

Curriculum Vitae

Shuyi S. Chen

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PERSONAL INFORMATION

Name: **Shuyi S. Chen**
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Home Address: 4181 Pomona Ave., Miami, FL 33133

Current Academic Rank: Professor
Primary Appointment: Department of Ocean Sciences
Rosenstiel School of Marine & Atmospheric Sciences
University of Miami, Miami, FL 33149

Affiliate Appointment I: Affiliate Professor, Department of Atmospheric Sciences
University of Washington, Seattle, WA 98195

Affiliate Appointment II: Affiliate Scientist, MMM/National Center for Atmospheric
Sciences, Boulder, CO

Citizenship: U.S.

HIGHER EDUCATION

1990 Ph.D. Meteorology, The Pennsylvania State University
1985 M.S. Meteorology, University of Oklahoma
1982 B.S. Geophysics/Meteorology, Peking University

PROFESSIONAL EXPERIENCE

June 2007 – Present Professor, University of Miami
June 2006 – Present Affiliate Scientist, National Center for Atmospheric Research
Oct 1998 – Present Affiliate Professor, University of Washington
June 2000–May 2007 Associate Professor, University of Miami
Aug 1997– May 2000 Associate Research Professor, University of Miami
Jan 1996–July 1997 Assistant Research Professor, University of Washington
Sept 1991–Dec 1995 Research Associate, University of Washington
May 1990–Aug 1991 Research Associate, The Pennsylvania State University

Editorial Responsibilities:

2012 – Editorial Review Appointee for **National Research Council** Reports
2004 – 2006 **Editor, *Weather and Forecasting***, America Meteorological Society.
2000 – 2003 **Associate Editor, *Weather and Forecasting***, America Meteorological Society.

Professional Membership:

1991 – present Member, The American Geophysical Union
1984 – present Member, The American Meteorology Society

Field Program Experience:

2012 – Co-Principal Investigator/Lead Scientist for mini-Met/Ocean surface drifters, Grand Lagrangian Deployment (GLAD) Experiment, Miami, FL
2011 – Principal Investigator/Mission Scientist for Aircraft Observation, Dynamics of Madden-Julian Oscillation (DYNAMO), Diego Garcia, BIOT
2010 – Principal Investigator, Impact of Typhoons on the Ocean over the Pacific (ITOP), Guam, US
2005 – Principal Investigator/Co-Chief Scientist, Hurricane Rainbands and Intensity Change Experiment (RAINEX), Miami and Tampa, Florida
2003 – 2004 Principal Investigator of Coupled Boundary Air-Sea Transfer (CBLAST)-Hurricane, Miami, Florida
1992 – 1993 Satellite/Aircraft Scientist, providing guidance and directing aircraft missions, Tropical Ocean and Global Atmosphere Coupled Ocean and Atmosphere Response Experiment (TOGA COARE), Honiara, Solomon Islands

Science Committee/Panel and Service (Current and Recent):

- The National Academies Board on Atmospheric Sciences and Climate (BASC) (2011-present)
- The National Academies Steering Committee for the 2017-2027 Decadal Survey for Earth Science and Applications from Space (2015 - present)
- UCAR Community Advisory Committee for NCEP (UCACN) (2014 – present)
- American Geophysical Union – Executive Committee of the Atmospheric Sciences, **Chair**, AS FM committee, Secretary for Physics, Dynamics and Climate (2014 – present)
- Science Advisory Board for the Weather Research and Forecasting (WRF) Model (2008 – present)
- Science Advisory Board for UCAR/NOAA/NSF Developmental Testbed Center (DTC) (2009 – 2014)
- The National Academy of Science Committee on Progress and Priorities of US Weather Research and Research-to-Operations Activities (2008 – 2010)
- The National Academies BASC Committee on Frontiers of Decadal Variability (2015)
- Science Steering Committee for the NSF Coastal Ocean Processes (CoOP) (2005 – 2010)

Congressional Testimonies and Briefings:

