

Feiqin Xie, Ph.D.

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 Department of Physical & Environmental Sciences
 Texas A&M University-Corpus Christi
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EDUCATION

- Ph.D. University of Arizona, Tucson, AZ, USA 2006**
 Atmospheric Sciences (Minor: Remote Sensing and Spatial Analysis)
Dissertation: *Development of a GPS Occultation Retrieval Method for Characterizing the Marine Boundary Layer in the Presence of Super-refraction*
- M.S. Peking (Beijing) University, Beijing, China 2001**
 Atmospheric Physics and Atmospheric Environment
Thesis: *A Numerical Method for Dense Gas Dispersion*
- B. S. Lanzhou University, Lanzhou, Gansu, China 1998**
 Atmospheric Physics and Atmospheric Environment (with honor)

APPOINTMENTS

- Associate Professor – Atmospheric Sciences** 2018.09 – present
 Department of Physical & Environmental Sciences
 Texas A&M University-Corpus Christi, Corpus Christi, TX
- Assistant Professor – Atmospheric Sciences** 2012.09 – 2018.8
 Department of Physical & Environmental Sciences
 Texas A&M University-Corpus Christi, Corpus Christi, TX
- Affiliated Research Scientist**
 University of California, Los Angeles, CA 2012.09 – present
 Jet Propulsion Laboratory, California Institute of Technology, CA 2013.09 – present
- Visiting Scientist**
 Danish Meteorological Institute, Copenhagen, Denmark 2016.07 – 2016.09
 Danish Meteorological Institute, Copenhagen, Denmark 2013.07 – 2014.01
- Assistant Researcher** 2009.10 – 2012.08
 Joint Institute for Regional Earth System Science and Engineering,
 University of California, Los Angeles, CA
- Aerosol and Cloud Group & Ionospheric and Atmospheric Remote Sensing Group
 Jet Propulsion Laboratory, California Institute of Technology
- Caltech Postdoctoral Scholar** 2008.10 – 2009.09
 Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA
- Postdoctoral Researcher** 2006.05 – 2008.09
 Department of Earth and Atmospheric Sciences, Purdue University, West Lafayette, IN
- Research & Teaching Assistant** 2001.08 – 2006.05
 Department of Atmospheric Sciences, University of Arizona, Tucson, AZ
- Research & Teaching Assistant** 1998.09 – 2001.06
 Center for Environmental Sciences, Peking University, Beijing, China

I. RESEARCH

RESEARCH INTERESTS

Primary research interests are in atmospheric remote sensing retrieval and science application. Current member of NASA MODIS/VIIRS science team, the International Radio Occultation Working Group (IROWG), and member of Texas OneGulf Network of Experts (TONE). Has extensive experience in space-borne and airborne Global Navigation Satellite System (GNSS) radio occultation technique and retrieval algorithm development. Primary research involves GNSS as well as nadir-viewing satellite lidar, radar and infrared observations for atmospheric research. Current projects include the airborne/space-borne GNSS remote sensing retrieval, low clouds, planetary boundary layer, and hurricane studies, as well as deep convection impact on the upper troposphere and lower stratosphere.

RESEARCH GRANTS

Funded Research (Current)

2020

PI: Airbus: “*Airborne RO - Application for Airbus*”, (PI: Feiqin Xie), A³ by Airbus LLC (“Airbus”), \$118,864, 2020.01.10-2020.05.31.

Co-I: NOAA - FY-2019 Small Business Innovation Research (SBIR) Program – Phase II: “*GNSS radio occultations (GNSS-ROs) from a balloon platform – Phase-II*”, (PI: Mr. Bryan Chan, Night Crew Labs), **NOAA2018-2**, \$45,000, 2019.06.01-2021.05.31.

PI: TAMUCC – Texas Comprehensive Research Fund (TCRF): “*Hurricane Boundary Layer Study with in-situ and Satellite Measurements*”, \$19,992, 2019.09.01-2021.08.31.

PI: TAMUCC – Research Enhancement: “*Water Vapor Retrieval from a Ground-based GPS Station on Campus*”, Texas A&M University, College Research Enhancement Grant, **\$3,000**, 2018.11.01-2020.08.31.

Funded Research (Completed)

2019

Co-I: NASA “*Vertical Profiling of the Planetary Boundary Layer with Current and Future GNSS Radio Occultation Measurements*”, (PI: C. O. Ao, NASA-JPL) NNH14ZDA001N-GNSS, **\$160,000**, 2015.10.01-2019.09.30.

2018

PI: NASA “*Advanced Retrieval of Cloudy Boundary Layer with MODIS, AMSR-E and GPS Radio Occultation’s Direct and Reflected Measurements*”, NASA NRA NNH14ZDA001N-RST, **\$445,917** (\$337,978 at TAMUCC), 2015.07.15-2018.07.14.

PI: NASA “*Boundary Layer Cloud Entrainment Study with MODIS, MISR, CALIPSO, GPSRO, AMSR-E Measurements and Global Reanalysis*”, NASA-NNH13ZDA001N-TERAQ, **\$354,113**, 2014.06.10-2018.06.09.

2017

Co-PI: NSF - MRI: “*Acquisition of a High Performance Computing Cluster to Support Multidisciplinary Big Data Analysis*”, (PI: Longzhuang Li, Co-PIs: **F. Xie**, R. Chen, C. Bird & L. Su), **\$399,038**, 2014-2017.09.

2016

Co-I: NASA “*Making Earth System Data Records for Use in Research Environments: A Data Record of the Cloudy Boundary Layer*”, NASA NRA NNH12ZDAO01N-MEASURES (PI: J. Teixeira, JPL), **\$35,000** (out of \$4.5M), 2015-2016.

PI: European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT) “*ROPP-9.0 beta testing – Radio Occultation Processing Package (ROPP) planetary boundary layer height (PBLH) product evaluation*”, ROM SAF CDOP-2 Visiting Scientist (Host: Dr. Ian Culverwell, UK Met Office, Dr. Kent B. Lauritsen, Danish Meteorological Institute, Copenhagen, Denmark), Proposal No. 30, **\$9,000** (€8,535), 2016.07-2016.10.

Co-PI: NSF - CC-NIE Network Infrastructure: “*Campus Bridging for Research on Coastal, Marine, and Atmospheric Systems, and Geospatial Computing and Engineering*”, (PI: Dulal Kar, Co-Is: **F. Xie**, J. Gibeaut, R. Mehrubeoglu, T. Tatun), **\$495,466**, 2013-2016.

2015

Co-PI: NSF - Climate and Large Scale Dynamics Program: “*Collaborative Research: Investigating the characteristics of lower tropospheric airborne GPS radio occultation observations and their impact in hurricane studies*”, (PI: J. Haase, UCSD, Co-PIs: **F. Xie**, **TAMUCC** & S-H Chen, UC-Davis), NSF, **\$223,246** (at TAMU-CC), 2010-2015.

