

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
Graduate Research Assistant

Sep. 2014 - Est. Jun. 2020

- Analyzed the dust-gas-metals relation in the ISM in 100 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.
- Made an open source package for dust SED fitting.

University of California - San Diego, La Jolla, CA
Teaching Assistant (TA) and Lab TA Coordinator

Sep. 2014 - Jun. 2016

- 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
Graduate Research Assistant

Sep. 2012 - Jun. 2014

- 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
Second Lieutenant (Company second-in-command)

Aug. 2011 - Jul. 2012

EDUCATION

University of California - San Diego
Ph.D. (Physics and Astronomy)
Adviser: Prof. Karin M. Sandstrom

Sep. 2014 - Est. Jun. 2020

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

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 (submitted to ApJS).

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, arXiv:1904.02705 (accepted by ApJ)

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

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

2013, Contributed talk, Frontiers in Optics, Orlando, Florida, USA

2012, Poster, Optics & Photonics Taiwan International Conference, Taipei, Taiwan

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

OUTREACH EXPERIENCE

STEM in Your Backyard: City Heights – presenter

Jan. 2018

Tech Trek: University of California, San Diego – presenter

Jul. 2017