- **2015:** UCAR Congressional Briefing, Capitol Hill: *The Next-Generation Hurricane Prediction*, 23 June 2015 (<http://president.ucar.edu/government-relations/washington-update/754/congressional-hurricane-briefing-packs-capitol-visitors>)
- **2013:** Testimony at the Hearing on: *Restoring U.S. Leadership on Weather Forecasting*, before the Subcommittee on Environment, Committee on Science, Space, and Technology of United States House of Representatives, 26 June 2013 (<https://science.house.gov/legislation/hearings/subcommittee-environment-hearing-restoring-us-leadership-weather-forecasting>)
- **2008:** Testimony at the Joint Hearing on: *The State of Hurricane Research and the National Hurricane Research Initiative Act of 2007*, before the Subcommittee on Energy and Environment and the Subcommittee on Research and Science Education, Committee on Science and Technology of United States House of Representatives, 26 June 2008 (<https://science.house.gov/legislation/hearings/subcommittee-energy-and-environment-and-subcommittee-research-and-science>)
- **2007:** UCAR Panel Congressional Briefing at the Invitation of the US Senate and House of Representatives: *A National Hurricane Research Initiative: Meeting Society's Needs*. July 10, 2007, Capitol Hill.

HONORS & AWARDS

- 2012 Fellow of the American Meteorological Society
- 2007 A.P. Sloan Foundation Leadership Award for Advancing Underrepresented Minority Students in Mathematics, Science and Engineering
- 2006 NASA Group Achievement Award for Tropical Cloud System Processes
- 2002 First Place Award, the National Collegiate Weather Forecasting Contest, the Faculty and Staff Division (2001-2002).

PUBLICATIONS

Juried or refereed journal articles and books:

Chen, S. S., and M. Curcic, 2016: Coupled Modeling and Observations of Ocean Surface Waves in Hurricane Ike (2008) and Superstorm Sandy (2012), *Ocean Modeling*, in press. [doi:10.1016/j.ocemod.2015.08.005](https://doi.org/10.1016/j.ocemod.2015.08.005)

Chen, S. S., B. W. Kerns, N. Guy, D. P. Jorgensen, J. Delanoë, N. Viltard, C. Zappa, F. Judt, C.-Y. Lee, and A. Savarin, 2016: Aircraft observations of dry air, ITCZ, convective

cloud systems and cold pools in MJO during DYNAMO: *Bull. Amer. Meteor. Soc.*, **97**, 405-423. doi: 10.1175/BAMS-D-13-00196.1