PI: Texas Research Development Fund (TAMUCC) “*Integrating a Campus GPS Station into a National Network for Real-time Column Water Vapor Measurement*”, TAMUCC, **\$7500**, 2014-2015.

2014/2013

PI: European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT) “*Investigation of methods for the determination of the PBL height from RO observations using ECMWF re-analysis data*”, ROM SAF CDOP-2 Visiting Scientist (Host: Dr. Stig Syndergaard and Dr. Kent B. Lauritsen, Danish Meteorological Institute, Copenhagen, Denmark), **\$20,000**, 2013.07-2014.08.

Co-I: University Technology Council Fund (TAMUCC) “*Pilot project to provide key technology and equipment for recording major undergraduate core courses in the College of Science and Engineering*”, (PI: F. Pezold, TAMU-CC), **\$47,100**, 2013.09-2014.08.

(2012 and Earlier)

Co-PI: NSF - Climate and Large Scale Dynamics Program: “*Collaborative Research: Investigating the characteristics of lower tropospheric airborne GPS radio occultation observations and their impact in hurricane studies*”, (PI: J. Haase, UCSD, Co-PIs: **F. Xie**, **UCLA** & S-H Chen, UC-Davis), NSF, **\$223,246** (at UCLA), 2010-2012.

Co-I: NOAA, NESDIS-NESDISPO-2008-2001042: Research in Satellite Data Assimilation for Numerical Weather, Climate, and Environmental Forecast Systems: “*Improving the*

Impact of GPSRO Data Assimilation in the Lower Troposphere”, (PI: E. R. Kursinski, Univ. of Arizona) NA08NES4400015, NOAA, **\$227,373**, 2010-2012.

Co-I: Director's Research and Development Fund (NASA JPL), “*Studying atmospheric planetary boundary layer (PBL) with innovative satellite remote sensing and numerical models*”, (PI: D. L. Wu, JPL), **\$18,000** (out of \$200,000), 2011.

JOURNAL PAPERS IN REVIEW AND IN PREPARATION

Peer-reviewed papers to be submitted:

1. Adhikari, L., **F. Xie**, 2020: New MODIS Low Cloud Top Height and Marine Boundary Layer Lapse Rate over the Northeastern Pacific, *Geophys. Res. Lett.*, to be submitted.
2. Nelson, K. J. *(PhD Student), **F. Xie**, C. O. Ao and M. I. Oyola, 2020: Diurnal Variation of the Planetary Boundary Layer Observed from GNSS Radio Occultation and Radiosonde Soundings over the Southern Great Plains. *J. Atmos. Oceanic Technol.*, to be submitted.

Peer-reviewed paper publications:

1. Feng, X.*(Postdoc), **F. Xie**, C.O. Ao, and R.A. Anthes, 2020: Ducting and Biases of GPS Radio Occultation Bending Angle and Refractivity in the Moist Lower Troposphere. *J. Atmos. Oceanic Technol.*, **37**, 1013–1025, <https://doi.org/10.1175/JTECH-D-19-0206.1>
2. Johnston, B. R.*(PhD Student), **F. Xie**, 2020: Characterizing Extratropical Tropopause Bimodality and its Relationship to the Occurrence of Double Tropopauses using COSMIC GPS Radio Occultation Observations. *Remote Sens.* 2020, 12(7), 1109, <https://doi.org/10.3390/rs12071109>
3. Kubar, T. L., **F. Xie**, C. O. Ao, and L. Adhikari, (2020). An assessment of PBL heights and how cloud profiles in CAM5 and CAM5-CLUBB over the Southeast Pacific using satellite observations. *Geophys. Res. Lett.*, **47**, e2019GL084498. doi:10.1029/2019GL084498.
4. Ho, S., R.A. Anthes, C.O. Ao, S. Healy, A. Horanyi, D. Hunt, A.J. Mannucci, N. Pedatella, W.J. Randel, A. Simmons, A. Steiner, **F. Xie**, X. Yue, and Z. Zeng, 2019: The COSMIC / FORMOSAT-3 Radio Occultation Mission after 12 years: Accomplishments, Remaining Challenges, and Potential Impacts of COSMIC-2. *Bull. Amer. Meteor. Soc.*, **0**, <https://doi.org/10.1175/BAMS-D-18-0290.1>
5. Feng X.*(Postdoc), C. Liu, **F. Xie**, J. Lu, L. S. Chiu, G. Tintera, B. Chen, 2019: Precipitation characteristic changes due to global warming in a high-resolution (16 km) ECMWF simulation. *Q. J. R. Meteorol. Soc.*, <https://doi.org/10.1002/qj.3432>.
6. **Xie, F.**, L. Adhikari, J. S. Haase, B. Murphy, K.-N. Wang, and J. L. Garrison, 2018: Sensitivity of airborne radio occultation to tropospheric properties over ocean and land, *Atmos. Meas. Tech.*, **11**, 763–780, <https://doi.org/10.5194/amt-11-763-2018>.
7. Johnston, B. R.*(PhD Student), **F. Xie** and C. Liu, 2018: The effects of deep convection on regional temperature structure in the tropical upper troposphere and lower stratosphere. *J. Geophys. Res.*, **123**, 1585–1603, <https://doi.org/10.1002/2017JD027120>.
8. Yu, X.*(MS Student), **F. Xie**, and C. O. Ao, 2018: Evaluating the lower-tropospheric COSMIC GPS radio occultation sounding quality over the Arctic, *Atmos. Meas. Tech.*, **11**, 2051-2066, <https://doi.org/10.5194/amt-11-2051-2018>.
9. Chen, X. M., S.-H. Chen, J. S. Haase, B. J. Murphy, K.-N. Wang, J. L. Garrison, S.-Y. Chen, C.-Y. Huang, L. Adhikari, **F. Xie**, 2018: The impact of airborne radio occultation

