

Curriculum Vitae Dr. Jyh-Jaan “Steven” Huang – 黃致展

PERSONAL INFORMATION

Institute of Geology, University of Innsbruck, Innrain 52, A-6020 Innsbruck, Austria.

E-Mail: huang.jyhjaan@gmail.com; Jyh-Jaan.Huang@uibk.ac.at

Website: <https://www.uibk.ac.at/geologie/sediment>

ORCID: 0000-0001-8815-3957

Date of birth: April 26, 1987. Nationality: Taiwan. Marital status: married, no children.



RESEARCH FOCUS

Micro- radiographic and XRF-core scanning technique developments and applications.

Geohazards and extreme events in Source to Sink (S2S) Systems.

Paleoceanography/ Paleolimnology/ Paleoclimatology.

Pollution history and monitoring in river, lacustrine and marine sediments.

EDUCATION

- Sep. 2011 –** **Doctor of Philosophy**, Department of Geosciences, National Taiwan University (NTU).
Dec. 2016 *An Investigation of Environment-Human Interactions in the Lanyang Source-to-Sink System Based on X-Ray Fluorescence Scanning Analysis.*
Supervisors: Kuo-Yen Wei, Sheng-Rong Song, Ludvig Löwemark.
- Sep. 2009 –** **Master of Science**, Department of Geosciences, National Taiwan University.
Jun. 2011 *Linkage between Natural Disasters and Kiwulan Cultural Hiatus over the Last 1000 Years in the Lanyang Drainage System.* Supervisors: Kuo-Yen Wei, Chih-An Huh.
- Sep. 2005 –** **Bachelor of Science**, Department of Geosciences, National Taiwan University.
Jun. 2009 *High-resolution paleoceanography records in the South China Sea over the past 11,600 years.* Supervisors: Kuo-Yen Wei.

PROFESSIONAL APPOINTMENTS

- Oct. 2017 – Present** **Postdoctoral Researcher.**
Austrian Core Facility, Institute of Geology, University of Innsbruck.
Lab website: <https://www.uibk.ac.at/geologie/sediment/>
- Jan. 2017 – Sep. 2017** **Postdoctoral Researcher**, Department of Geosciences, National Taiwan University.
Sep. 2009 – Sep. 2017 **Manager of NTUGEO Itrax Lab.**
Department of Geosciences, National Taiwan University.
Lab website: <http://ntuitrax.wixsite.com/home>
- Feb. – Mar. 2012** **Visiting Scholar.**
Department of Geology and Geochemistry, Stockholm University.

HONORS AND AWARDS (5 most important ones)

- 2014** **Distinguished Teaching Assistant** of National Taiwan University, due to the Outstanding Teaching Assistant Award in 2012, 2013 and 2014.
- 2011** Membership of the **Phi-Tau-Phi Scholastic Honor Society** of the Republic of China (Taiwan) (Top 1% of the graduates in College of Science).
- 2011** **Student Poster Award** in Taiwan Geosciences Assembly.
- 2010** **Student Poster Award** in Oceanographic Society Assembly of Taiwan.
- 2009, -11** **Dean's Award** of College of Science, NTU, Taiwan (Two times, Bachelor of Science and Master of Science).

SCHOLARLY ACTIVITIES / SERVICES (5 most important ones)

- Mar. 2017** **Organizer and Contact Person - International Conference of XRF Scanning 2017, Taipei, Taiwan.** Website: <http://b00302249.wixsite.com/mxcs>
- June. 2018** Reviewer for Journal Quaternary International with "**Certificate of Outstanding Contribution**" (2 reviews per year).
- May 2017** **Organizer of Conference Field Trip – 14th International Ichnofabric Workshop, Taipei, Taiwan.** Website: <http://homepage.ntu.edu.tw/~ludvig/styled-12/>
- Mar. 2017** **Organizer - Natural hazards on a tropical island (Taiwan).**
Field Excursion with University of Bremen, Germany.
- 2012, 2013** **Organizer - Geological Hazard Assessment -**
Exchange course with Tohoku University, Japan (2 times)

INVITED PRESENTATIONS (5 most important ones)

- 2018** **IPA-IAL 2018:** Joint meeting of the International Paleolimnology Association and the International Association of Limnogeology (at Stockholm University, funding: COX Analytical Systems, Sweden)
X-ray fluorescence (XRF) core-scanning of organic-rich sediments: suggestions based on the analysis of incremental spiking reference materials.
- 2018** **University of Taipei** (assistant professor job interview)
Environmental-Human Interactions: Past, Present and Beyond.
- 2017** **University of Innsbruck** (funding: BMWFW, Austria)
The applications of XRF-core scanning technique: past, present, and beyond.
- 2017** **National Taiwan Normal University** (funding: NTNU and MOST of Taiwan)
Invited talk of public science: Few things that can be learned from the field: from nature to reality.
- 2015** **University of Cologne, University of Bremen, GFZ, and University of Southampton** (funding: COX Analytical Systems and MOST of Taiwan)
The technical developments and applications of XRF core scanner in Taiwan (Due to the successful presentations and follow-up cooperation, we decided to host XRF Scanning 2017 and Bremen Field excursion in Taiwan).

