Curriculum Vitae

Dr. Ya Huei Huang 黃雅惠

CONTACT INFORMATION

Space Science Institute, Macau University of Science and Technology

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LinkedIn
ResearchGate

RESEARCH INTERESTS

Lunar science, planetary science, impact history, Apollo returned samples, impact glasses, impact cratering, machine learning, groundwater forecasting, and data analysis and assimilation.

ACADEMIC APPOINTMENTS

- 09/2025 - current Assistant Professor, **Macau University of Science and Technology**, Space Science Institute, Macau
- 05/2024-08/2025 Contracted Assistant Researcher, **National Yunlin University of Science and Technology**, Research Center for Soil & Water Resources and Natural Disaster Prevention, Taiwan (*Focus: AI approach on groundwater forecasting*)
- 11/2020-07/2023 Postdoctoral Associate, **Massachusetts Institute of Technology**, Department of Earth, Atmospheric, and Planetary Sciences, U.S.A. (Sci-PI on NASA LDAP Grant 80NSSC20K1417 with *Focus: Planetary surface and crustal evolution*)
- 01/2019-11/2020 Postdoctoral Associate, **Massachusetts Institute of Technology**, Department of Earth, Atmospheric, and Planetary Sciences, U.S.A. (on NASA LDAP Grant NNX16AN62G) with *Focus: Planetary surface and crustal evolution*)
- 08/2012-12/2018 Graduate Assistant, **Purdue University**, Department of Earth, Atmospheric, and Planetary Sciences, U.S.A. (on NASA NESSF with *Focus: Lunar surface composition evolution*)
- 08/2010-07/2012 Research Assistant, **National Taiwan Normal University**, Department of Physics, Taiwan (*Focus: Predicting protein dynamic structures using molecular dynamics*)

EDUCATION

Purdue University, West Lafayette, IN

Ph.D., Planetary Science, December 2018

- Thesis Topic: *Impact Transport on the Moon*
- Advisor: Professor David A. Minton
- Major: Earth, Atmospheric, and Planetary Sciences
- Concentration: Geophysics

National Tsing Hua University, Hsinchu, Taiwan

M.S., Physics, August 2010

- Thesis Topic: *The Velocity-Size Relation for Members of Asteroid Families*
- Advisor: Professor Ing-Guey Jiang
- Major: Physics / astrophysics

National Chung Cheng University, Chiayi, Taiwan

B.S., Physics, June 2008

In preparation

[1] Ya Huei Huang, J. M. Soderblom, H. Long, S. B. Krein, Unmixing the Moon – developing a novel impact mixing model to investigate lunar mare basalt composition (in prep).

[2] Ya-Huei Huang, D. A. Minton, J. R. Elliott, C. Andronicos, P. Q. Nguyen, N. E. B. Zellner, A Global Lunar Impact Bombardment ∼800 Ma Ago Recorded in Lunar Impact Glasses. Earth and Planetary Science Letters (in prep).

Refereed Journal Publications

[1] Austin M. Blevins, David A. Minton, Ya Huei Huang, Jun. Du, M. M. Tremblay, C. I. Fassett, Constraining the source craters of Apollo impact melts. Journal of Geophysical Research: Planets 130(8), e2025JE009137 (2025). https://doi.org/10.1029/2025JE009137

[2] Austin M. Blevins, David. A. Minton, Ya Huei Huang, Jun Du, Marissa M. Tremblay, Caleb I. Fassett, Apollo Impact Melts Record a Rapidly Declining Impact Rate in the Late Imbrian. Journal of Geophysical Research: Planets 130(2), e2024JE008722 (2025). https://doi.org/10.1029/2024JE008722

[3] Ya Huei Huang, Christian Riedel, Jason M Soderblom, Stephanie Brown Krein, Csilla Orgel, Jack W Conrad, Masatoshi Hirabayashi, David A Minton, Global Lunar Crater Density Using Buffered Nonsparseness Correction. The Planetary Science Journal 5(7), 155 (2024). https://doi.org/10.3847/PSJ/ad4ceb