- Judt, F., **S. S. Chen**, and J. Berner, 2016: Predictability of tropical cyclone intensity: Scale-dependent forecast error growth in high-resolution stochastic kinetic-energy backscatter ensembles, *Quat. J. Roy. Meteor. Soc.*, **142**, 43-57. DOI:10.1002/qj.2626
- Curcic, M., **S. S. Chen**, and T. M. Özgökmen, 2016: Hurricane-Induced Ocean Waves and Stokes Drift and their Impacts on Surface Transport and Dispersion in the Gulf of Mexico, *Geophys. Res. Lett.*, **43**(6), 2773-2781, doi:10.1002/2015GL067619.
- Zhu, P., Y. Wang, **S. S. Chen**, M. Curcic, and G. Gao, 2016: Impact of storm-induced cooling of sea surface temperature on large turbulent eddies and vertical turbulent transport in the atmospheric boundary layer of Hurricane Isaac, *J. Geophys. Res. – Oceans*, **121**, 861–876. DOI: 10.1002/2015JC011320
- Romero, I. C., T. Özgökmen, S. Snyder, P. Schwing, B. J. O'Malley, F. J. Beron-Vera, M. J. Olascoaga, P. Zhu, E. Ryan, **S. S. Chen**, D. L. Wetzel, D. Hollander and S. A. Murawski, 2016: Tracking the Hercules 265 marine gas well blowout in the Gulf of Mexico, *J. Geophys. Res. – Oceans*, **121**, 706–724, DOI: 10.1002/2015JC011037
- Judt, F., and **S. S. Chen**, 2016: Predictability and Dynamics of Rapid Intensification of Tropical Cyclones, *Mon. Wea. Rev.*, accepted.
- Judt, F., **S. S. Chen**, and M. Curcic, 2016: Atmospheric forcing of ocean transport in the Gulf of Mexico from seasonal to diurnal time scales, *J. Geophys. Res.-Oceans*, accepted.
- Kerns, B. W., and **S. S. Chen**, 2016: Large-scale precipitation tracking of the MJO over the Indo-Pacific warm pool. *J. Geophys. Res.-Atmospheres*, revised (acceptable with revisions).
- Judt, F., and **S. S. Chen**, 2015: A new aircraft hurricane wind climatology and application in assessing predictive skill of tropical cyclone intensity using high-resolution ensemble forecasts, *Geophys. Res. Lett.*, **42**, 6043-6050.
- Kerns, B. W., and **S. S. Chen**, 2015: Subsidence warming as an underappreciated ingredient in tropical cyclogenesis. Part I: Aircraft observations, *J. Atmos. Sci.*, **72**, 4237-4260.
- Coelho E., P. Hogan, G. Jacobs, P. Thoppil, H. Huntley, B. Haus, B. Lipphardt, Jr., A. D. Kirwan, Jr., E. H. Ryan, J. Olascoaga, G. Novelli, F. Beron-Vera, A. C. Haza, A. C. Poje, A. Griffa, T.M. Özgökmen, D. Bogucki, **S. S. Chen**, M. Curcic, M. Iskandarani, F. Judt, N. Laxague, A. J. Mariano, A.J.H.M. Reniers, C. Smith, A. Valle-Levinson, and M. Wei, 2015: Ocean current estimation using a multi-model ensemble Kalman filter during the Grand Lagrangian Deployment (GLAD) experiment. *Ocean Modelling*, **87**, 86–106.

- D'Asaro, E., P. G. Black, L. Centurioni, Y-T. Chang, **S. S. Chen**, R. Foster, H.C. Graber, P.Harr, V. Hormann, R.-C. Lien, I.-I. Lin, T.B. Sanford, T.-Y. Tang, and C.-C. Wu, 2014: Impact of Typhoons on the Ocean in the Pacific: ITOP, *Bull. Amer. Meteor. Soc.*, **95**, 1405-1418.
- Judt, F., and **S. S. Chen**, 2014: A convective explosion and its environmental conditions in MJO initiation observed during DYNAMO, *J. Geophys. Res.*, **119**, 2781–2795.
- Kerns, B. W., and **S. S. Chen**, 2014a: Equatorial dry air intrusion and related synoptic variability in MJO initiation during DYNAMO, *Mon. Wea. Rev.*, **142**, 1326-1343.
- Kerns, B. W., and **S. S. Chen**, 2014b: ECMWF and GFS Model Forecast Verification During DYNAMO: Multi-scale Variability in MJO Initiation over the Equatorial Indian Ocean, *J. Geophys. Res.*, **119**, 3736–3755.
- Lee, C.-Y., and **S. S. Chen**, 2014a: Stable boundary layer and its impact on tropical cyclone structure in a coupled atmosphere-ocean model, *Mon. Wea. Rev.*, **142**, 1927-1944.
- Lee, C.-Y., and **S. S. Chen**, 2014b: Reply to comments on symmetric and asymmetric structures of hurricane boundary layer in coupled atmosphere-wave-ocean models and observations, *J. Atmos. Sci.*, **71**, 2786-2787.
- Poje, A.C., T.M. Özgökmen., B. Lipphardt, Jr., B. Haus, E.H. Ryan, A.C. Haza, G. Jacobs, A. Reniers, J. Olascoaga, G. Novelli, A. Griffa, F.J. Beron-Vera, **S. S. Chen**, P. Hogan, E. Coelho, A.D. Kirwan, Jr., H. Huntley, A.J. Mariano, 2014: Submesoscale dispersion in the vicinity of the Deepwater Horizon spill. [*Proceedings of the National Academy of Sciences*, 111\(35\), 12693-12698.](#)
- Jacobs, G. A., B. Bartels, D. Bogucki, F. J. Beron-Vera, **S. S. Chen**, E. F. Coelho, M. Curcic, A. Griffa, M. Gough, B. K. Haus, A. C. Haza, R. W. Helber, P. J. Hogan, H. Huntley, M. Iskandarani, F. Judt, A. D. Kirwan Jr., N. Laxague, A. Valle-Levinson, B. Lipphardt, A. Mariano, H. E. Ngodock, G. Novelli, M. J. Olascoaga, T. M. Ozgokmen, P. G. Thoppil, A. C. Poje, A. Reniers, C. D. Rowley, E. H. Ryan, S. R. Smith, P. L. Spence, M. Wei, 2014: Data assimilation considerations for improved ocean predictability during the Gulf of Mexico Grand Lagrangian Deployment (GLAD), *Ocean Modeling*, **83**, 98-117.
- Chen, S. S.**, W. Zhao, M. A. Donelan, and H. L. Tolman, 2013: Directional wind-wave coupling in fully coupled atmosphere-wave-ocean models: Results from CBLAST-Hurricane, *J. Atmos. Sci.*, **70**, 3198-3215.
- Judt, F., and **S. S. Chen**, 2013: Reply to “Comments on ‘Convectively Generated Potential Vorticity in Rainbands and Formation of the Secondary Eyewall in Hurricane Rita of 2005’”. *J. Atmos. Sci.*, **70**, 989–992.

