

I-DA CHIANG

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SUMMARY

An observational astrophysics at UCSD. Familiar with scientific calculation, data analysis and data visualization with python. Familiar with *Herschel*, *JVLA* data.

RESEARCH INTERESTS

Multi-wavelength studies of the interstellar medium in nearby galaxies

I am interested in the relations between dust, metal, and neutral gas in the interstellar medium of spatially resolved galaxies, especially how these relations depend on local physical environments.

Radio astronomy

As part of my research, I calibrated HI 21 cm line emission data observed by the *Karl G. Jansky* Very Large Array, with ~ 170 hours of total observational time. I am interested in both the science and software development of radio astronomy.

EXPERIENCE

University of California - San Diego, La Jolla, CA

Sep. 2014 - Est. Jun. 2020

Graduate Research Assistant

- Analyzed the dust-to-gas relations in the ISM in ~ 100 nearby galaxies.
- Analyzed the dust-to-metal relation in detail in 5 nearby galaxies.
- Examined the empirical radiation distribution law in the local group galaxies.
- Calibrated and imaged HI 21cm line data of ~ 30 galaxies observed by VLA with CASA 5.4.

University of California - San Diego, La Jolla, CA

Sep. 2014 - Jun. 2016

Teaching Assistant (TA) and Lab TA Coordinator

- Familiarized new teaching assistants with lab setups and teaching skills.
- Led discussion sessions, which helped 40 students every week.
- Led introductory level physics lab, with 24 students per session.
- Improved course materials from feedback from teaching assistants and students.

National Taiwan University, Taipei City, Taiwan

Sep. 2012 - Jun. 2014

Graduate Research Assistant

- Improved the photo-degradation reactor for wastewater treatment with plasmonic nano-particles.
- Built the protocol for maintaining/using the sputter machine and clean room.

Taiwan (R.O.C.) Armed Forces, Hsinchu County, Taiwan

Aug. 2011 - Jul. 2012

Second Lieutenant (Company second-in-command)

EDUCATION

University of California - San Diego

Sep. 2014 - Est. Jun. 2020

Ph.D. (Physics and Astronomy)

Adviser: Prof. Karin M. Sandstrom

National Taiwan University

Aug. 2012 - Jul. 2014

M.S. (Physics)

Thesis: "Plasmonic Enhanced Optical Disk Reactor for Wastewater Treatment"

Adviser: Prof. Din Ping Tsai

National Taiwan University

Sep. 2007 - Jun. 2011

B.S. (Physics)

AWARDS

Deans Award, College of Science, National Taiwan University *Jun. 2014*

Deans Award, College of Science, National Taiwan University *Jun. 2011*

Presidential Award, National Taiwan University *Mar. 2011*

REFEREED PUBLICATIONS AS FIRST OR SECOND AUTHOR

3) E.W. Koch, **I-D. Chiang**, D. Utomo, J. Chastenet, A.K. Leroy, E.W. Rosolowsky, K.M. Sandstrom, "Spatial power spectra of dust across the Local Group: No constraint on disc scale height", 2020, MNRAS, 492, 2663.

2) D. Utomo, **I-D. Chiang**, A.K. Leroy, K.M. Sandstrom, J. Chastenet, "The Resolved Distributions of Dust Mass and Temperature in Local Group Galaxies", 2019, ApJ, 874, 141.

1) **I-D. Chiang**, K.M. Sandstrom, J. Chastenet, L.C. Johnson, A.K. Leroy, D. Utomo, "The Spatially Resolved Dust-to-metals Ratio in M101", 2018, ApJ, 865, 117.

REFEREED PUBLICATIONS AS OTHER COAUTHOR

3) A.K. Leroy, K.M. Sandstrom, D. Lang, A. Lewis, E.A. Behrens, J. Chastenet, **I-D. Chiang**, M.J. Gallagher, D. Utomo, "A $z = 0$ Multi-wavelength Galaxy Synthesis I: A WISE and GALEX Atlas of Local Galaxies", 2019, ApJS, 244, 24.

2) J. Chastenet, K.M. Sandstrom, **I-D. Chiang**, A.K. Leroy, D. Utomo, C. Bot, K.D. Gordon, B.T. Draine, Y. Fukui, T. Onishi, K. Tsuge, "Polycyclic Aromatic Hydrocarbon Fraction at ~ 10 pc scale in the Magellanic Clouds", 2019, ApJ, 876, 62.

1) W.T. Chen, K.-Y. Yang, C.-M. Wang, Y.-W. Huang, G. Sun, **I-D. Chiang**, C.Y. Liao, W.-L. Hsu, H.T. Lin, S. Sun, L. Zhou, A.Q. Liu, D.P. Tsai, "High-Efficiency Broadband Meta-Hologram with Polarization-Controlled Dual Images", 2014, Nano Lett., 14, 225.

RESEARCH PRESENTATIONS

2020, Contributed talk, The AAS 235th Meeting, Honolulu, USA

2019, Special seminar, ASIAA, Taipei, Taiwan

2019, Contributed talk/Poster, ASROC2019, Taichung, Taiwan

2019, Contributed talk, Dusting the Universe, Tucson, Arizona, USA

2019, Lunch talk, University of California, San Diego, USA

2018, Tea time talk, University of California, San Diego, USA

2018, Poster, CPHDUST, Copenhagen, Denmark

2018, Poster, ASROC2018, Kinmen, Taiwan

2018, Lunch talk, University of California, San Diego, USA

TEACHING EXPERIENCE

Lab TA Coordinator, PHYS 1-ABC Lab – University of California, San Diego *Mar. 2015 - Jun. 2016*

Teaching Assistant, PHYS 1-A Lab – University of California, San Diego *Sep. 2014 - Mar. 2015*