



黃韶怡 Huang, Shao-Yi

新南向計畫辦公室(PPO-BEST) - 11529 台北市南港區研究院路二段 128 號 環境變遷研究大樓 8017 室

Program Promoting Office of New South Bound Program -
Bridging Earth Sciences and Technology

Institute of Earth Sciences, Academia Sinica Research Center for
Environmental Changes Building, Room 8017; No.128, Section
2, Academia Road, Nankang, Taipei 11529, Taiwan, R.O.C.

Tel: +886-2-27839910 ext. 2823

Email: shao.syh@gmail.com; shaosyh@earth.sinica.edu.tw

Web: <http://shaosyh.tw>

Areas of expertise

- ✓ Sedimentology
- ✓ Event stratigraphy (identification of short time event, e.g., earthquake, dammed lake and extreme wave inundation)
- ✓ Paleoseismology
- ✓ Thermo-chronology/Geochronology (specialize in Fission Track Dating)
- ✓ Provenance study
- ✓ Tectonic geomorphology/Surface process

Education

2005 – 2014 **Ph.D.**

Dept. of Geosciences, National Taiwan University, Taipei, Taiwan

Supervised by Dr. Yue-Gau Chen

Thesis title: *Provenance tracking deduced by multiple thermochronometers on detrital minerals from the Yarlung-Tsangpo, southeast Tibet*

*2009 – 2010 Visiting research fellow in Geologisches Institut, ETH Zurich, Switzerland, funded by NSF

2001 – 2003 **M.S.**

Dept. of Geological Sciences, Central Washington University, WA, USA

Supervised by Dr. Charles M. Rubin

Thesis title: *Prehistoric earthquakes along the Shanchiao Fault, Taipei Basin, northern Taiwan*

1996 – 2000 **B.S.**

Dept. of Geology, National Taiwan University, Taipei, Taiwan

Research Background

- ✓ Paleoseismology study – Borehole correlations of fluvial to estuary sediments were conducted between pairs of drill holes in Taipei Basin, Taiwan. The boreholes were drilled across the major normal fault, Sanchiao Fault, which situates along the western boundary of the Taipei metropolitan area. With the occurrence of growth strata, we have identified Holocene activities of the Sanchiao Fault with good estimates of co-seismic offsets.
- ✓ Glacially dammed Lake – Stratigraphy of lacustrine sediments and terrace fills documents the evolution of the glacial-related delta found in the tributary of Yarlung-Tsangpo, the great river of Tibet. The lacustrine sections represent a high-water-level stage when the Yarlung-Tsangpo was impeded by advanced mountain glacier during late Pleistocene.
- ✓ Multi-thermochronology on detrital material – Multiple thermochronometers were applied to detrital samples from the tributaries of Yarlung-Tsangpo. Comparisons of age populations between different catchments and up-/down-stream samples reveal a focused denudation pattern within the Lhasa River catchment, particularly along the Yadong-Gulu (亞東-古露) Rifting belt.
- ✓ Extreme wave events along the coast of east Taiwan – Exposed outcrops of modern marine terraces present plausible extreme wave records. Sedimentary features in conjunction with topographic survey suggest the occurrence of paleo-tsunami events at some sites along the east Taiwan.
- ✓ Impacts of (extreme) storm surges on the coastal environment, east Taiwan – The severe damage resulted from Typhoon Soudelor (蘇迪勒), Aug 2015, has brought up our attention toward the impact of storm surges to the east coast of Taiwan. My current investigation focus on the inundation limit, beach profile, and grain size distribution of storm-related deposits. We are in hopes of establishing a comprehensive index system in a near future to describe and estimate the impact of typhoon surges and applying that to the justification of tsunami deposits.

Employment

- 2018 – Postdoctoral research fellow, Institute of Earth Sciences, Academia Sinica
- 2014 – 2018 Postdoctoral research fellow, Department of Natural Resources and Environmental Studies, National Dong Hwa University
- 2004 – 2005 Research Assistant of TCDP (Taiwan Chelungpu Drilling Program), Dept. of Geosciences, National Taiwan University
- 2002 – 2003 Research Assistantship, Dept. of Geological Sciences, Central Washington University
- 2001 – 2002 Teaching Assistantship, Dept. of Geological Sciences, Central Washington University
- 1999 – 2000 Research Assistantship, Dept. of Geosciences, National Taiwan University
- 1998 – 1999 Research Assistantship, Institute of Oceanography, National Taiwan University

Publications:

Journal article

- ✓ Shao-Yi Huang, Jiun-Yee Yen, Bo-Lin Wu, and Nai-Wun Shih, 2019, Field observations of sediment transport across the rocky coast of east Taiwan: impacts of extreme waves on the coastal morphology by Typhoon Soudelor, *submitted to Marine Geology* (in revision)
- ✓ Bo-Lin Wu, Jiun-Yee Yen, Yu-Ting Kuo, Wen-Yen Chang, Shao-Yi Huang, 2019, The study on surface rupture and deformation in the area from Nanbin to Lingding of 0206 Hualien earthquake, *Terrestrial, Atmospheric and Oceanic Sciences (SCI)* (in revision)
- ✓ Shao-Yi Huang, Jiun-Yee Yen, Bo-Lin Wu, I-Chin Yen, and Ray Y. Chuang, 2019, Investigating the Milun Fault: The coseismic surface rupture zone of the 2018/02/06 ML 6.2 Hualien earthquake, Taiwan, *Terrestrial, Atmospheric and Oceanic Sciences (SCI)* (in press) (DOI: 10.3319/TAO.2018.12.09.03)
- ✓ Tzu-Tsen Shen, Tsung-Kwei Liu, Shao-Yi Huang, Pei-Shan Hsieh and Cheng-Yin Wu, 2019, Post-collisional exhumation and geotherm pattern in northern Tananao Complex, northeastern Taiwan, *Terrestrial, Atmospheric and Oceanic Sciences (SCI)* (in press) (DOI: 10.3319/TAO.2019.04.06.01)
- ✓ Ya-Shien Lin, Ray Y. Chuang, Jiun-Yee Yen, Yi-Chin Chen, Yu-Ting Kuo, Bo-Lin Wu, Shao-Yi Huang, and Ci-Jian Yang, 2019, Mapping surface breakages of the 2018 Hualien earthquake by using UAS photogrammetry, *Terrestrial, Atmospheric and Oceanic Sciences (SCI)* (in press) (DOI: 10.3319/TAO.2018.12.09.02)
- ✓ Yu-Ting Kuo, Yu Wang, James Hollingsworth, Shao-Yi Huang, Ray Y. Chuang, Chih-Heng Lu, Yi-Chun Hsu, Hsin Tung, Jiun-Yee Yen, and Chung-Pai Chang, 2018, Shallow fault rupture of the Milun Fault in the 2018 Mw 6.4 Hualien Earthquake: A high resolution approach from optical correlation of Pléiades satellite imagery, *Seismological Research Letters* v.90, no. 1, p. 97-107 (**SCI**) (<https://doi.org/10.1785/0220180227>)
- ✓ Lih Kae Chim, Jiun-Yee Yen, Shao-Yi Huang, Ying-San Liou, and Louis Loung-Yi, Tsai, 2018, Using Raman Spectroscopy of Carbonaceous Materials to track exhumation of an active orogenic belt: An example from Eastern Taiwan, *Journal of Asian Earth Sciences*, 164, p. 248-259 (**SCI**) (doi.org/10.1016/j.jseaes.2018.06.030)
- ✓ Shao-Yi Huang, Yue-Gau Chen, George S. Burr, Manoj K. Jaiswal, Yunung Nina Lin, Gongming Yin, Jingwei Liu, Shujun Zhao, and Zhongquan Cao, 2014, Late Pleistocene sedimentary history of multiple glacially dammed lake episodes along the Yarlung-Tsangpo river, southeast Tibet, *Quaternary Research*, v.82, p.430-440 (**SCI**) (<http://dx.doi.org/10.1016/j.yqres.2014.06.001>)
- ✓ B.J. Yanites, G.E. Tucker, K.J. Mueller, Y.G. Chen, T. Wilcox, S.Y. Huang, K.W. Shi. , 2010, Incision and channel morphology across active structures along the Peikang River, central Taiwan: Implications for the importance of channel width. *GSA-Bulletin*, v.122, p.1192-1208 (**SCI**) ([doi: 10.1130/B30035.1](https://doi.org/10.1130/B30035.1))
- ✓ Shao-Yi Huang, Charles M. Rubin, Yue-Gau Chen and Huan-Chi Liu, 2007, Prehistoric earthquakes along the Shanchiao Fault, Taipei Basin, northern Taiwan, *Journal of Asian Earth*

Featured Conference presentations (in 5 years):

- ✓ Shao-Yi Huang, Jiun-Yee Yen, Nai-Wun Shih, and Bo-lin Wu, 2018, Long-term monitoring of the coastline on eastern Taiwan using aerial photos from unmanned aerial vehicle, 2018 annual congress of Geological Society in Taipei, Taiwan
- ✓ Shao-Yi Huang, Jiun-Yee Yen, Bo-Lin Wu, Yu-Hsuan Kao and Ting-Yi Chang, 2017, Impacts of severe wave event to the coastal environment, east Taiwan: a case study of 2015 Typhoon Soudelor, European Geosciences Union General Assembly 2017 in Vienna, Austria
- ✓ Shao-Yi Huang, Jiun-Yee Yen, and I-Chin Yen, 2016, Preliminary investigation of possible extreme wave events along the Jiqi coast, east Taiwan, 2016 TGA in Taipei, Taiwan
- ✓ Shao-Yi Huang, Jiun-Yee Yen, Tsung-Kwei Liu, Yue-Gau Chen, and Ching-Hua Lo, 2015, Basin-scale Distributed Denudation Patterns Revealed by Multiple Thermo-chronological Results: Example from Lhasa River, Southern Tibet, 2015 American Geophysical Union Fall Meeting in San Francisco, USA
- ✓ Shao-Yi Huang, Yue-Gau Chen, Tsung-Kwei Liu, Ching-Hua Lo, Gongming Yin, and Zhongquan Cao, 2014, Provenance detection deduced by multiple thermochronometers: a tributary study of Yarlung-Tsangpo River, southeast Tibet. 2nd Workshop of Working Group on Sediment Generation (WGSG) in Göttingen, Germany

Organizations:

- ✓ Member of the Geological Society of America
- ✓ Member of the American Geophysical Union
- ✓ Member of the International Association of Sedimentologists
- ✓ 中華民國地質學會 (Geological Society Located in Taipei)