- Kerns, B. W., and **S. S. Chen**, 2013: Cloud clusters and tropical cyclogenesis: Morphology and large-scale environment of developing and non-developing systems, *Mon. Wea. Rev.*, **141**, 190-210.
- Lin, I.-I., P. Black, J. F. Price, C.-Y. Yang, **S. S. Chen**, C.-C. Lien, P. A. Harr, N.-H. Chi, C.-C. Wu, and E. A. D'Asaro, 2013: An ocean cooling potential intensity index for tropical cyclones, *Geophys. Res. Lett.*, **40**, 1878-1882, doi: 10.1002/grl.50091.
- Sraj, I, M. Iskandarani, A. Srinivasan, W. C. Thacker, J. Winokur, A. Alexanderian, C.-Y. Lee, **S. S. Chen**, and O. M. Knio, 2013: Bayesian inference of drag parameters using Fanapi AXBT data, *Mon. Wea. Rev.*, **141**, 2347-2367.
- Curcic, M., E. Kim, L. Emanuel, **S. S. Chen**, M. A. Donelan, and J. Michalakes, 2013: Coupled atmosphere-wave-ocean modeling to characterize hurricane load cases for offshore wind turbines, *51st AIAA Aerospace Sciences Meeting proceedings*, AIAA 2013-0198, <http://dx.doi.org/10.2514/6.2013-198>
- Donelan, M. A., M. Curcic, **S. S. Chen**, and A. K. Magnusson, 2012: Modeling waves and wind stress, *J. Geophys. Res.* **117**, DOI: 10.1029/2011JC007787.
- Lee, C.-Y., and **S. S. Chen**, 2012: Symmetric and asymmetric structures of hurricane boundary layer in coupled atmosphere-wave-ocean models and observations, *J. Atmos. Sci.*, **69**, 3576-3594.
- Tao, W.-K., J. J. Shi, **S. S. Chen**, and co-authors, 2011: The impacts of microphysical schemes on hurricane intensity and Track, *Asia-Pacific J. Atmos. Sci.*, **47**, 1-16.
- Judt, F., and **S. S. Chen**, 2010: Convectively Generated Potential Vorticity in Rainbands and Formation of Secondary Eyewall in Hurricane Rita of 2005, *J. Atmos. Sci.*, **67**, 3581–3599.
- Dabberdt, W., R. E. Carbone, **S. S. Chen**, G. S. Forbes, E. Foufoula-Georgiou, R. Morss, J. T. Snow, X. Zeng, 2010: When Weather Matters, *The National Academies Press*, pp 181.
- Chen, S. S.**, 2009: The next-generation coupled atmosphere-wave-ocean-ice-land models for ocean research and prediction, *Oceanography in 2025, The National Academies Press*, 26-27, pp 198.
- Ray, P., C. Zhang, J. Dudhia, and **S. S. Chen**, 2009: A Numerical Case Study on the Initiation of the Madden-Julian Oscillation, *J. Atmos. Sci.*, **66**, 310-331.
- Chen, S. S.**, and W. Zhao, 2008: Atmospheric forcing in the Japan/East Sea during January 1997. *Asia-Pacific J. Atmos. Sci.*, **44**, 17-28.
- Davis, C., W. Wang, **S. S. Chen**, Y. Chen, K. Corbosiero, M. DeMaria, J. Dudhia, G. Holland,