[4] Jun Du, David A Minton, Austin M Blevins, Caleb I Fassett, Ya-Huei Huang, Spectral analysis of the morphology of fresh lunar craters I: Rim crest, floor, and rim flank outlines. Journal of Geophysical Research: Planets 129(11), e2024JE008357 (2024). https://doi.org/10.1029/2024JE008357

[5] Ya Huei Huang, Jason M. Soderblom, David. A. Minton, Masatoshi Hirabayashi, H Jay Melosh, Bombardment history of the Moon constrained by crustal porosity. Nat. Geosci. 15, 531–535 (2022). https://doi.org/10.1038/s41561-022-00969-4

[6] Ya-Huei Huang, David A. Minton, Nicolle E. B. Zellner, Masatoshi Hirabayashi, James E. Richardson, Caleb I. Fassett, No Change in Recent Lunar Impact Flux Required Based on Modeling of Impact Glass Spherule Age Distributions, Geophysical Research Letters 45, 6805–6813. 2018.

[7] Jacob R. Elliott, Ya-Huei Huang, David A. Minton, Andrew M. Freed, The Length of Lunar Crater Rays Explained Using Secondary Crater Scaling, Icarus 312, 231–246. 2018

[8] Ya-Huei Huang, David A. Minton, Masatoshi Hirabayashi, Jacob R. Elliott, James E. Richardson, Caleb I. Fassett, Nicolle E. B. Zellner, Heterogeneous impact transport on the Moon, Journal of Geophysical Research: Planets, 122, 1158–1180. 2017.

[9] Ya-Huei Huang and Chi-Ming Chen, Statistical Analysis and Computational Prediction of Helical Kinks in Membrane Proteins, Journal of Computer-Aided Molecular Design 10, 1171–1185. 2012.

Research Article Highlights

[1] *Bombardment history of the Moon constrained by crustal porosity* on Eos,"Moon's Porosity Changes Cratering History, Study Says", August 3 2022

[2] *Bombardment history of the Moon constrained by crustal porosity* on News & Views on Nature Geoscience "Moon's crustal porosity records impact history", July 7 2022

[3] *Bombardment history of the Moon constrained by crustal porosity* on MIT News "Porosity of the moon's crust reveals bombardment history", July 7, 2022

[4] *The Length of Lunar Crater Rays Explained Using Secondary Crater Scaling* on Science Trends "The Moon's Bright Streaks Explained", September 25, 2018

[5] *No Change in Recent Lunar Impact Flux Required Based on Modeling of Impact Glass Spherule Age Distributions* on Daily News in New Scientist "Why a rake on the moon messed up our theories of life on Earth", September, 14 2018.

[6] *No Change in Recent Lunar Impact Flux Required Based on Modeling of Impact Glass Spherule Age Distributions* on News in Phys.org "Age bias exists even in outer spacein samples collected by Apollo astronauts", September 11, 2018. a rake on the moon messed up our theories of life on Earth", September, 14 2018.

[7] *Heterogeneous Impact Transport on the Moon* on Research Spotlight in Eos, June 7 2017

GRANTS

National Science and Technology Council Research Grant Proposal Program 2026 Jan. – 2028 Dec.

- Title: Advanced Multilevel Groundwater Monitoring System Technique Development Alliance.
- PI: Prof. Wen Jet-Chau (National Yunlin University of Science and Technology).
- Status: Funded

National Science and Technology Council Department of Academia-Industry Collaboration and Science Park Affairs Program 2025 Feb. – 2028 Jan.

- Title: Hydrological Partitioning in Subsurface (Co-PI).
- PI: Prof. Huang Shao-Yang (National Yunlin University of Science and Technology) and Prof. Zhang Chi (University of Vienna).
- Co-PI: Dr. Ya Huei Huang.
- Status: Pended

NASA Solar System Workings Proposal 2025-2028

- Title: Excavation and burial on Europa by impact gardening (Post-doc).
- PI: Dr. Augusto Carballido.
- Status: Pended

NASA Lunar Data Analysis Program 2020 Oct. – 2022 Oct.