- observations on the simulation of Hurricane Karl (2010), *Monthly Weather Review*, <https://doi.org/10.1175/MWR-D-17-0001.1>.
10. Wang, K.-N., M. de la Torre Juárez, C. O. Ao, and **F. Xie**, 2017: Correcting negatively biased refractivity below ducts in GNSS radio occultation: an optimal estimation approach towards improving planetary boundary layer (PBL) characterization, *Atmos. Meas. Tech.*, 10, 4761-4776, <https://doi.org/10.5194/amt-10-4761-2017>.
 11. Adhikari, L.*(Postdoc), **F. Xie** and J. S. Haase, 2016: Application of the full spectrum inversion algorithm to simulated airborne GPS radio occultation signals, *Atmos. Meas. Tech.*, 9, 5077-5087, doi:10.5194/amt-9-5077-2016.
 12. Winning, T.* (PhD student), Yi-Leng Chen and **F. Xie**, 2016: Estimation of the Marine Boundary Layer height over the central North Pacific using GPS Radio Occultation. *Atmos. Res.*, <http://dx.doi.org/10.1016/j.atmosres.2016.08.005>.
 13. **Xie, F.**, D. L. Wu, C. O. Ao, A. Mannucci and E. R. Kursinski, 2012: Advances and limitations of atmospheric boundary layer observations with GPS occultation over southeast Pacific Ocean, *Atmos. Chem. Phys.*, 12, 903-918, doi:10.5194/acp-12-903-2012.
 14. Ao, C. O., D. E. Waliser, S. K. Chan, J.-L. Li, B. Tian, **F. Xie**, and A. J. Mannucci, 2012, Planetary boundary layer depths from GPS radio occultation profiles, *J. Geophys. Res.*, 117, D16117, doi:10.1029/2012JD017598.
 15. Zhang, C., Y. Wang, A. Lauer, K. Hamilton, and **F. Xie**, 2012: Cloud base and top heights in the Hawaiian region determined with satellite and ground-based measurements, *Geophys. Res. Lett.*, doi:10.1029/2012GL052355.
- [Before 2012]
16. **Xie, F.**, D. L. Wu, C. O. Ao, E. R. Kursinski, A. Mannucci and S. Syndergaard, 2010: Super-refraction effects on GPS radio occultation refractivity in marine boundary layers, *Geophys. Res. Lett.*, 37, L11805, doi:10.1029/2010GL043299.
 17. **Xie, F.**, D. L. Wu, C. O. Ao, A. Mannucci, 2010: Atmospheric diurnal variations observed with GPS radio occultation soundings, *Atmospheric Chemistry and Physics*, 10, 1–11, doi:10.5194/acp-10-1-2010.
 18. **Muradyan, P.*(Graduate Student)**, J. S. Haase, **F. Xie**, J. L. Garrison, and J. Voo, 2010: GPS/INS navigation precision and its effect on airborne radio occultation retrieval accuracy, *GPS Solutions*, 15 (3), 207-218, doi: 10.1007/s10291-010-0183-7.
 19. **Xie, F.**, J. S. Haase, S. Syndergaard, 2008: Profiling the atmosphere using the airborne GPS radio occultation technique: a sensitivity study, *IEEE Transactions on Geoscience and Remote Sensing*, 46 (11), 3424-3435, doi:10.1109/TGRS.2008.2004713.
 20. **Xie, F.**, S. Syndergaard, E. R. Kursinski and B. M. Herman, 2006: An approach for retrieving marine boundary layer refractivity from GPS occultation data in the presence of super-refraction, *J. Atmos. Oceanic Technol.*, 23, 1629-1644.
 21. Cai, X., **F. Xie**, and J. Chen, 2002: Large-eddy Simulation for unstable surface layers, *Acta Scientiarum Naturalium Universitatis Pekinensis* (in Chinese with English Abstract), 38 (5), 698-704.
 22. **Xie, F.**, and X. Cai, 2000: Spatial and temporal variation of total ozone over East Asia and Europe: an inter-comparison, *J. Environ. Sci. Health*, 35 (10), 1923-1930.
 23. Li, Y., X. Cai, **F. Xie**, 2002: Recent Variations of Total Ozone Over East Asia, *Environmental Science* (in Chinese with English Abstract), 23(supplemental), 103-105.

24. **Xie, F.**, and X. Cai, 2000: Spatial and Temporal Variation of Total Ozone Over East-Asia, *Acta Scientiae Circumstantiae* (in Chinese with English Abstract), 20 (5), 513-517.

BOOK CHAPTERS

GNSS Remote Sensing: Theory, Methods and Applications, Editors: Prof. Shuanggen Jin, Dr. Estel Cardellach and **Prof. Feiqin Xie**, Springer Verlag, Heidelberg, Germany, 276pp., 2014. ISBN 978-94-007-7482-7. (Two Chapters Contributed by Prof. Xie: *Chapter 5: GNSS Radio Occultation; Chapter 6: Atmospheric Sensing using GNSS RO*)

TECHNICAL REPORT AND PROCEEDING PAPERS

1. **Xie, F.**: ROPP-9.0 beta testing – Radio Occultation Processing Package (ROPP) planetary boundary layer height (PBLH) product evaluation, ROM SAF CDOP-2 Visiting Scientist Report 30, Danish Meteorological Institute, Copenhagen, Denmark, pp 32, October 4, 2016. (http://www.romsaf.org/Publications/reports/romsaf_vs30_rep_v10.pdf).
2. **Xie F.** and L. Adhikari, Full Spectrum Inversion for Airborne GPS Radio Occultation Retrieval, Algorithm Theoretical Basis Document, Technical Report (version 2), NSF, November 2015.
3. **Xie, F.**: Investigation of methods for the determination of the PBL height from RO observations using ECMWF re-analysis data, ROM SAF CDOP-2 Visiting Scientist Report 21, Danish Meteorological Institute, Copenhagen, Denmark, pp 48, December 3, 2014. (www.romsaf.org/Publications/reports/romsaf_vs21_rep_v10.pdf).
4. Lulich, T. D., J. L. Garrison, J. S. Haase, Y-M. Yang, J. Voo, **F. Xie**, P. Muradyan: Open Loop Tracking of Radio Occultation Signals from an Airborne Platform, Proceedings of the 23rd International Technical Meeting of The Satellite Division of the Institute of Navigation (ION GNSS 2010), Portland, OR, September 21-24, 2010, pp. 1049-1060.
5. Garrison, J. L., and M. Walker, J. S. Haase, T. Lulich, **F. Xie** and Coauthors: Development and testing of the GISMOS instrument, *IEEE International Geoscience and Remote Sensing Symposium (IGARSS)*, Barcelona, Spain, July 23-28, 2007.
6. **Xie, F.**, J. S. Haase, T. Lulich, P. Muradyan, J. L. Garrison, S. Syndergaard and E. Calais: Profiling the Atmosphere with an Airborne GPS Receiver System, 88th American Meteorology Society Annual Meeting Extended Abstract, 2008. (<https://ams.confex.com/ams/pdfpapers/135116.pdf>)

Project Reports

1. **Xie, F.**: PI - NASA Progress Report (Award# NNX14AK17G), “*Boundary Layer Cloud Entrainment Study With MODIS, MISR, CALIPSO, GPSRO, AMSR-E Measurements and Global Reanalysis*”, April 10, 2015, 2016, 2017, 2018-Final Report.
2. **Xie, F.**: PI - NASA Progress Report (Award# NNX15AQ17G), “*Advanced Retrieval of Cloudy Boundary Layer with MODIS, AMSR-E and GPS Radio Occultation’s Direct and Reflected Measurements*”, May 14, 2016, 2017, 2018-Final Report.
3. **Xie, F.**: Co-PI - Contributing to **NSF Final Report** (Award# ACI-1341027, PI: Dulal Kar), “*CC-NIE Network Infrastructure: Campus Bridging for Research on Coastal, Marine, and Atmospheric Systems, and Geospatial Computing and Engineering*”, December, 2016.

