002) (NSC 90-2116-M-008-007; NSC 91-2116-M-008-011)
- 15* **Chen, Chien-Chih**, Chang, C.P., and Chen, K.S., 2003. Segmented faulting process of Chelungpu thrust: Implication of SAR interferograms. *Terr. Atmos. Ocean. Sci.*, 14: 241-247. (June 2003) (NSC 90-2116-M-008-007; NSC 91-2116-M-008-011) (**▲: 2; SCI: 0.966**) (**TAO 2003-2004 Best Paper Award**)
- 16* **Chen, Chien-Chih**, 2003. Accelerating seismicity of moderate-size earthquakes before the 1999 Chi-Chi, Taiwan, earthquake: Testing for self-organizing spinodal behavior of earthquakes. *Geophys. J. Int.*, 155: F1-F5. (October 2003) (NSC 92-2116-M-008-002) (**▲: 1; SCI: 1.826**)
- 17* **Chen, Chien-Chih**, and Chang, C.L., 2004. Comment on "Entropy, energy, and proximity to criticality in global earthquake populations" by Ian G. Main and Fahad H. Al-Kindy. *Geophys. Res. Lett.*, 31(6), L06608, doi: 10.1029/2003GL019008. (March 2004) (NSC 93-2119-M-008-017) (**▲: 1; SCI: 2.378**)
- 18* Liu, L.G., Okamoto, K., Yang, Y.J., **Chen, Chien-Chih**, and Lin, C.C., 2004. Elasticity of single-crystal phase D (a dense hydrous magnesium silicate) by Brillouin spectroscopy. *Solid State Communications*, 132: 517-520. (November

- 2004) (NSC 93-2119-M-008-021) (**▲ : 1; SCI: 1.671**)
- 19* **Chen, Chien-Chih**, Chuo, Y.J., Wang, F.L., Yen, H.Y., and Chen, C.H., 2005. Correlation dimension and its temporal variations in geomagnetic total field during storms. *Terr. Atmos. Ocean. Sci.*, 16: 435-443. (June 2005) (NSC 91-2815-C-008-022-M; NSC 93-2119-M-008-017) (**▲ : 0; SCI: 0.966**)
- 20* Liu, L.G., **Chen, Chien-Chih**, Lin, C.C., and Yang, Y.J., 2005. Elasticity of single-crystal aragonite by Brillouin spectroscopy. *Phys. Chem. Miner.*, 32: 97-102. (June 2005) (NSC 93-2119-M-008-021) (**▲ : 0; SCI: 1.306**)
- 21* **Chen, Chien-Chih**, Rundle, J.B., Holliday, J.R., Nanjo, K.Z., Turcotte, D.L., Li, S.C., and Tiampo, K.F., 2005. The 1999 Chi-Chi, Taiwan, earthquake as a typical example of seismic activation and quiescence. *Geophys. Res. Lett.*, 32(22), L22315, doi: 10.1029/2005GL023991. (November 2005) (NSC 43077F) (**▲ : 2; SCI: 2.378**)
- 22* Chang, Y.F., **Chen, Chien-Chih**, and Huang, H.C., 2006. Rescaled range analysis of microtremors in the Yun-Chia area, Taiwan. *Terr. Atmos. Ocean. Sci.*, 17: 129-138. (March 2006) (**▲ : 0; SCI: 0.966**)
- 23* **Chen, Chien-Chih**, and Wu, Y.X., 2006. An improved region-time-length algorithm applied to the 1999 Chi-Chi, Taiwan earthquake. *Geophys. J. Int.*, 166: 1144-1147. (September 2006) (**▲ : 0; SCI: 1.826**)
- 24* **Chen, Chien-Chih**, Rundle, J.B., Li, H.C., Holliday, J.R., Turcotte, D.L., and Tiampo, K.F., 2006. Critical point theory of earthquakes: Observation of correlated and cooperative behavior on earthquake fault systems. *Geophys. Res. Lett.*, 33(18), L18302, doi: 10.1029/2006GL027323. (September 2006) (NSC 43077F) (**▲ : 0; SCI: 2.378**) (with the Correction of doi: 10.1029/2007GL029485 published in 2007)