- Title: Material Mixing on the Moon from Impacts (Sci-PI).
- PI: Dr. Jason Soderblom.
- Sci-PI: Dr. Ya Huei Huang
- Co-I: Dr. Stephanie Brown Krein.
- Status: Funded

NASA Precursor Science Investigation - Europa 2022 Dec.

- Title: Excavation and burial on Europa by impact gardening.
- PI: Dr. Augusto Carballido.
- Status: Rejected

NASA Lunar Data Analysis Program 2021 March

- Title: Fractured Planets: Investigation the Evolution of Porosity within the Moon's Crust.
- PI: Dr. Jason Soderblom.
- Sci-PI: Dr. Ya Huei Huang
- Status: Rejected

AWARDS

[1] NASA Earth and Space Science Fellowship (NESSF), 2015 – 2018. (Funded)

[2] Purdue Research Foundation Research Assistantship, 2014 – 2015. (Funded)

[3] National Air and Space Museum Postdoctoral Earth and Planetary Sciences Fellowship, 2023 April. (Rejected)

[4] Carnegie Department of Terrestrial Magnetism Postdoctoral Fellowship, 2018 Feb. (Rejected)

INVITED TALKS

- Ya Huei Huang, Lunar Bombardment History. In: *Scientific Exploration of Lunar Frontier Workshop* hosted by Prof. Ip Wing-Huen, May 22, 2025. National Central University, Taiwan (in person).

- Ya Huei Huang, Smashing Planets: Using Impact Craters to Uncover Planetary Surface and Crustal Evolution. In: *State Key Laboratory of Lunar and Planetary Sciences* hosted by Prof. Zhu Meng Hua, February 24, 2025. Macau University of Science and Technology, Macau (in person)

- Ya Huei Huang, Reconstructing the histories of planets and building their futures. In: *Department of Aeronautics and Astronautics* hosted by Prof. Chi-Yung Wu, April 10, 2024. National Cheng Kung University, Taiwan (in person)
- Ya Huei Huang, To infinity and beyond: Back to the Moon and planets. In: *Department of Earth and Environmental Sciences* hosted by Prof. Yuan-Hsi Lee, December 6, 2023. National Chung Cheng University, Taiwan (in person)
- Ya Huei Huang, To infinity and beyond: Back to the Moon and planets. In: *Department of Physics* hosted by Prof. Tsung-Han Lee, October 18, 2023. National Chung Cheng University, Taiwan (in person)
- Ya Huei Huang, Beyond Earth: Navigating Survival and Exploration from the Moon to Mars. In: *Department of Earth Sciences* hosted by Prof. Jennifer Kung, October 13, 2023. National Cheng Kung University, Taiwan (in person).
- Ya Huei Huang, Impacts drive the composition and structure evolution of planetary surfaces and crusts. In: *Department of Geosciences* hosted by Prof. David King Jr., February 27, 2023. Auburn University, USA (in person).
- Ya Huei Huang, What's in an impact record? Using impact records to study the composition, age, and structure of planetary crusts. In: *Departments of Earth Environmental Sciences* hosted by Dr. Seth Jacobson, December 2, 2022. Michigan State University, USA (in person).
- Ya Huei Huang, What's in an impact record? Using impact records to study the composition, age, and structure of planetary crusts. In: *Bullard Laboratories Wednesday Seminars, Department of Space Science and Engineering Colloquium* hosted by Dr. Yihe Xu, November 2022. University of Cambridge, United Kingdom (virtual).
- Ya Huei Huang, Using impacts to investigate the lunar surface and crust. In: *Department of Space Science and Engineering Colloquium* hosted by Dr. Chi-Kuang Chao, April 2022. National Central University, Taiwan.
- Ya Huei Huang, Earth's Moon bombardment history revealed by Apollo samples and crustal porosity. In: *Department of Earth Sciences Seminar* hosted by Dr. Yueh-Ning Lee, Novemeber 2020. National Taiwan Normal University, Taiwan.
- Ya Huei Huang, The young and old on the Moon: Understanding the lunar surface and impact bombardment from returned samples and remote sensing observation data. In: *Planetary Lunch Colloquium Series (PICS)*, 2019. Massachusetts Institute of Technology, USA.
- Ya-Huei Huang, D. A. Minton, N. E. B. Zellner, M. Hirabayashi, J. R. Elliott, C. I. Fassett, What do Apollo impact glasses tell us about post Copernican impact flux?, In: *Geological Society of America Annual Meeting*, 2018. Indianapolis, USA.

