

EN-CHI LEE

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SCHOOL College of Science, University of Arizona, Tucson, Arizona

EDUCATION

2023 – now **University of Arizona**, Tucson, Arizona
Department of Geosciences & Lunar and Planetary Laboratory
Majors: Geophysics & Planetary Geoscience
Minors: Mathematics & Oceanic and Atmospheric Sciences
Expected graduation: May 2026

2022 – 2023 **National Taiwan University**, Taipei, Taiwan
Department of Geosciences & Institute of Oceanography
Majors: Geosciences
Transferred to the University of Arizona

RESEARCH EXPERIENCES & WORKSHOPS

2024 – now **Arizona Polar Ice Laboratory**, Undergraduate researcher
Department of Geosciences, University of Arizona, Tucson, Arizona
Mentor: Christopher Harig, PhD
Project: Estimating Basin-Scale Ocean Mass Budgets with Satellite Gravity

- Developing MATLAB pipeline for processing GRACE satellite data and constructing Slepian functions over the oceans
- Providing mass change estimates in each ocean basin since 2003
- Quantifying the spatial variance of the glacial isostatic adjustment and its impact on sea-level budget closures

- 2023 **Dynamics and Modelling Laboratory**, Undergraduate researcher
National Centre of Theoretical Sciences, National Taiwan University, Taipei, Taiwan
Mentor: Hung-Chi Kuo, PhD
Project: Potential Vorticity Invertibility for Boundary Layer in Hadley Circulation
- Implemented algorithms for boundary layer dynamical adjustment
 - Evaluated the performance of the Pangu AI model in forecasting typhoons compared to numerical weather prediction
 - Developed suitable numerical methods for PDE invertibility and gained experience in operating AI models
- 2022 **IRIS Seismology Skill Building Workshop**, Participant
Incorporated Research Institutions for Seismology (*Online*)
Participated in the self-motivated workshop with a 99% average score
- Performed analysis using Shell scripts, Seismic Analysis Code (SAC), and ObsPy
 - Studied behaviours of seismic events, earthquake positioning, and waveforms
- 2020 – 2022 **Institute of Earth Sciences**, Student researcher
Academia Sinica, Taipei, Taiwan
Mentor: Wen-Tzong Liang, PhD
Project: Exploration of Low-Frequency Seismic Events
- Streamlined the *stormquake* detection process during hurricanes
 - Developed an event positioning algorithm using a single Rayleigh wave packet
 - Acquired skills in maths-based MATLAB programming and statistical methods

PUBLICATIONS

- Oct 2024 **Investigating the Variance of GIA Corrections on Gravimetric Basin-Scale Ocean Mass Budgets** (*abstract, submitted*)
Washington, D.C.
AGU24 Annual Meeting
- Aug 2024 **Estimating Basin-Scale Ocean Mass Budgets with Satellite Gravity** (*abstract*)
University of Arizona, Tucson, Arizona
Undergraduate Research Opportunities Consortium's 2024 Abstract Review

PRESENTATIONS

- Sep 2024 **Estimating Basin-Scale Ocean Mass Budgets with Satellite Gravity** (*talk*)
University of New Mexico, Albuquerque, New Mexico
McNair Scholar Research Conference
- Aug 2024 **Estimating Basin-Scale Ocean Mass Budgets with Satellite Gravity** (*talk & poster*)
University of Arizona, Tucson, Arizona
Undergraduate Research Opportunities Consortium (UROC) Colloquium

HONOURS & DISTINCTIONS

- 2023 – now **Transfer Global Wildcat Award**
University of Arizona, Tucson, Arizona
Awarded 11,000 USD/year for outstanding academic performance
- 2023 – now **Scholarship for Outstanding Students Participating in International Mathematics and Science Olympiads and International Science Exhibitions to Study abroad**
Ministry of Education, Taichung, Taiwan
Awarded 30,000 USD/year to study abroad
- 2023 – 2024 **Dean's List with Distinction**
University of Arizona, Tucson, Arizona
Awarded for a 4.0 GPA
- 2022 – 2023 **Fu Bell Scholarship**
National Taiwan University, Taipei, Taiwan
Awarded 200,000 NTD/year for outstanding academic performance
- 2022 – 2023 **Presidential Award**
National Taiwan University, Taipei, Taiwan
Awarded for maintaining a top 5% GPA within the department
- 2021 **International Earth Science Olympiad**, Gold medallist
International Geoscience Education Organisation (*Online*)
Ranked second place internationally

PROFESSIONAL AFFILIATIONS & MEMBERSHIPS

- 2024 – now **American Geophysical Union**, Member
- 2023 – now **Arizona Science, Engineering, and Mathematics Scholars (ASEMS)**, Scholar member

2022 – now **Seismological Society of America**, Member

REFERENCES

Christopher Harig, PhD

Assistant Professor, Department of Geosciences
University of Arizona, Tucson, Arizona
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Hung-Chi Kuo, PhD

Chair Professor, Department of Atmospheric Science
National Taiwan University, Taipei, Taiwan
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Leah Callovini, MS

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