CHONGXING FAN

2455 Hayward St., Ann Arbor, MI 48109-2143
(+1) 734-276-3383 ⋄ cxfan@umich.edu

EDUCATION

University of Michigan, Ann Arbor *September 2019 - Present*
Ph.D. Precandidate in Climate and Space Sciences and Engineering GPA: 4.00/4.00
MICDE 2019-2020 Fellow ($4,000)

Nanjing University *September 2015 - July 2019*
Bachelor of Science in Atmospheric Sciences GPA: 3.95/4.00
TOEFL: 109, GRE: 323+4.0
Chow Tai Fook Scholarship (Top 1%)
National Scholarship (Top 1%)
Scholarship of Mr. Liao (Top 1%)

RESEARCH PROJECT

Satellite Observation of Aerosol-Precipitation Relationship *September 2018 - July 2019*

- *Dissertation for Bachelor's Degree*
- Advisor: Prof. Minghuai Wang
- Co-Advisors: Prof. Daniel Rosenfeld, Dr. Yannian Zhu
- Showed that detectable rain initiates when the drop effective radius at the cloud top exceeds 14 μm.
- Showed that precipitation is strongly suppressed with increasing cloud drop concentration (N_d).
- Submitting to the peer-review journal.

Evaluation of Quantitative Precipitation Estimation from Model, Satellite and Radar *July 2018 - October 2018*

- *Globalink Research Internship*
- Advisor: Prof. Yongsheng Chen
- Initiated the project, read related literature and manuals of each dataset
- Downloaded HRRR, GOES, StageIV and METAR one hour precipitation variable from corresponding product
- Interpolated the estimations into observation grid and compared these four datasets using various statistical methods
- Achieved the results that compared with the METAR data, all the estimates had a wet bias the total rainfall rate and light rain, GOES satellite estimation had the largest bias, and for medium and heavy rain, all QPEs had dry bias
- Drafted the closing report and gave a 52-slide PPT presentation

Analysis of the Positive Correlation of Precipitation and Aerosol Using Satellite Data *October 2016 - October 2017*

- *National Excellent Research Project*

- Advisor: Prof. Minghuai Wang
- Initiated the research project and developed and implemented the research plan
- Consulted related literature, supplemented and discussed background knowledge in group meetings
- Collected TRMM and CloudSat data set, applied NCL in Linux, conducted satellite data matching, analyzed data with sensitivity analysis method, realized the implementation of core codes
- Verified the positive correlation of precipitation and aerosol from multiple perspectives after analyzing the observation information of the three sample regions selected in the Pacific Ocean, Atlantic Ocean, and Indian Ocean from 2006 to 2011 of CloudSat satellite
- Concluded that the increase in AOD widened the spectrum of radar reflectivity while the increase in CDNC narrowed the spectrum of radar reflectivity from the three-dimensional structure of clouds
- Drafted the closing report, created a poster and gave a 19-slide PPT presentation

INTERNSHIP EXPERIENCE

Meteorological Bureau of Hunan Province, China *Feburary 2018*

- *Weather Forecaster, Intern*
- Familiarized with forecasting process, and learned forecasting techniques
- Attended daily National and Provincial Weather Consultation to discuss the weather situation and to predict the weather tendency
- Analyzed the daily weather situation in 500hPa, 700hPa, 850hPa at 8 a.m., the surface weather charts and upper weather charts every day
- Analyzed numerical forecast products using MICAPS software, drew forecasting conclusions based on weather comprehensive situation, numerical forecast products, ensemble forecast products and experience
- Made forecast products including the city weather forecasts twice a day and warnings if major weather events occurred
- Conducted forecast verification of numerical forecast products result and forecast result, compared them with the actual situation

HONORS AND AWARDS

MICDE 2019-2020 Fellowship Holder ($4,000) *2019*
Honorable Mention in Mathematical Contest in Modeling *2018*
First Prize in Data Processing Contest (Top 0.5%) *2017*

SKILLS

Programming Languages and Frameworks
C, Fortran, NCAR Command Language (NCL), Python, Visual Basic, SPSS, Linux

Software
Word, Excel, Powerpoint, LaTeX, Git