CONFERENCE ABSTRACTS

- Ya-Huei Huang, Hong-Ru Lin, Ming-Chang Wu, Shao-Yang Huang, Jet-Chau Wen, Developing a Knowledge-Base Machine Learning Framework: A Case Study of Groundwater Level Forecasting in the Gaoping River Basin, Taiwan. In: The 2025 Taiwan Geoscience Assembly, June 2025.
- Haydn Long, Ya Huei Huang, J. M. Soderblom, S. B. Krein, USING ARCGIS TO INTEGRATE LUNAR GLOBAL SURFACE UNIT MAPS WITH LUNAR PROSPECTOR GAMMA RAY SPECTROMETER COMPOSITION DATASETS AND INVESTIGATE THE PRE-SENT-DAY SURFACE COMPOSITION. In: 54th Lunar Planetary Science Conference, Abstract #2409, 2024.
- Austin M. Blevins, D. A. Minton, Ya Huei Huang, J. Du, M. M. Tremblay. MODELING THE SOURCE OF IMPACT MELT AT THE APOLLO 14-17 SITES. In: 54th Lunar Planetary Science Conference, Abstract #2403, 2024.

- Ya Huei, Huang, Jason M. Soderblom, Stephanie Brown Krein, Haydn Long, Masatoshi Hirabayashi, David A. Minton, Unmixing the Moon – developing a novel impact mixing model to investigate lunar surface composition. In Endurance Science Workshop, Abstract #3024, August 9 - 11, 2023.
- Austin M. Blevins, D. A. Minton, Ya Huei Huang, J. Du, M. M. Tremblay, MODELING THE EFFECTS OF POST-IMBRIUM CRATERS ON THE APOLLO LANDING SITE LOCATIONS. In: 53rd Lunar Planetary Science Conference, Abstract #2812, 2023.
- Ya Huei Huang and J. M. Soderblom, CORRECTING IMPACT MIXING REVEALS UNDERLYING GRAIN DENSITY IN THE LUNAR CRUST. In: Geological Society of America Annual Meeting, 2022. Denver, USA. doi: 10.1130/abs/2022AM-383993
- Ya-Huei Huang, D. A. Minton, J. R. Elliott, C. Andronicos, P. Q. Nguyen, N. E. B. Zellner, A GLOBAL LUNAR IMPACT BOMBARDMENT ∼800 MA AGO RECORDED IN LUNAR IMPACT GLASSES. In: Geological Society of America Annual Meeting, 2022. Denver, USA. doi: 10.1130/abs/2022AM-382706
- Ya Huei Huang, C. Riedel, J. M. Soderblom, S. B. Krein, C. Orgel, M. Hirabayashi, D. A. Minton, Understanding the Global Spatial Distribution of Impact Craters on the Moon Using the Buffered Non-Sparseness Correction Technique. In: 13th Planetary Crater Consortium Meeting, 2022.
- Ya Huei Huang, J. M. Soderblom, S. B. Krein, M. Hirabayashi, D. A. Minton, Correcting Impact Mixing Reveals Underlying Grain Density in the Lunar Crust. In: 52nd Lunar Planetary Science Conference, Abstract #2958, 2022.
- Ya Huei Huang, C. Riedel, J. M. Soderblom, S. B. Krein, C. Orgel, M. Hirabayashi, D. A. Minton, Updated Lunar Global Crater Density Using Buffered Non-Sparseness Correction Reveals the Oldest Age in East Smythii Region. In: 52nd Lunar Planetary Science Conference, Abstract #2957, 2022.
- Ya Huei Huang, J. M. Soderblom, D. A. Minton, M. Hirabayashi, H. J. Melosh, Crustal prosity reveals the bombardment history of the Moon. In: The Earth and Early Moon Conference, 2021.
- Ya Huei Huang, J. M. Soderblom, D. A. Minton, M. Hirabayashi, H. J. Melosh, Crustal prosity reveals the bombardment history of the Moon. In: American Geological Union Fall Meeting, Abstract #768832, 2020.
- Ya-Huei Huang, D. A. Minton, J. R. Elliott, C. Andronicos, P. Q. Nguyen, N. E. B. Zellner, A short-lived lunar impact spike induced by Copernicus Crater-forming sesquinaries versus a long-duration global impact resurfacing 800 Ma ago from a modeling perspective. In: 50th Lunar Planetary Science Conference, Abstract #2957, 2019.
- Ya-Huei Huang, D. A. Minton, J. R. Elliott, N. E. B. Zellner, What happened 800 million years ago on the Moon? In: Bombardment: Shaping Planetary Surfaces and Their Environments workshop, Abstract #2028, 2018.
- Ya-Huei Huang, D. A. Minton, N. E. B. Zellner, M. Hirabayashi, J. E. Richardson, C. I. Fassett, No Change in the Lunar Impact Flux Through the Copernican Period from Modeling Impact Glass Spherule Age Distribution in Lunar Regolith. In: 49th Lunar Planetary Science Conference, Abstract #2677, 2018.
- Ya-Huei Huang, D. A. Minton, M. Hirabayashi, J. R. Elliott, C. I. Fassett, N. E. B. Zellner. Heterogeneous Impact Transport on the Moon. In: New Views of the Moon 2 - Europe, Abstract #6013, 2017.
- J. Elliott, Ya-Huei Huang, D. A. Minton, A. M. Freed. The Length of Lunar Crater Rays Explained Using Secondary Crater Scaling. In: 47th Lunar and Planetary Science Conference, Abstract #2774, 2016.