- J. Klemp, J. Michalakes, H. Reeves, R. Rotunno¹, and Q. Xiao, 2008: Prediction of landfalling hurricanes with the Advanced Hurricane WRF Model, *Mon. Wea. Rev.*, **136**, 1990-2005.
- Langousis, A., D. Veneziano, **S. S. Chen**, 2008: A boundary layer model for moving tropical cyclones, *Hurricanes and Climate Change*, Springer, 71-85.
- Chen, S. S.**, J. F. Price, W. Zhao, M. A. Donelan, and E. J. Walsh, 2007: The CBLAST-Hurricane Program and the next-generation fully coupled atmosphere-wave-ocean models for hurricane research and prediction. *Bull. Amer. Meteor. Soc.*, **88**, 311-317.
- Houze, R. A., **S. S. Chen**, B. Smull, W.-C. Lee, M. Bell, 2007: Hurricane intensity and eyewall replacement. *Science*, **315**, 1235-1239.
- Rogers, R., M. Black, **S. S. Chen**, and R. Black, 2007: Evaluating microphysical parameterization schemes for use in hurricane environments. Part I: Comparisons with observations. *J. Atmos. Sci.*, **64**, 1811-1834.
- Chen, S. S.**, J. Knaff, F. D. Marks, 2006: Effect of vertical wind shear and storm motion on tropical cyclone rainfall asymmetry deduced from TRMM. *Mon. Wea. Rev.*, **134**, 3190-3208.
- Houze, R. A., **S. S. Chen**, and co-authors, 2006: The Hurricane Rainband and Intensity Change Experiment (RAINEX): Observations and modeling of Hurricanes Katrina, Ophelia, and Rita (2005). *Bull. Amer. Meteor. Soc.*, **87**, 1503-1521.
- Dorman, C. E., C. A. Friehe, D. Khelif, A. Scotti, J. Edson, R. C. Bearsley, **S. S. Chen**, 2006: Winter atmospheric conditions over the Japan/East Sea: Structure and impact of severe cold-air outbreaks. *Oceanography*, **19**, 3.
- Chen, S. S.**, W. Drennan, J. Mullen, H.-J. Xue, and P. Chu, 2006: Coastal atmosphere-wave-ocean coupling, *Coupled Coastal Wind-Wave-Current Dynamics*, SCOR, Graig et al. Ed.
- Mechem, D. B., **S. S. Chen**, and R. A. Houze, Jr., 2005: Momentum transport processes in the stratiform regions of mesoscale convective systems over the western Pacific warm pool, *Quat. J. Roy. Meteor. Soc.*, **132A**, 709-736.
- Lonfat, M., F. D. Marks, **S. S. Chen**, 2004: Precipitation distribution in tropical cyclones using the Tropical Rainfall Measuring Mission (TRMM) microwave imager: A global perspective. *Mon. Wea. Rev.*, **132**, 1645-1660.
- Stensrud, D. J., H. E. Brooks, **S. S. Chen**, and P. J. Rebber, 2004: Editorial. *Weather and Forecasting*, **19**, 3-4.
- Rogers, R., **S. S. Chen**, J. E. Tenerelli, and H. E. Willoughby, 2003: A numerical study of the impact of vertical shear on the distribution of rainfall in Hurricane Bonnie

(1998), *Mon. Wea. Rev.*, **131**, 1577-1599.