4. **Xie, F.:** Co-PI - Contributing to NSF Progress Report (Award# ACI-1341027, PI: Dulal Kar), “*CC-NIE Network Infrastructure: Campus Bridging for Research on Coastal, Marine, and Atmospheric Systems, and Geospatial Computing and Engineering*”, September, 2014, 2015, December 2016 (Final Report).
5. **Xie, F.:** Co-PI - Contributing to NSF Annual Report (Award# 1429518, PI: L. Li), “*Acquisition of a High Performance Computing Cluster to Support Multidisciplinary Big Data Analysis and Modeling*”, August 23, 2016

Ph.D. Dissertation

Xie F.: Development of a GPS Occultation Retrieval Method for Characterizing the Marine Boundary Layer in the Presence of Super-refraction, Ph.D. Dissertation, 134pp, 2006, Department of Atmospheric Science, University of Arizona, Tucson, Arizona, USA.

M.S. Thesis

Xie F.: A Numerical Simulation Method for Dense Gas Dispersion, M.S. Thesis, 59pp, 1998, Center for Environmental Sciences, Peking University, Beijing, China.

INVITED TALKS

1. **Xie, F.:** *GNSS Radio Occultation and its Application for Planetary Boundary Layer and Tropical Tropopause Layer Studies (Invited)*, Texas A&M University, Department of Atmospheric Sciences Seminar, March 4, 2020.
2. **Xie, F.:** *Planetary Boundary Layer Sensing with MODIS and CALIPSO over the Northeast Pacific Ocean (Invited)*, The Second Youth Forum of Peking University Remote Sensing and Geoscience Information System, Peking University, Beijing, China, May 28-29, 2018.
3. **Xie, F.:** *Satellite observation of cloudy planetary boundary layer (Invited)*, Department of Environmental Engineering Seminar Series, Texas A&M University – Kingsville, Kingsville, Texas, April 27, 2018.
4. **Xie, F.:** *Weather Observation from the Space (Invited)*, Department of Environmental Engineering Seminar Series, University of Texas Marine Science Institute, Port Aransas, January 26, 2017.
5. **Xie, F.:** *Planetary boundary layer studies with GPS-RO, ECMWF/ EUMETSAT ROM-SAF workshop on Applications of GPS radio occultation measurements (Invited)*, Reading, United Kingdom, June 16-18, 2014.
6. **Xie, F.:** *From Marine Stratus to Trade Cumulus: Cloudy Boundary Layer from Satellite Observation and Global model analysis*, Department of Wind Energy, Danish Technology University Risø Campus (**Invited**), Frederiksborgvej 399 DK-4000 Roskilde, Denmark, August 7, 2013.
7. **Xie, F.:** *From Marine Stratus to Trade Cumulus: Cloudy Boundary Layer from Satellite Observation and Global model analysis*, Danish Meteorological Institute Seminar Series (**Invited**), Copenhagen, Denmark, August 2, 2013.
8. **Xie, F.:** *Satellite Sensing of Cloudy Boundary Layer: From Marine Stratus to Trade Cumulus*, Department of Environmental Engineering Seminar Series (**Invited**), Texas A&M University – Kingsville, March 26, 2014.

9. **Xie, F.**, D. L. Wu, R. Wood, C. O. Ao and A. J. Mannucci: *Marine Atmospheric Boundary Layer Observations from GPS Occultation and CALIPSO over Subtropical Eastern Oceans (Invited)*, AGU Fall Meeting, San Francisco, CA, December 3-7, 2012.

SELECTED PRESENTATIONS IN SYMPOSIUMS AND CONFERENCES

2020

1. **Xie, F.**: *GNSS Radio Occultation and its Application for Planetary Boundary Layer and Tropical Tropopause Layer Studies (Invited)*, Texas A&M University, Department of Atmospheric Sciences Seminar, March 4, 2020.
2. **Nelson, K.** (PhD Student), **F. Xie**, C. O. Ao and M. I. Oyola*, 2020 *Diurnal Variation of the Planetary Boundary Layer Observed from GNSS Radio Occultation and Radiosonde Soundings over the Southern Great Plains*, 100th AMS Annual Meeting, Boston, MA, January 12-16, 2020.

2019

3. **Xie, F.**, T. Winning* (PhD Student), C. O. Ao, K-N. Wang and L. Adhikari, *Satellite Sensing the Horizontal Inhomogeneity of the Cloudy Planetary Boundary Layer over the Subtropical Eastern Pacific Ocean (Oral: G14A-08)*, 100th AGU Fall Meeting, San Francisco, CA, December 9-13, 2019.
4. **Johnston, B. R.*** (PhD Student), F. Xie and C. Liu, *Relationships Between Extratropical Precipitation Systems and Upper Tropospheric and Lower Stratospheric Temperatures and Tropopause Height Observed from GPM and GPS Radio Occultation*, (poster: A53P-2980), AGU Fall Meeting, San Francisco, CA, December 9-13, 2019.
5. Ao, C. O. K-N Wang, T. L. Kubar, **F. Xie**, L. Adhikar, P. M. Kalmus, M. Lebsock, and J. Teixeira, *Vertical Profiling of the Planetary Boundary Layer from GNSS Radio Occultations*, 99th AMS Annual Meeting, Phoenix, Arizona, January 6-10, 2019.

2018

6. **Xie, F.**, and L. Adhikari, *Marine Boundary Layer Height and Cloud Entrainment Rate over the Eastern Pacific*, AGU Fall Meeting, Washington D.C., December 10-14, 2018.
7. **Xie, F.**: *Planetary Boundary Layer Sensing with MODIS and CALIPSO over the Northeast Pacific Ocean (Invited)*, The Second Youth Forum of Peking University Remote Sensing and Geoscience Information System, Peking University, Beijing, China, May 28-29, 2018.
8. **Xie, F.**: *Satellite observation of cloudy planetary boundary layer (Invited)*, Department of Environmental Engineering Seminar Series, Texas A&M University – Kingsville, Kingsville, Texas, April 27, 2018.
9. **Xie, F.**, and L. Adhikari, *An Assessment of Planetary Boundary Layer Lapse Rate Variations and New MODIS Low Cloud Top Height Retrieval over the Northeast Pacific Ocean*, 98th AMS Annual Meeting, Austin, Texas, January 8-12, 2018.
10. **Nelson, K.*** (PhD Student), and **F. Xie**, *Hurricane Boundary Layer Observed from Dropsonde and COSMIC GPS Radio Occultation*, 98th AMS Annual Meeting, Austin, Texas, January 8-12, 2018.
11. **Johnston, B. R.*** (PhD Student), and **F. Xie**, *Study the Impact of Midlatitude Deep Convection on Upper Troposphere/Lower Stratosphere Temperatures and Moisture from Satellite Measurements*, 98th AMS Annual Meeting, Austin, Texas, January 8-12, 2018.

