

Yin-Chung (Lloyd) Huang

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EDUCATION

National Taiwan University (NTU)

Master of Science in Agricultural Chemistry

Sept. 2020 – July 2022

Taipei, Taiwan

- GPA 4.24/4.30
- Advisor: Prof. Zeng-Yei Hseu
- Thesis: Using pXRF and Vis-NIR reflectance spectra to predict the diagnostic criteria of podzolic soils in subalpine areas of Taiwan
- Relevant courses: Principles of Remote Sensing, Geostatistics, Soil Physical Chemistry, and English Writing for Academic Purposes

National Taiwan University

Biological Statistics Program

Sept. 2019 – Jan. 2022

Taipei, Taiwan

- Completed 20 designated credits, including Advanced Statistics, Applied Linear Algebra, Experimental Design, Artificial Neural Networks, and Spatial Analysis

National Taiwan University

Bachelor of Science in Agricultural Chemistry

Sept. 2016 – June 2020

Taipei, Taiwan

- GPA 4.24/4.30
- Rank 1/55 (**summa cum laude**)
- Relevant courses: Physical Chemistry, Analytical Chemistry, Organic Chemistry, Soil Chemistry, Soil Morphology and Classification, Biochemistry, Plant Nutrition, and Molecular Biology

PUBLICATIONS

Submitted

Huang, Y. C., Chen, Z. S., Hsu, J. Y., Chiu, C. M., & Hseu, Z. Y. (2022). Differentiation of fine-textured podzolic soils controlled by climate and landscape in Taiwan. *Geoderma* (**SCI, IF = 7.422, ranked 4/47 in Soil Science**). (manuscript number: GEODER-D-22-00525)

Published papers

Huang, Y. C., & Hseu, Z. Y. (2021). Silicon availability in relation to soil properties in Inceptisols on uncultivated lands and paddy fields in Taiwan. *Geoderma Regional*, 26: e00406. (**SCI, IF = 4.201**)

International conference publications

Huang, Y. C., Huang, C. Y., & Hseu, Z. Y. (2022). Characterization of podzolic soils using digital soil morphometrics in subtropical subalpine forests. Abstract Proceedings of 22nd World Congress of Soil Science. International Union of Soil Science. Glasgow, UK. July 31-Aug. 5, 2022. (oral presentation in person; accepted on Feb. 10, 2022)

Huang, Y. C., Huang, C. Y., & Hseu, Z. Y. (2022). Characterization of organometallic complexes in podzolic soils in subalpine forest using proximal sensors. Abstract Proceedings of 8th International Symposium on Soil Organic Matter. Korean Society of Soil Science and Fertilizer. Seoul, Korea. June 26-30, 2022. (oral presentation by pre-recorded video)

Huang, Y. C., & Hseu, Z. Y. (2021). Characterization of podzolic soils using digital morphometrics in a subtropical subalpine forest of Taiwan. Abstract Proceedings of Pedometric Webinar. International Union of Soil Science. June 16-17, 2021. (oral presentation)

Huang, Y. C., & Hseu, Z. Y. (2019). Silicon availability and its relation to other properties of soils in Taiwan. Abstract Proceedings of 14th International Conference of the East and Southeast Asia Federation of Soil Science Societies (ESAFS). National Taiwan University. Taipei, Taiwan. Nov. 3-8, 2019. (oral presentation)

Huang, Y. C., Tsui, C. C., Chiang, C. H., & Hseu, Z. Y. (2018). Element composition of the colluvial soils at an archeological site from Linkou Terrace, Taiwan. Abstract Proceedings of Joint Seminar on Environmental Ecology and Restoration. Ishikawa Prefectural University. Hakodate, Japan. Sept. 3-6, 2018. (oral presentation)

RESEARCH EXPERIENCE

Soil Survey and Remediation Laboratory, NTU

July 2017 – Present

Will work as Full Time Research Assistant from Sept. 2022

Lab website: <https://ssrlab.com.tw/>

- Combined portable X-ray fluorescence spectrometer and Vis/NIR/SWIR spectroradiometers to predict soil organic carbon, clay, amorphous iron, and optical density of oxalate extractant (ODOE)
- Investigated the differentiation of podzolic soils in subalpine forests in Taiwan using selective extraction, micromorphology, and multivariate statistics
- Analyzed the distribution of silicon (Si) availability and its difference in forest soils and paddy fields
- Carried out physicochemical analysis on the soils from an archeological site for the Department of Anthropology, NTU

AWARDS & HONORS

Travel Grants supported by International Union of Soil Sciences (IUSS)

July 2022

Up to 1000 USD as reimbursements of travel costs for early-career scientists

(Accepted May 2022)