- T. Hirabayashi, D. A. Minton, H. J. Melosh, C. Milbury, Ya-Huei Huang, J. M. Soderblom. Equilibrium State in Impact-Generated Porosity on a Lunar Surface. In: 47th Lunar and Planetary Science Conference, Abstract #2491, 2016
- Ya-Huei Huang, T. Hirabayashi, D. A. Minton, J. R. Elliott, A. Freed, C. I. Fassett, J. E. Richardson. The Role of Vertical Mixing Process Across Mare and Highland Contacts. In: 47th Lunar and Planetary Science Conference, Abstract #2521, 2016.
- Ya-Huei Huang, D. A. Minton, J. Richardson, B. Cohen, C. Fassett, and N. Zeller. Simulating Three-Dimensional Regolith Transport with the Cratered Terrain Evolution Model. In: Workshop on Issues in Crater Studies and the Dating of Planetary Surfaces, Abstract #9049, 2015.
- S. J. Saikia, A. Das, F. E. Laipert, C. Dapkus, J. Kendall, T. Bowling, J. Steckloff, S. Holbert, K. Graves, T. Antony, R. Bobick, Y. Huang, J. Stuart, D. A. Minton, J. M. Longuski. Marching Towards Troy: Exploration of Jupiter Trojan Asteroids. In: 11th International Planetary Probe Workshop, Abstract #8076, 2014.
- S. Saikia, A. Das, F. Laipert, C. Dapkus, J. Kendall, T. Bowling, J. Steckloff, S. Holbert, K. Graves, T. Antony, R. Bobick, Ya-Huei. Huang, J. Stuart, D. A. Minton, J. M. Longuski. Voyage to Troy: A Mission Concept for the Exploration of the Trojian Asteroids. In: Asteroids, Comets, and Meteors (ACM), 2014.
- Ya Huei Huang, D. A. Minton, J. E. Richardson. Modeling Topographic Changes by Ballistic Sedimentation from Orientale Ejecta. In: 45th Lunar and Planetary Science Conference, Abstract #2551, 2014.
- Ya-Huei Huang and D.A. Minton. Modeling the Provenance of Crater Ejecta. In: Division for Planetary Sciences Meeting (DPS), 2014.
- Ya-Huei Huang and I.-G. Jiang. The Velocity-Size Relation for Members of Asteroid Families. In: The Royal Physcial Society of Republic of China, 2010.