12. Adhikari, L. (Postdoc), and F. Xie, *Seasonal and inter-annual variabilities of the marine boundary layer depth and entrainment rates over the Eastern Pacific (Oral)*, 98th AMS Annual Meeting, Austin, Texas, January 8-12, 2018.
13. Feng, X. (Postdoc), and F. Xie, *Lower Tropospheric GPS Radio Occultation Bending Angle and Refractivity Errors in the Northeast Pacific*, 98th AMS Annual Meeting, Austin, Texas, January 8-12, 2018 (Oral).

2017

14. Xie, F., L. Adhikari, J. S. Haase, B. Murphy, K.-N. Wang and J. L. Garrison: *Sensitivity of airborne radio occultation to tropospheric properties over ocean and land*, Joint COSMIC Tenth Data Users' Workshop and IROWG-6 Meeting, Estes Park, CO, September 21- 27, 2017.
15. Johnston, B. R.*(PhD Student), F. Xie and C. Liu, *The Effects of Deep Convection on Regional Temperature Structure in the Tropical Upper Troposphere and Lower Stratosphere*, Tenth Data Users' Workshop and IROWG-6 Meeting, Estes Park, CO, September 21- 27, 2017.
16. Winning, T.* (PhD Student), C. O. Ao, F. Xie: *Horizontal Inhomogeneity of the Planetary Boundary Layer and its Impact on GPS Radio Occultation Retrieval over the Northeastern Pacific Ocean*, Tenth Data Users' Workshop and IROWG-6 Meeting, Estes Park, CO, September 21- 27, 2017.
17. Wang, K.-N., C. O. Ao, M. de La Torre Juarez, J. Turk, F. Xie: *Correcting negatively-biased radio occultation refractivity below ducts using an optimal estimation approach*, Tenth Data Users' Workshop and IROWG-6 Meeting, Estes Park, CO, September 21- 27, 2017.

2016

18. Xie, F., T. L Kubar, L. Adhikari, T. Winning and C. O. Ao, *Cloudy Planetary Boundary Layer Study with Satellite, Climate Model, and ERA-I Reanalysis Data over the Subtropical Eastern Pacific*, AGU Fall Meeting, San Francisco, CA, December 12-16, 2016.
19. Johnston, R. B. *(PhD Student), F. Xie and C. Liu, *The Effects of Deep Convection on Regional Temperatures in the Tropical Upper Troposphere/Lower Stratosphere (UTLS)*, AGU Fall Meeting, San Francisco, CA, December 12-16, 2016.
20. Xie, F., L. Adhikari, D. L. Wu, R. Wood, *Marine Boundary Layer Lapse Rate and Cloud-top-height Observed from MODIS and CALIPSO over Subtropical Eastern Pacific*, MODIS/VIIRS Science Team Meeting, Silver Spring, MD, June 6-10, 2016.
21. Xue-Meng Chen, J. S. Haase, B. J. Murphy, K-N. Wang, J. L. Garrison, L. Adhikari (Postdoc), F. Xie, S. Y. Chen, C. Y. Huang. *A Study on Airborne Radio Occultations and their Impact on Severe Weather Prediction*, 3rd International Conference on GPS RO (ICGPSRO), Taipei, Taiwan, March 9-11, 2016.

2015

22. Xie, F., C. O. Ao, L. Adhikari and X. Yu, *Ducting and Boundary Layer Refractivity Bias Correction in GPS Radio Occultation Soundings with MODIS over the Subtropical Eastern Pacific Ocean*, AGU Fall Meeting, San Francisco, CA, December 14-18, 2015.
23. Adhikari, L. (Postdoc), F. Xie and T. Winning, *Spatial and Temporal Variation of Boundary Layer Lapse Rate and Cloud-top-height Observed from MODIS, CALIPSO and AMSR-E over Eastern Pacific*, AGU Fall Meeting, San Francisco, CA, December 14-18, 2015.
24. Murphy, B., J. Haase, K.-N. Wang, J. L. Garrison, L. Adhikari (Postdoc), and F. Xie, *Mid-Tropospheric moisture variations during the development of hurricane Karl as resolved by*

airborne GPS radio occultation with open loop tracking, AGU Fall Meeting, San Francisco, CA, December 14-18, 2015.

25. **Xie, F.**, L. Adhikari, D. L. Wu, R. Wood, *Marine Boundary Layer Cloud-top-height from MODIS, CALIPSO and COSMIC Over Subtropical Eastern Oceans*, MODIS/VIIRS Science Team Meeting, Silver Spring, MD, May 18-22, 2015.

2014

26. **Xie, F.**, D. L. Wu and R. Wood: *Planetary Boundary Layer Height and Cloud-top-height from COSMIC and CALIPSO over Eastern Pacific Ocean*, Eighth FORMOSAT-3/COSMIC Data Users' Workshop, Boulder, Colorado, September 30-October 2, 2014.
27. **Adhikari, L.** * (Postdoc), **F. Xie**, B. Murphy, J. S. Haase, P. Muradyan, K.-N. Wang and J. L. Garrison: *Application of Full Spectrum Inversion to Airborne GPS Radio Occultation Measurements*, Eighth FORMOSAT-3/COSMIC Data Users' Workshop, Boulder, Colorado, September 30-October 2, 2014.
28. **Winning, T.** * (Graduate student), Y. L. Chen, D. Hitzl, F. Hsiao, Y. Fen Huang, **F. Xie**: *Detection of the Inversion Layer over the central North Pacific Ocean using GPS Radio Occultation*, Eighth FORMOSAT-3/COSMIC Data Users' Workshop, Boulder, Colorado, September 30-October 2, 2014.

2013

29. **Xie, F.**, C. O. Ao and A. J. Mannucci, J. Turk, S. Syndergaard, E. R. Kursinski, D. L. Wu and L. Adhikari: *Profiling the Cloudy Boundary Layer from GPS Radio Occultation and MODIS*, AGU Fall Meeting, San Francisco, CA, December 9-13, 2013.
30. **Adhikari, L.** * (Postdoc), B. Murphy, **F. Xie**, J. S. Haase, P. Muradyan, K.-N. Wang and J. L. Garrison: *High-resolution Profiling of the Lower Troposphere from Airborne GPS Radio Occultation*, AGU Fall Meeting, San Francisco, CA, December 9-13, 2013.
31. **Xie, F.**: *From Marine Stratus to Trade Cumulus: Cloudy Boundary Layer from Satellite Observation and Global model analysis (Invited Seminar)*, Danish Meteorological Institute, Copenhagen, Denmark, August 2, 2013.