- Acquired travel grant to 22nd World Congress of Soil Science

Honorable Mention for Academic Thesis Competition

May 2021

Annual Meeting of the Geography Society of China

Honorable Mention for Poster Competition

Nov. 2020

Annual Meeting of the Chinese Society of Soil and Fertilizer Sciences

Dean's List Award (Academic Excellence Award)

Oct. 2020

Top 5% of class in a semester

Oct. & Apr. 2019

- Demonstrated diligence on every subject

Oct. & Apr. 2018

- Completed all credits with outstanding grades

Oct. & Apr. 2017

Hsin Tian Kong Long-term Scholarship

July 2019 – June 2022

1500 USD each semester

- Acquired financial support from the Cultural and Educational Foundation of the largest religious group in Taiwan

CONFERENCES EXPERIENCE

22nd World Congress of Soil Science

July-Aug. 2022

Oral presentation (in person; accepted on Feb. 10, 2022)

Glasgow, UK

- The leading international conference in soil science with over 3000 participants worldwide
- Topic: Characterization of podzolic soils using digital soil morphometrics in subtropical subalpine forests

8th International Symposium on Soil Organic Matter

June 2022

Oral presentation (pre-recorded video)

Seoul, Korea

- Topic: Characterization of organometallic complexes in podzolic soils in subalpine forest using proximal sensors

Pedometric Webinar

June 2021

Oral presentation

Virtual

- Webinar held by the Pedometrics commission of the International Union of Soil Sciences (IUSS)
- Topic: Characterization of podzolic soils using digital soil morphometrics in a subtropical subalpine forest of Taiwan

Annual Meeting of the Geography Society of China

May 2021

Oral presentation

Virtual

- Topic: Characterization of podzolic soils in Shanlinshi using digital soil morphometrics

Annual Meeting of the Chinese Society of Soil and Fertilizer Sciences

Nov. 2020

Poster presentation

Taichung, Taiwan

- Topic: Using Vis-NIR spectroscopy and pXRF to pedogenesis
- Presented research progress of a collaborative project with the Department of Geology, NTU

14th Conference of the East and Southeast Asia Federation of Soil Science Societies (ESAFS)

Nov. 2019
Taipei, Taiwan

Oral presentation

- Topic: Silicon availability and its relation to other properties of soils in Taiwan

Joint Seminar on Environmental Ecology and Restoration

Sept. 2018
Hakodate, Japan

Oral presentation

- Joint seminar between NTU and Ishikawa Prefectural University
- Topic: Element composition of the colluvial soils at an archeological site from Linkou terrace, Taiwan
- Presented research progress of a collaborative project with the Department of Anthropology, NTU

SKILLS

Computer Programming

- R (Carried out machine learning, spectra pre-processing, and geostatistics)
- QGIS
- HTML (Lab website maintenance)

Laboratory Instruments

- Field-portable Vis/NIR/SWIR spectroradiometer (ASD FieldSpec 3)
- Portable X-ray fluorescence spectrometer (Olympus DELTA Premium pXRF)
- Atomic absorption spectroscopy
- Inductively coupled plasma - optical emission spectrometry (ICP-OES)
- X-ray diffraction (XRD)
- Electron probe micro-analysis with X-ray wavelength dispersive spectroscopy (EPMA-WDS)

English

- TOEFL: 107 (R30 / L30 / S23 / W24)
- TOEIC: 975

TEACHING EXPERIENCE

Soil Science Lab (2020, 2021)

Sept. 2021 – Jan. 2022

Teaching Assistant

Sept. 2020 – Jan. 2021

- Organized weekly soil science lab lecture
- Delivered lectures on soil science and statistics

EXTRACURRICULAR EXPERIENCE

NTU Agricultural Chemistry Workshop

July 2019

Director of Academic Department

Taipei, Taiwan

- Organized seminar on the topic of “The Merits and Sins of Paraquat”
- Delivered lectures on soil chemistry and soil classification
- Hosted four invited speeches and one field trip

New Taipei City Model United Nations (MUN) 2018

Aug. 2018

Chair

Taipei, Taiwan

- Committee: United Nations Development Programme (UNDP)
- Topic: Harnessing SDGs to Achieve Inclusive Growth
- Wrote Background Guide with detailed introduction and explanation of topic
- Presided a committee with over 100 delegates in the largest MUN event in Taiwan

Overseas Community Affairs Council (OCAC, ROC)

July 2018

Participator of OCAC Youth Bridge Program

London, UK

- Visited Taipei Representative Office (TRO) in the UK
- Discussed with the Representative (Ambassador) on the topic of youth education

Harvard World Model United Nations (MUN) 2017

Mar. 2017

Delegate of Iraq

Montreal, Canada

- Committee: World Health Organization (WHO)
- Topic: Reforming the Global Pharmaceutical Industry
- Contributed to the Draft Resolution that was adopted by the committee