Advising and Mentoring

Undergraduate Research

- **Chen Yeh Hong(陳燁虹)** Undergraduate student in Department of Physics, National Chung-Cheng University. Analyzing the Moon's UV/VIS spectrum data derived from optic fiber and spectrum analyzer (original project with Dr. Chang Yuming) Primary academic advisor: Prof. Tsung-Han Lee
- **Haydn Long**
  Undergraduate student in Earth, Atmospheric, and Planetary Sciences, Massachuttes Institute of Technology. Undergraduate research project on mapping mare and highland boundaries on the Moon. Primary advisors: Dr. Ya Huei Huang and Dr. Jason Soderblom. 2023–2024.
- **Jacob R. Elliott**
  Undergraduate student in Earth, Atmospheric, and Planetary Sciences, Purdue University. Undergraduate research project on mapping crater rays on the Moon. Primary advisors: Professors Andrew M. Freed and David A. Minton. 2016–2018.
- **Jennifer Larson**
  Undergraduate student in Physics, Purdue University. Undergraduate research project on modeling Orientale Basin ejecta's sedimentation process. Primary advisor: Professor David A. Minton. 2012–2013.

Teaching Experience

Massachusetts Institute of Technology, Cambridge, MA

IAP 2023 Seminar on Teaching in Earth Science **2023**

- Attended a 5 weeks long course from MIT Independent Activity Period (IAP) on a subject of exploring methodologies and practice in teaching Earth Science (Instructor: Professor David McGee)

Purdue University, West Lafayette, IN

ESL teaching certification **2014**

- Classroom Communication In ESL For Teaching Assistants (Instructor: Professor Beth Lageveen)

Teaching Assistant **September 2013 to August 2014**

- Grader for Planet Earth (Instructor: Professor Larry Braile)
- Grader for Earthquakes And Volcanoes (Instructor: Professor Lucy Flesch)
- The Planets (Instructor: Professor David A. Minton)

Teaching Assistant **September 2012 to August 2013**

- Grader for Planet Earth (Instructor: Professor Larry Braile)
- Grader for Oceanography (Instructor: Professor James G. Ogg)

National Tsing Hua University, Hsinchu, Taiwan

Teaching Assistant **September 2008 to March 2009**

- Instructor for General Physics I and II
  Responsible for grading and solving homework assignment on a blackboard.

OUTREACH EXPERIENCE

Purdue University, West Lafayette, IN

ScienceScape Camp **June 2018**

- Held by Purdue's The Science Diversity Office.
- The Solar System trivia for K-12 students.

Second Annual Earth Science Passport Day **2017**

- Held by Imagination Station, Lafayette, IN.
- Showcase the pictures of the Solar System for kids ages 5–9.

Earth Science Passport Day **2016**

- Held by Imagination Station, Lafayette, IN.
- Showcase the Lafayette Martian meteorite and rock collections and present the slideshow of the Solar System planets for kids ages 5–9.

Spring Fest Event **2013**

- Held by Department of Earth, Atmospheric, and Planetary Sciences, Purdue University, West Lafayette, IN.
- Hand-on activities for rocks, fossils and volcano experiment.

Global Fest Food Bazaar **2012**

- Held by International Center, Purdue University, West Lafayette, IN.

- Host introducing Taiwanese food with people from around the world.

Professional Experience

Massachusetts Institute of Technology, Cambridge, MA

Postdoctoral Associate **January 2019 to present**

- Funding: National Aeronautics and Space Administration
  - Supervisor: Dr. Jason M. Soderblom
- Investigate the origin of the crustal porosity on the Moon.
- Study the evolution of composition of the lunar crust and surface.
- Investigate the early impact history on the Moon.