2012

32. **Xie, F.**, C. O. Ao, J. Turk, E. R. Kursinski, A. J. Mannucci and D. L. Wu: *Reconstructing the GPS Refractivity Profiles inside the Atmospheric Boundary Layer with MODIS Cloud-top-temperature over Subtropical Eastern Oceans*, Sixth FORMOSAT-3/COSMIC Data Users' Workshop, Boulder, Colorado, October 30-November 1, 2012.
33. Ao, C. O., **F. Xie**, T. K. Meehan, A. J. Mannucci, and G. Matheou: *On the Resolution and Noise Characteristics of GPS Radio Occultation Retrievals: A Simulation Study*, Sixth FORMOSAT-3/COSMIC Data Users' Workshop, Boulder, Colorado, October 30-November 1, 2012.

Before 2012.09

34. **Xie, F.**, D. L. Wu, C. O. Ao, A. J. Mannucci and E. R. Kursinski: *Evaluating the Marine Atmospheric Boundary Layer in Reanalyses over Subtropical Eastern Oceans with in-situ radiosondes, COSMIC Radio Occultation and CALIPSO Lidar Measurements*, IROWG 2nd Workshop, Estes Park, CO, March 28 – April 3, 2012.

35. **Xie, F.**, J. S. Haase and P. Muradyan: *Airborne GNSS radio occultation retrieval with a radiological method*, IROWG 2nd Workshop, Estes Park, CO, March 28-April 3, 2012.
36. **Muradyan, P.* (Graduate student)**, J. S. Haase, U. Acikoz, J. L. Garrison and **F. Xie**: *Profiling the atmosphere with the airborne RO technique using GPS signals recorded in open-loop mode*, IROWG 2nd Workshop, Estes Park, CO, March 28 – April 3, 2012.
37. Ao, C. O., B. A. Iijima, A. J. Mannucci, T. K. Meehan and **F. Xie**: *Outstanding Issues Concerning GPS RO Measurements in the Lower Troposphere*, IROWG 2nd Workshop, Estes Park, CO, March 28 – April 3, 2012.
38. **Xie, F.**, D. L. Wu, J. F. Li, C. O. Ao, A. J. Mannucci, E. R. Kursinski and X. Jiang: *Diagnostic Evaluation of Atmospheric Boundary Layer Heights in Global Analyses and Reanalyses over Subtropical Eastern Oceans with COSMIC Radio Occultation and Radiosonde Sounding Measurements*, *AGU Fall Meeting*, San Francisco, CA, December 5-9, 2011.
39. Hurst, K. J., C. O. Ao, A. J. Mannucci, **F. Xie**, R. Wood: *Radio Occultation Measurements of the Lower Troposphere: Observing Boundary Layer Vertical Structure From Satellite*, *AGU Fall Meeting*, San Francisco, CA, December 5-9, 2011.
40. **Xie, F.**, D. L. Wu, C. O. Ao, A. J. Mannucci and E. R. Kursinski: *VOCALS/Southeast Pacific Science: Cloudy atmospheric boundary layer observations over subtropical eastern oceans from COSMIC GPS occultation*, *World Climate Research Programme (WCRP) Open Science Conference*, Denver, CO, October 24-28, 2011.
41. Kursinski, E. R. and **F. Xie**: *Improving the Impact of GPS RO in the Troposphere*, *the 9th NOAA (National Oceanic and Atmospheric Administration) JCSDA (Joint Center for Satellite Data Assimilation) Workshop on Satellite Data Assimilation*, University of Maryland, College Park, Maryland, May 24-25, 2011.
42. Murphy, B., J. S. Haase, **P. Muradyan* (Graduate student)**, A.V. Johnson, **F. Xie** and J. L., Garrison: *The Use of Airborne GPS radio occultation in the Pre-Depression Investigation of Cloud-systems in the Tropics (PREDICT) experiment*, Fifth FORMOSAT-3 / COSMIC Data Users Workshop and International Conference on GPS Radio Occultation, Taipei, Taiwan, April 13-15, 2011.
43. **Xie, F.**, D. L. Wu, C. O. Ao, A. J. Mannucci and E. R. Kursinski: *Characteristics of atmospheric boundary layer structures over subtropical stratocumulus regions*, *AGU Fall Meeting*, San Francisco, California, December 13-17, 2010.
44. Ao, C. O., **F. Xie**, Y. Zhang, D. J. Seidel, J. E. Kay, C. Deser: *High-Latitude Inversion Layers from GPS Radio Occultation Observations*, *AGU Fall Meeting*, San Francisco, California, December 13-17, 2010.
45. **Xie, F.**, D. L. Wu, C. O. Ao, E. R. Kursinski and A. J. Mannucci: *Stratocumulus-topped atmospheric boundary layers: GPS RO observations vs. ECMWF analysis*, 19th Symposium on Boundary Layers and Turbulence, sponsored by the American Meteorological Society, Keystone, Colorado, August 2-6, 2010.
46. **Xie, F.**, D. L. Wu, C. O. Ao, A. J. Mannucci: *Observing the diurnal cycle with GPS/COSMIC occultations*, 90th AMS Annual Meeting, Atlanta, Georgia, January 17-21, 2010.
47. **Xie, F.**, D. L. Wu, C. O. Ao, E. R. Kursinski, A. J. Mannucci and S. Syndergaard: *Profiling Stratocumulus-topped Boundary Layers with GPS Radio Occultation*, *AGU Fall Meeting*, San Francisco, California, December 14-18, 2009.
48. **Xie, F.**, D. L. Wu, C. O. Ao, A. J. Mannucci: *Atmospheric diurnal cycle observed from GPS radio occultation soundings*, Fourth FORMOSAT-3/COSMIC Data Users Workshop, Boulder, Colorado, October 27-29, 2009.