Mechem, D. B., R. A. Houze, and **S. S. Chen**, 2002: Layer inflow into precipitating convection over the western tropical Pacific, *Quat. J. Roy. Meteor. Soc.*, **128**, 1997-2030.

Chen, S. S., W. Zhao, J. E. Tenerelli, R. H. Evans, V. Halliwell, 2001: Impact of the Pathfinder sea surface temperature on atmospheric forcing in the Japan/East Sea, *Geophys. Res. Lett.*, **28**, No. 24, 4539-4542.

Houze, R. A. Jr., **S. S. Chen**, D. Kingsmill, Y. Serra, S. E. Yuter, 2000: Convection over the Pacific warm pool in relation to the atmospheric Kelvin-Rossby wave. *J. Atmos. Sci.*, **57**, 3058-3089.

Mooers, C. N. K., H. S. Kang, and **S. S. Chen**, 2000: Several aspects of the simulated response of the Japan (East) Sea to synoptic atmospheric forcing due to Siberian cold air outbreaks, *La Mer*, **38**, 233-243.

Su, H., C. S. Bretherton, and **S. S. Chen**, 2000: Self-aggregation and large-scale control of tropical deep convection: A modeling study. *J. Atmos. Sci.* **57**, 1797-1816.

Su, H., **S. S. Chen**, and C. S. Bretherton, 1999: Three-dimension week-long simulations of TOGA COARE convective systems using the MM5 Mesoscale Model. *J. Atmos. Sci.*, **56**, 2326-2344.

Chen, S. S., and R. A. Houze, Jr., 1997a: Diurnal variation and lifecycle of deep convective systems over the tropical Pacific warm pool. *Quat. J. Roy. Meteor. Soc.*, **123**, 357-388.

Chen, S. S., and R. A. Houze, Jr., 1997b: Interannual variability of deep convection over the tropical warm pool. *J. Geophys. Res.*, **102**, 25,783-25,795.

Chen, S. S., R. A. Houze, Jr. and B. E. Mapes, 1996: Multiscale variability of deep convection in relation to large-scale circulation in TOGA COARE. *J. Atmos. Sci.*, **53**, 1380-1409.

Chen, S. S., R. A. Houze, Jr., B. E. Mapes, S. Brodzik, and S. Yuter, 1995: TOGA COARE satellite data summaries available via World Wide Web. *Bull. American Meteor. Soc.*, **76**, 329-333.

Chen, S. S., and W. M. Frank, 1993: A numerical study of the genesis of extratropical convective mesovortices. Part I: Evolution and Dynamics. *J. Atmos. Sci.*, **50**, 2401 - 2426.

Doviak, R. J., **S. S. Chen**, and D. R. Christie, 1991: A thunderstorm generated solitary wave observation compared with nonlinear wave theory for a compressible fluid. *J. Atmos. Sci.*, **48**, 87-111.

Manuscripts submitted/in review:

- Curcic, M., and **S. S. Chen**, 2016: Impacts of Wind, Waves, and Currents on Surface Transport during the Surfzone Coastal Oil Pathways Experiment (SCOPE), *J. Geophys. Res.-Oceans*, in review.
- Dietrich, J.C., A. Muhammad, M. Curcic, A. Fathi, C.N. Dawson, **S. S. Chen**, R.A. Luettich: Sensitivity of Storm Surge Predictions to Meteorological Forcing for Hurricane Isaac (2012), *J. Geophys. Res.-Oceans*, in review.
- Chen, S. S.**, C.-Y. Lee, and L. Centurioni, 2016: Air-sea coupling in Typhoon Fanapi (2010). Part I: Observations of stable boundary layer and storm-induced cooling from ITOP, *J. Atmos. Sci.*, submitted.
- Wu, C.-C., S.-L. Sung; Y.-H. Huang, C.-Y. Lee, **S. S. Chen**, and I.-I. Lin, 2016: Impact of the upper-ocean thermal structure on typhoon intensity change: Synergy of EnKF Data Assimilation and a coupled atmosphere-ocean model, *Mon. Wea. Rev.*, in review.
- Chen, S. S.**, M. Curcic, M. A. Donelan, T. Campbell, R. Allard, T. Smith, S. Chen, J. Michalakes: A Unified Air-Sea Interface for Fully Coupled Atmosphere-Wave-Ocean Models and Application in Tropical Cyclone Prediction, *Journal of Advances in Modeling Earth Systems*, to be submitted (June 2016).
- Curcic, M., and **S. S. Chen**: Atmosphere-wave-ocean momentum exchange in tropical cyclones: Results from a fully coupled model and observations, *Journal of Advances in Modeling Earth Systems*, to be submitted (June 2016).