Purdue University, West Lafayette, IN

Graduate Research Assistant **September 2012 to December 2018**

- Funding: National Aeronautics and Space Administration
  - Supervisor: Professor David A. Minton
- Investigate the ballistic sedimentation processes of the Orientale Basin-forming debris on the Moon's surface.
- Benchmark the Clementine Ultraviolet/Visible spectral reflectance data on the contacts between lunar basaltic plains and highlands from using a cratered terrain evolution model.
- Simulate the composition and petrology types of in-situ returned Apollo soil samples.
- Investigate the formation of lunar rayed craters.

National Taiwan Normal University, Taipei, Taiwan

Research Assistant **August 2010 to August 2012**

- Supervisor: Professor Chi-Ming Chen
- Study membrane protein folding in Molecular Dynamics using AMBER.
- Sampling membrane protein data on Protein Data Bank, using MD and SPICKER software to predict the extent of kink of alpha helices.

National Tsing Hua University, Hsinchu, Taiwan

Graduate Research Assistant **August 2008 to August 2010**

- Supervisor: Professor Ing-Guey Jiang
- Investigate the migration of giant planets in early solar system using MERCURY6.2jh code.
- Simulate the orbital evolution of Vesta Family using the Planetary Data System data and MERUCRY code.

Professional Service

Referee Service

- *Earth and Space Science*
- *Geophysical Research Letters*
- *Journal of Geophysical Research: Planets*
- *Planetary Space Science*
- *Planetary Science Journal*
- *Nature Communication*

Proposal Review Panel

- *NASA Lunar Data Analysis Program*
- *NASA Solar System Workings*

Relevant Experience

IBM Data Fundamentals **March 2024**

Discussed the concept of data and its methodologies, application and tools in the data science industry and ecosystems.

Algorithmic Thinking Part 1 **Feb 2024**

Applied graph theory to simulate network attack and citation.

Mathematics of Big Data MIT **Jan 2024**

Discussed mathematical foundation of big data and machine learning.

Erdős Institute Data Science Boot Camp **June 2023**

- Collaborated with the software engineer, the particle physics PhD, and the mathematician professor on tracking down the underlying causes of global mass layoffs between 2020 March and 2023 April from Kaggle website.
- Basic exploratory data analysis and model search (regression model, decision tree, and time series).
- Applied a category linear regression model to predict the global mass layoffs with an accuracy of 21%.

References Available to Contact

Dr. Wing-Huen Ip (e-mail: wingip@astro.ncu.edu.tw; phone: +886-3-422-7151)
- Professor, Graduate Institute of Astronomy, National Central University
- ◇ No.300, Zhongda Rd., Zhongli Dist., Taoyuan City 320317, Taiwan (R.O.C.)
- ⋆ *Prof. Ip is my mentor.*

Dr. Jason M. Soderblom (e-mail: jms4@mit.edu; phone: +1-617-253-6299)
- Research Scientist, Department of Earth, Atmospheric and Planetary Sciences, Massachusetts Institute of Technology
- ◇ Department of Earth, Atmospheric and Planetary Sciences, 77 Massachusetts Avenue, 54-520, Cambridge, Massachusetts 02139 USA
- ⋆ *Dr. Soderblom is my postdoctoral supervisor and current academic mentor.*

Dr. David A. Minton (e-mail: daminton@purdue.edu; phone: +1-765-494-3292)
- Associate Professor, Department of Earth, Atmospheric and Planetary Sciences, Purdue University
- ◇ Department of Earth, Atmospheric and Planetary Sciences, 550 Stadium Mall Drive, West Lafayette, Indiana 47907
- ⋆ *Dr. Minton is my PhD advisor.*

Dr. Nicolle E. B. Zellner (e-mail: nzellner@albion.edu; phone: +1-517-629-0465)
- Professor, Department of Physics, Albion College
- ◇ Department of Physics, 324 Palenske Hall, Albion, Michigan 49224 USA
- ⋆ *Dr. Zellner is my collaborator and mentor.*