49. **Xie, F.**, D. L. Wu, C. O. Ao, A. J. Mannucci, B. Iijima and M. Pestana: Atmospheric diurnal and semi-diurnal variations observed from GPS radio occultation soundings, Global Navigation Satellite System Radio Occultation Workshop, Pasadena, California, April 7-9, 2009.
50. Teixeira, J., A. J. Mannucci, C. O. Ao, D. L. Wu and **F. Xie**, Science Requirements – Atmosphere or Future observations of cloudy boundary layers and the cloud/climate feedback, Global Navigation Satellite System Radio Occultation Workshop, Pasadena, California, April 7-9, 2009.
51. Haase, J. S., **F. Xie**, Muradyan, P., J. L. Garrison, T. Lulich, J. Voo, F.G. Nievinski, and K. Larson, 2009: New Atmospheric Observations from the Airborne GNSS Instrument System for Multistatic and Occultation Sensing (GISMOS), AGU Fall Meeting, San Francisco, California, December 15-19, 2008.
52. **Xie, F.**, J. S. Haase, T. Lulich, P. Muradyan, J. L. Garrison, S. Syndergaard and E. Calais: Profiling the Atmosphere with an Airborne GPS Receiver System, 88th AMS Annual Meeting, New Orleans, Louisiana, January 20-24, 2008.
53. **Xie, F.**, J. S. Haase, S. Syndergaard, T. Lulich, P. Muradyan, J. L. Garrison and E. Calais: Error Estimation of Airborne GPS Radio Occultation Measurements: Simulation Analysis, Second FORMOSAT-3/COSMIC Data Users Workshop, Boulder, Colorado, October 22-24 2007.
54. Kursinski, E. R., **F. Xie** and C. O. Ao: Issues Regarding GPS RO-Derived Tropospheric Humidity, First FORMOSAT-3/COSMIC Data Users Workshop, Boulder, Colorado, October 16-18, 2006.
55. **Xie, F.**: Characterizing the Earth’s Atmosphere Using GPS Radio Occultation Measurements: Opportunities and Challenges, Department of Earth and Atmospheric Sciences Seminar (Invited), Purdue University, August 31, 2006.
56. **Xie, F.**, S. Syndergaard, E. R. Kursinski, C. O. Ao and B. M. Herman: An Approach for Retrieving Marine Boundary Layer Refractivity From GPS Occultation Data, AGU Fall Meeting, San Francisco, California, December 5-9, 2005.
57. **Xie, F.**, S. Syndergaard, E. R. Kursinski and B. M. Herman: Reconstruction of the Marine Boundary Layer Refractivity in the Presence of Super-refraction (Poster), Second GPS Radio Occultation Data Users’ Workshop, Lansdowne, Virginia, August 22-24, 2005.

PROFESSIONAL DEVELOPMENT

Teaching Development

Best Practices in Online Instruction, Office of Distance Education and Learning Technology, TAMUCC, July, 2020

Community of Practice (CoP) – Course Redesign, CFE, TAMUCC, Spring 2013

Regular meetings and workshops on quality teaching and learning, course and program assessment, successful scholarship/creative activities, the university mission, course design, and university faculty support services.

New Faculty Seminar Series, CFE (Center for Faculty Excellence), TAMUCC, Fall 2012

Research Development

Faculty Research Development Program (Grant Writing and Research Development), Division of Research, Commercialization and Outreach, TAMUCC, Fall 2014

RCN CE³SAR Fall Steering Committee Meeting, TAMU-College Station, Nov. 9, 2012
The Research Coordination Network (RCN) – Climate, Energy, Environment and Engagement in Semiarid Regions (CE³SAR) is an NSF funded South Texas sustainability project to develop an innovative model for conducting interdisciplinary, region-specific, sustainability research closely tied to the needs of highly-engaged local stakeholders.

NSF CAREER and Other Young Investigator Programs, TAMU-College Station, March 31, 2016

NSF CAREER Proposal Webinar, *How to Write a Competitive NSF CAREER Proposal*, by Academic Research Funding Strategies, LLC, April 18, 2013

II. TEACHING MENTORING AND ADVISING

COURSE DEVELOPMENT

New Course Development:

ATSC 3305 (Spring 2018) – Physical Meteorology (ATSC undergraduate core course),
CMSS 6310 / ESCI 5490 (Fall 2013) – Fundamental of Remote Sensing (Graduate)
ATSC 4305 (ESCI 4490) (Fall 2018) – Remote Sensing (ATSC undergraduate core)
ESCI 4490.003/ ESCI 6590.002 (Spring 2014) – The Elements of Air Pollution

Start from the scratch on developing the new courses, including syllabus, teaching slides, readings, homework, quiz, exam etc.

Course Redesign:

ESCI 4335 / ATSC 4335: Climate and Climate Variability

Adapt the face-to-face course to be fully online, Fall 2020

Revamp course contents (slides/readings/homework) of the course by incorporating the state-of-the-art climate sciences, case studies, and the basic physics of the climate sciences, Fall 2012

BS-Atmospheric Science Program Curriculum Development:

Develop the BS-ATSC program curriculum

Following the university undergraduate program guideline and also the NOAA National Weather Service federal requirements (GS1340).

Curriculum includes 40 semester credit hours (SCHs) of university core, 60 SCHs in ATSC core, and additional 18 SCHs of ATSC elective courses.

STUDENT & POSTDOC ADVISED/ADVISING

Student Graduated:

Ph.D. Students

Benjamin Johnston (2019.12, CMSS, TAMUCC, **Chair**)

Nana Liu (2019.12, CMSS-TAMUCC, Committee)

Abishek Adhikari (2019.06, CMSS-TAMUCC, Committee)
 Paytsar Muradyan (2012.06, EAS-Purdue University, Committee)

M.S. Students

Xiao Yu (2016.06, TAMUCC-ESCI, Chair)
 Nieva Tamasiunas, Mariana (2019.12, ESCI-TAMUCC, Committee)
 Thomas Lavigne (2017.08, TAMUCC-ESCI, Committee)
 Nana Liu (2016.08, TAMUCC-ESCI, Committee)

Postdoc Supervised:

Dr. Xuelei Feng (2020.01-present)
 Dr. Loknath Adhikari (2013.05-2019.01)
 Dr. Xuelei Feng (2017.01-2018.01)

Ph.D. Thesis Committee:

Committee Chair: Benjamin Johnston (2014.01-2019.12)
 Committee Chair: Kevin Nelson (2016.09-present)
 Committee Chair: Thomas Winning (2014.09-present)

Committee: Nieva Tamasiunas, Mariana (2020.01-present)
 Committee: Xue Feng (2016.09-present)
 Committee: Hayden, Lindsey (2017-present)
 Committee: Thomas Lavigne (2017-present)
 Committee: Abishek Adhikari (2015-2019.05)
 Committee: Nana Liu (2016-2019.12)
 Committee: Mohammad Barzegar(2019.01-present)
 Committee Co-Chair: Frank Kelly (2012.01-2015)
 Committee: Paytsar Muradyan (2009-2012, PhD, 2012, Purdue Univ.)
 Committee (GFR): Liesl M. Hecht (2019.03-2019.10)

M.S. Thesis Committee:

Committee Chair: Xiao Yu (2014.01-2016.06)
 Committee Chair: Michael Garcia (2014.09-2018.05)

Committee: Isabel A. Garcia (2020.02-present)
 Committee: Freguete Larissa (2020.02-present)
 Committee: Nieva Tamasiunas Mariana (2018.04-2019.12)
 Committee: Joseph R. Hill (2016-present)
 Committee: Nana Liu (2014-2016.08)
 Committee: Thomas Lavigne (2015.09-2017.08)

Undergraduate Student Supervised:

Fortunato, Isabella (2019.05-present) Ground-based GPS & RO
 Thomas Lavigne (2014.09-2015.06) Ground-based GPS
 Xiao Yu (2013.09-2014.08) Boundary Layer
 Jasmine Boutte (2013.09-2014.12) Satellite Analysis

Student Summer Internship Award:

NASA Intensive Summer School for Computing in Environmental Sciences

Kevin Nelson (CMSS PhD student) May 2018

Benjamin Johnston (CMSS PhD student) May 2014

Xiao Yu (ESCI MS student) May 2014

NASA Summer Internship (10-week):

Jet Propulsion Laboratory, Caltech, CA Kevin Nelson (2019.6-8)

Goddard Space Flight Center, Maryland Kevin Nelson (2018.6-8)

Jet Propulsion Laboratory, Caltech, CA Thomas Winning (2016.6-8)

Jet Propulsion Laboratory, Caltech, CA Xiao Yu (2014.6-8)

Goddard Space Flight Center, Maryland Benjamin Johnston (2014.6-8)

Student Conference Travel Support:

The 6th Workshop of the International Radio Occultation Working Group (IROWG-6),
Estes Park, Colorado, September 21-27, 2017

Benjamin Johnston & Thomas Winning (CMSS PhD student)

Sponsored by National Science Foundation, and UCAR/COSMIC

Student Awards:

The 98th American Meteorological Society (AMS) Annual Meeting, Austin, Texas, January
8-12, 2018

Benjamin Johnston, Thomas Winning & Kevin Nelson (CMSS PhD students)

TAMUCC-Parents' Council Travel Support

III. SERVICE**UNIVERSITY SERVICE****Service at the Department Level:**

Seminar Organizer for Atmospheric Science Program, 2017-present

Undergraduate Student Mentor for Atmospheric Sciences Program Fall 2016-present

Faculty Search Committee:

Professional-track Faculty in Atmospheric Sciences Search Committee, 2018

Tenure-track Faculty in Atmospheric Sciences (two positions) Search Committee, 2013

PENS Department Chair Search Committee, 2014

Environmental Chemist Search Committee, 2015

Program Admission Evaluation Panel:

CMSS & ESCI graduate student applications, 2012-present

Contribution to the 2020 PENS strategy plan development, 2015

Service at the College Level:

College of S&E Library Liaisons (ATSC-BS), 2015-2016

Team Lead: BS Program Proposal Development, 2012-2015

New BS degree in Atmospheric Sciences Program (Approved by TAMUS Board of Regents in 2015.06)

Work: program proposal drafting, curriculum and budget development, weather lab set up, CATALOG development, present at all required meetings (including departmental, college and university level) during the proposal approving process.

Member: MS Program Proposal Development, 2013-present

New MS degree in High-impact Meteorology and Incident Response (Status: under development)

Work: meeting with local NWS colleagues, program proposal drafting, curriculum and budget development

Member: Secure University Technology Council (UTC) fund to purchase university core lecture capture and recording device for “Education Continuity” effort in College of Science and Engineering. 2013-2014

Service at the University Level:

Member: Research Enhancement Committee, 2017-2019

Member: The University Research Council (UTC) (2012-2014). Offer recommendation to the President’s Cabinet on the strategic direction of the university technology.

TAMUCC Open House, University Center, Lone Star Ballroom, March 26, 2013

Spring/Fall Commencement Ceremonies at American Bank Center, 2013-present

Upgrade the university campus network infrastructure through a nearly half a million NSF Campus Cyberinfrastructure grant (PI: Dulal Kar, Co-PI: F. Xie etc.). The project leads to 10 times faster network, and create a science data center to allow fast and secure large dataset exchange among research collaborators, 2013-2016

Host NASA’s UAS-NAS group visit, LSUASC (Lone Star UAS Center of Excellence & Innovation), Coastal Bend Business Innovation Center, July 15, 2014

PROFESSIONAL SERVICE

Referee or Panel Member for Funding Agencies:

Panelist:

NSF Graduate Research Fellowship Program (GRFP), 2017, 2019

NASA Postdoc Proposal Review Panel 2017, 2018, 2019

NASA Proposal Review Panel (ROSES Call), 2016, 2017

DOD NDSEG (National Defense Science and Engineering Graduate) Fellowship, 2016.1

SMART (Science, Mathematics And Research for Transformation) Scholarship

Evaluation Panel, 2011

Proposal Reviewer: NSF, NASA, DOD

Guest-editor for Scientific Journal:

MDPI-Sensors (A leading international, peer-reviewed, open access journal on the science and technology of sensors and biosensors. Sensors is published monthly online by MDPI.), 2017

Referee for Scientific Journals:

Nature, Journal of Climate, Journal of Atmospheric Sciences, Journal of Geophysical Research, Radio Science, Advances in Space Research, IEEE International Geoscience and Remote Sensing Symposium (IGARSS), IEEE Transactions on Geoscience and Remote Sensing (TGRS), GPS Solutions, Remote Sensing, Space Weather, Journal of Atmospheric and Solar-Terrestrial Physics, Sensors, Atmospheric Chemistry and Physics, Atmospheric Measurement Techniques

Science Team Member:

Texas OneGulf Network of Experts (TONE), 2015-present
NASA Terra/Aqua - MODIS Science Team member, 2014-present
International Radio Occultation Working Group (IROWG), 2010-present
GNSS Radio-occultations and Heavy Precipitation Experiment in PAZ (ROHPP), Spain, 2010-present

Conference Convener:

Co-Chair, RO Applications for Climate Session, Eighth FORMOSAT-3/COSMIC Data Users' Workshop, Boulder, Colorado, October 2, 2014

Membership of Professional Societies:

American Geophysical Union, Full Member, since 2004
American Meteorological Society, Full Member, since 2005
Sigma-Xi, The Scientific Research Society, Full Member, since 2009
Chinese-American Oceanic and Atmospheric Association, since 2009

PUBLIC SERVICE

Panelist, *Climate Science Movie Screening “Between Earth and Sky”* (Interactive Panel of Climate Science Experts: David Weindorf (Texas Tech.), Dr. Jennifer Smith-Engles and Dr. Feiqin Xie, TAMUCC, University Center, TAMUCC, Texas, March 31, 2017

Invited Speaker/Panelist, *What’s up with the Weather? Ask an Expert*. (Interactive Presentations with a Special Panel of Weather Experts) by John Metz and Lara Keys, National Weather Service; **Dr. Feiqin Xie, TAMUCC**; and Dale Nelson, KRIS TV, University of Texas at Austin - Marine Science Institute, Port Aransas, Texas, January 26, 2017

Keynote Speaker, TAMUCC Pollution Prevention Partnership, Hosting the visit of the World Affairs Council Chinese Delegates, Corpus Christi, Texas, February, 3, 2015

Keynote Speaker, *Texas Drought and Climate*, Water Desalination Summit hosted by the State Representative Todd Hunter, Corpus Christi, Texas, August 5, 2014

Judge for Outstanding Student Paper Awards (OSPA), American Geophysical Union Fall Meeting, San Francisco, 2013-2014

Volunteer Team Member: Urban Search and Rescue (USAR) team, Jet Propulsion Laboratory, Caltech, Pasadena, California, 2010-2012