RECENT INVITED LECTURES AND TALKS

- 2016 April 21, AMS Zipser Symposium, Puerto Rico, Invited Speaker, *What has inspired by onions and diamonds in soundings*
- 2015 May 29, US-Taiwan Extreme Precipitation Workshop, Taipei, Invited Speaker, *Precipitation in Tropical Cyclones: Discrepancy in QPE and QPF and Model Bias*
- 2015 Jan 06, AMS 19th Conference on Air-Sea Interaction, Phoenix, AZ, Invited Talk, *Air-Sea Interactions in Tropical Cyclones: Progress, Challenges, and Ways Forward*
- 2014 Sep 29, JPL/CalTech, Pasadena, CA, Invited Seminar, *Tropical Cyclone Prediction and Predictability: Coupled Atmosphere-Wave-Ocean Modeling and Observations*
- 2014 Jun 19, NASA/GFSC, Greenbelt, MD, Invited Seminar, *Coupled Atmosphere-Wave-Ocean Modeling for Better Understanding Tropical Cyclone Prediction and Predictability*

- 2014 Jun 17, DOE/BOMD Wind Energy, Washington DC, Invited Speaker, *Characterizing Hurricane Load Cases for Offshore Wind Turbines*
- 2014 May 20, NCAR, Boulder, CO, *Energetics of NWP Models from the Bottom Up: Coupled Atmosphere-Wave-Ocean Impact Prediction of Superstorm Sandy and Beyond*
- 2014 Feb 27, Ocean Science Meeting, Hawaii, Tutorial Lecture, *Superstorm Sandy: An Ideal Testbed for Integrated Impact Forecasting using Coupled Atmosphere-Wave-Ocean-Surge Models*
- 2013 Dec 11, AGU Fall Meeting, San Francisco, CA, Invited Talk, *Effects of Dry Air Intrusion on MJO Initiation during DYNAMO*
- 2013 May 15, NSF-ICGPSRO, Taiwan, Invited Speaker, *Environmental Water Vapor and Tropical Cyclone Development: A Critical and Under-Appreciated Link*
- 2012 Apr 11, Validus Re-Insurance Florida Symposium, Nassau, Bahamas, Keynote Speaker, *A New Paradigm Shift from Weather to Quantitative Impact Forecasting*
- 2012 Mar 30, NTU, Taiwan, Honorary Guest Lecturer, *DYNAMO Field Campaign: Results From P-3 Aircraft Data and Satellite Cloud Cluster Tracking*

TEACHING SPECIALIZATION (COURSES TAUGHT AT UM)

- Undergraduate: MSC103 Survey of Modern Meteorology*
 MSC106 Hurricane and Society*
 MSC/ATM118 Current Weather and Climate Topics
 MSC240 Introduction to Meteorology
 MSC372 Hurricanes and Societal Impact*
 MSC405 Dynamic Meteorology I
 MSC407 Advanced Weather Analysis and Forecasting*
 MSC408 Tropical Meteorology I*
- Graduate: MPO552 Synoptic Meteorology Laboratory
 MPO561 Tropical Meteorology*
 MPO615 Numerical Weather Prediction
 MPO651 Dynamics and Modeling of Weather and Climate Systems*
 MPO675 Current Topics in Modern Meteorology

