

# EN-CHI LEE

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PHONE        +1 (623) 920-9079  
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: Dr. Christopher Harig  
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: Dr. Hung-Chi Kuo  
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: Dr. Wen-Tzong Liang  
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 medalist  
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  
charig@arizona.edu

### **Hung-Chi Kuo, PhD**

Chair Professor, Department of Atmospheric Science  
National Taiwan University, Taipei, Taiwan  
kuo@as.ntu.edu.tw

### **Leah Callovini, MS**

Programme Manager, Arizona Science, Engineering, and Mathematics Scholars (ASEMS) Scholar Training  
Academy for Research in STEM (STARS)  
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