Ting-Yu Cha

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RESEARCH INTERESTS

My research interests include tropical cyclones dynamics, heavy precipitation, radar meteorology, and numerical modeling.

EDUCATION

Ph.D. Colorado State University — Fort Collins, CO — 2018-Present
Atmospheric Sciences
Advisor: Dr. Michael M. Bell

M.S. Colorado State University — Fort Collins, CO — 2016-2018
Atmospheric Sciences
Advisor: Dr. Michael M. Bell

B.S. National Taiwan Unviersity — Taipei, Taiwan — 2012-2016
Atmospheric Sciences
Advisors: Dr. Chun-Chieh Wu and Dr. Ben Jong-Dao Jou

PUBLICATIONS

[1] Cha, T-Y., M. M. Bell, W.-C. Lee, A. J. DesRosiers, 2020: Polygonal Eyewall Asymmetries during the rapid intensification of Hurricane Michael (2018), *Geophysical Research Letters*, 47, e2020GL087919, 10.1029/2020GL087919

[2] Cha, T-Y., M. M. Bell, 2020: Comparison of Single Doppler and Multiple Doppler Wind Retrievals in Hurricane Matthew (2016), *In prep.*

[3] Cha, T-Y., M. M. Bell, A. J. DesRosiers, 2020: Eyewall Replacement Cycle of Hurricane Matthew (2016) Observed by Doppler Radars, *In prep.*

EXPERIENCE

Research Assistant — Colorado State University — Fall 2016 - Present
Investigating tropical cyclones dynamics and rainfall impact using the radar observations, and improving and developing radar analysis techniques (Supported by NSF).

Teaching Assistant — Colorado State University — Fall 2018
Assisting Dr. Michael M. Bell to help students' learning on the graduate-level course: Thermodynamics and Cloud dynamics.

Research Assistant — National Taiwan University (NTU) — Fall 2015 - Fall 2016
Investigating the polarimetric radar data during Typhoon Soudelor (2015) to understand the rainbands microphysics evolution.

Summer Intern — National Center of Atmospheric Research — Summer 2015
Worked with the NCAR radiosonde team to launch balloon soundings in Kansas and Nebraska for the Plains Elevated Convection at Night(PECAN) field project.

Vice-Chairman — NTUAS, Student Association — Fall 2014 - June 2015
Organized students' activities and communicated with the faculty for students' needs.

HONOR AND AWARDS

Student Poster Award at ICMCS-XII conference Colorado State University 2017

CONFERENCE PRESENTATIONS

ORAL

[1] 39th AMS Radar Conference, Nara, Japan, 2019: Polygonal Eyewall Asymmetries during the rapid intensification of Hurricane Michael (2018).

[2] 33rd AMS Conference on Hurricanes and Tropical Meteorology, Ponte Vedra, Florida, 2018: Eyewall Replacement Cycle of Hurricane Matthew (2016) Observed by Doppler Radar.

[3] 38th AMS Conference on Radar Meteorology, Chicago, IL, 2017: Eyewall Replacement Cycle of Hurricane Matthew (2016) Observed by Doppler Radar.

[4] 17th AMS Conference on Mesoscale Processes, San Diego, CA, 2017: Eyewall Replacement Cycle of Hurricane Matthew (2016) Observed by Doppler Radar.

POSTER

[1] Colorado State University Graduate Student Showcase, Fort Collins, CO, 2018: Comparison of Single Doppler and Multiple Doppler Wind Retrievals in Hurricane Matthew (2016).

[2] Colorado State University Graduate Student Showcase, Fort Collins, CO, 2017: Eyewall Replacement Cycle of Hurricane Matthew (2016) Observed by Doppler Radar.

[3] 12th International Conference on Mesoscale Convective System and High Impact Weather (ICMCS-XII), Taipei, Taiwan, 2017: Eyewall Replacement Cycle of Hurricane Matthew (2016) Observed by Doppler Radar.

[4] 11th International Conference on Mesoscale Convective System and High Impact Weather (ICMCS-XI), Busan, Korea, 2016: Rainbands Characteristics and Polarimetric Analysis of Typhoon Soudelor (2015).