RESEARCH PROJECTS

- 2018-present** **Nachwuchsförderung der University of Innsbruck** (Young scientist grant of the University of Innsbruck) : Core-XCT: X-ray Computed Tomography as new tool in Earth Science for non-destructive core analyses (12.000 Euro).
(PI)
- 2008-2009** **Taiwan Ministry of Science and Technology (MOST) Student Project:**
(PI) High-resolution sea surface temperature records in the South China Sea: Implication to the paleo-East Asian Monsoon intensity by IMAGES core MD97-2151 (NSC97-2815-C-002-023-M). (1.700 euro)

SCIENTIFIC PUBLICATIONS

Published

- ***Jyh-Jaan Huang***, Kuo-Yen Wei, Ludvig Löwemark, Sheng-Rong Song, Chih-An Huh, Chih-Kai Chuang, Tien-Nan Yang, Meng-Yang Lee, Yu-Be Chen, Teh-Quei Lee. (2018). What caused the cultural hiatus in the Iron-Age Kiwulan Site, northeastern Taiwan?
Quaternary International, in press
- Julie Lattaud, Li Lo, ***Jyh-Jaan Huang***, Yu-Min Chou, Sergey A. Gorbarenko, Jaap S. Sinninghe Damsté, Stefan Schouten. (2018). A comparison of Late Quaternary organic proxy-based paleotemperature records of the central Sea of Okhotsk.
Paleoceanography and Paleoclimatology, 33 (7), 732-744.
- Queenie Chang, Jian-Cheng Lee, ***Jyh-Jaan Huang***, Kuo-Yen Wei, Yue-Gau Chen, Timothy B. Byrne. (2018). Identifying the source of fluvial terrace deposits using XRF scanning and Canonical Discriminant Analysis: A case study of the Chihshang terraces, eastern Taiwan.
Geomorphology, 308, 204-214.
- Li Lo, Simon T. Belt, Julie Lattaud, Tobias Friedrich, Christian Zeeden, Stefan Schouten, Lukas Smik, Axel Timmermann, Patricia Cabedo-Sanz, ***Jyh-Jaan Huang***, Liping Zhou, Tsong-Hua Ou, Yuan-Ping Chang, Liang-Chi Wang, Yu-Min Chou, Chuan-Chou Shen, Min-Te Chen, Kuo-Yen Wei, Sheng-Rong Song, Tien-Hsi Fang, Sergey A. Gorbarenko, Wei-Lung Wang, Teh-Quei Lee, Henry Elderfield, David A. Hodell. (2018). Precession and atmospheric CO₂ modulated variability of sea ice in the central Okhotsk Sea since 130,000 years ago.
Earth and Planetary Science Letters, 488, 36-45.
- Akihiro Hiruta, Tsanyao Frank Yang, Saulwood Lin, Chih-Chieh Su, Nai-Chen Chen, Yi-Jyun Chen, Hsuan-Wen Chen, Tsung-Han Yang, Yu-Chun Huang, Kuo-Yen Wei, ***Jyh-Jaan Huang***, Song-Chuen Chen, Sheng-Rong Song. (2017). Activation of gas bubble emissions indicated by the upward decreasing Lead-210 activity at a submarine mud volcano (TY1) offshore southwestern Taiwan.

Journal of Asian Earth Sciences, 149, 160-171.

- ***Jyh-Jaan Huang***, Chih-An Huh, Kuo-Yen Wei, Ludvig Löwemark, Shu-Fen Lin, Wen-Hsuan Liao, Tien-Nan Yang, Sheng-Rong Song, Meng-Yang Lee, Chih-Chieh Su, Teh-Quei Lee. (2016) Disentangling natural and anthropogenic signals in lacustrine records: An example from the Ilan Plain, NE Taiwan. *Frontiers in Earth Science*, 4, 98.
- ***Jyh-Jaan Huang***, Ludvig Löwemark, Queenie Chang, Huei-Fen Chen, Sheng-Rong Song, Kuo-Yen Wei. (2016) Choosing optimal exposure times for XRF core-scanning: suggestions based on the analysis of geological reference materials. *Geochemistry, Geophysics, Geosystems*, 17, 1558-1566.
- Ludvig Löwemark, Tzu-Tung Chen, Björn Gunnarson, Chih-Chieh Su, Tien-Nan Yang, ***Jyh-Jaan Huang***, Yung-Hsiang Lan, George Burr. (2015) The Tienchi Pond on Lanyu Island (Western Pacific): Lake formation and potential as environmental archive. *Journal of Asian Earth Sciences* 114, 435-446.

In review/revision

- Itrax operators (group authorship of 21 scientists including ***Jyh-Jaan Huang***). Practical guidelines and recent advances in the Itrax XRF core-scanning procedure. *Quaternary International*, in revision.
- An-Sheng Lee, ***Jyh-Jaan Huang***, Kuo-Yen Wei, Sofia Ya-Hsuan Liou. High resolution and vertical distribution of heavy metals assessed by rigorous multivariate analyses: An example-based approach using the estuary sediments of the Nankan River, Taiwan. *Quaternary International*, in revision.
- Liang-Chi Wang, Zih-Wei Tang, Huei-Fen Chen, Hong-Chun Li, Liang-Jian Shiau, ***Jyh-Jaan Huang***, Kuo-Yen Wei, Chih-Kai Chuang, Yu-Min Chou. Late Holocene vegetation, climate, and nature disturbance records from an alpine pond in central Taiwan. *Quaternary International*, in review.
- ***Jyh-Jaan Steven Huang***, Sheng-Chi Lin, Ludvig Löwemark, Ya-Hsuan Liou, Queenie Chang, Tsun-Kuo Chang, Kuo-Yen Wei, Ian W. Croudace. A novel approach of heavy metal pollution monitoring using ion exchange resin and micro-XRF-core scanning technique. *Environmental Science & Technology Letters*, submitted.