- 25* **Chen, Chien-Chih**, Rundle, J.B., Li, H.C., Holliday, J.R., Nanjo, K.Z., Turcotte, D.L., and Tiampo, K.F., 2006. From tornadoes to earthquakes: Forecast verification for binary events applied to the 1999 Chi-Chi, Taiwan, earthquake. *Terr. Atmos. Ocean. Sci.*, 17: 503-516. (September 2006) (NSC 43077F) (**▲ : 1; SCI: 0.966**)
- 26* Nanjo, K.Z., Holliday, J.R., **Chen, Chien-Chih**, Rundle, J.B., and Turcotte, D.L., 2006. Application of a modified pattern informatics method to forecasting the locations of future large earthquakes in the central Japan. *Tectonophysics*, 424: 351-366. (October 2006) (NSC 43077F) (**▲ : 0; SCI: 1.732**)
- 27* **Chen, Chien-Chih**, Wang, W.C., Chang, Y.F., Wu, Y.M., and Lee, Y.H., 2006. A correlation between the *b*-value and the fractal dimension of the aftershock sequence of the 1999 Chi-Chi, Taiwan, earthquake. *Geophys. J. Int.*, 167: 1215-1219. (December 2006) (**▲ : 0; SCI: 1.826**)

- 28 Nanjo, K.Z., Holliday, J.R., **Chen, Chien-Chih**, Rundle, J.B., and Turcotte, D.L., 2006. Forecasting the Locations of Future Large Earthquakes Using Pattern Informatics Method. *Proceedings of the Institute of Statistical Mathematics*, 54: 281-297. (December 2006) (NSC 43077F) (in Japanese with English abstract)
- 29* Wu, Y.M., and **Chen, Chien-Chih**, 2007. Seismicity patterns before and after the 1999 Chi-Chi, Taiwan, Mw 7.6 earthquake. *Tectonophysics*, 429: 125-132. (January 2007) (NSC 94-2119-M-008-015; NSC 95-2116-M-008-003) (**▲: 0; SCI: 1.732**) (**Corresponding Author: CCC**)
- 30 Holliday, J.R., **Chen, Chien-Chih**, Tiampo, K.F., Rundle, J.B., Turcotte, D.L., and Donnellan, A., 2007. A RELM earthquake forecast based on pattern informatics. *Seismol. Res. Lett.*, 78(1): 87-93. (January 2007) (NSC 43077F) (**▲: 2**)
- 31* Chen, C.S., **Chen, Chien-Chih**, Chiang, C.W., Shu, H.L., Chiu, W.H., Unsworth, M.J., and Bertrand, E., 2007. Crustal resistivity anomalies beneath central Taiwan imaged by a broadband magnetotelluric transect. *Terr. Atmos. Ocean. Sci.*, 18: 19-30. (March 2007) (NSC 91-2111-M008-015; NSC 92-2111-M008-015; NSC 93-2119-M008-005) (**▲: 0; SCI: 0.966**)
- 32* **Chen, Chien-Chih**, Chi, S.C., Chen, C.S., and Yang, C.H., 2007. Electrical structures of the source area of the 1999 Chi-Chi, Taiwan, earthquake: spatial correlation between crustal conductors and aftershocks. *Tectonophysics* (in press)
- 33* Chang, Y.F., **Chen, Chien-Chih**, and Liang, C.Y., 2007. The fractal geometry of the surface ruptures of the 1999 Chi-Chi earthquake, Taiwan, and its geophysical implications. *Geophys. J. Int.* (in press)
- 34* **Chen, Chien-Chih**, and Tseng, C.Y., 2007. Theoretical evidence of the link between geomagnetic reversal and glacial events: stochastic resonance in the geodynamo model. *Terr. Atmos. Ocean. Sci.* (accepted)
- 35* **Chen, Chien-Chih**, Tseng, C.Y., and Dong, J.J., 2007. Variable selection based on entropic criterion and its application to the debris-flows triggering. *Engineering Geology* (submitted, minor revision)