* New courses developed by Shuyi S. Chen

THESIS & DISSERTATION ADVISING

Graduate Students Advising:

Ph.D. Committee **Chair**, Milan Curcic, University of Miami (graduated 2015)
Ph.D. Committee **Chair**, Falko Judt, University of Miami (graduated 2014)
Ph.D. Committee **Chair**, Chiaying Lee, University of Miami (graduated 2012)
Ph.D. Committee **Chair**, Melicie Desflots, University of Miami (graduated 2009)
Ph.D. Committee **Chair**, Manuel Lonfat, University of Miami (graduated 2004)
Ph.D. Committee **Co-Chair**, David Mechem, University of Washington (graduated 2003)
Ph.D. Committee **Co-Chair**, Wei Zhao, Qingdao Ocean University (graduated 2002)
Ph.D. Committee **Chair**, Ajda Saravin, University of Miami
Ph.D. Committee **Chair**, Andrew Smith, University of Miami
Ph.D. Committee **Co-Chair**, Kuan-JenLin, Taiwan National Central University
Ph.D. Committee Member, Hui Su, University of Washington (graduated 1998)
Ph.D. Committee Member, Guojun Gu, University of Miami (graduated 2001)
Ph.D. Committee Member, HeeSook Kang, University of Miami (graduated 2001)
Ph.D. Committee Member, Ping Zhu, University of Miami (graduated 2002)
Ph.D. Committee Member, Fengchao Yao, University of Miami (graduated 2006)
Ph.D. Committee Member, Pallav Ray, University of Miami (graduated 2008)
Ph.D. Committee Member, Jun Zhang, University of Miami (graduated 2007)
Ph.D. Committee Member, Andreas Langousis, Massachusetts Institute of Technology
Ph.D. Committee Member, Brandon Kerns, University of Utah (graduated 2008)
Ph.D. Committee Member, Deanna Hence, University of Washington (graduated 2012)
Ph.D. Committee Member, Marcela Ulate-Medrano, University of Miami (graduated 2014)

M.S. Committee **Chair**, Patricia Sanchez, University of Miami (graduated 2013)
M.S. Committee **Chair**, Ronald Gordon, University of Miami (graduated 2012)
M.S. Committee **Co-Chair**, Sophia Brumer, South Hampton Univ. UK (graduated 2011)
M.S. Committee **Chair**, Falko Judt, University of Miami (graduated 2010)
M.S. Committee **Chair**, Derek Ortt, University of Miami (graduated 2008)
M.S. Committee **Chair**, Peter Kozich, University of Miami (graduated 2006)
M.S. Committee **Chair**, John Cangialosi, University of Miami (graduated 2004)
M.S. Committee **Chair**, Robert Wolfe, University of Miami (graduated 2003)
M.S. Committee **Chair**, Joel Cline, University of Miami (graduated 2003)
M.S. Committee **Chair**, Rebecca Waddington, University of Miami
M.S. Committee Member, Andrew Hagen, University of Miami (graduated 2010)
M.S. Committee Member, Da Hai Jeon, University of Miami (graduated 2009)
M.S. Committee Member, Mei Wang, University of Miami (graduated 2008)
M.S. Committee Member, Fei Zhang, University of Miami (graduated 2004)
M.S. Committee Member, Tara Sharon, University of Miami (graduated 2003)

Undergraduate Research Advising and Honors Theses:

B.S. Research Advisor, Nick Kedzuf, University of Miami
B.S. Research Advisor, Reed MacDonald, University of Miami
B.S. Research Advisor, Shane Hinton, University of Miami (graduated 2015)

B.S. Research Advisor, Robert Brinthaup, University of Miami (graduated 2015)
B.S. Research Advisor, Ajda Saravin, University of Miami (graduated 2013)
B.S. Research Advisor, Lee Picard, University of Miami (graduated 2012)
B.S. Research Advisor, Ken Dixon, University of Miami (graduated 2011)
B.S. Research Advisor, Jason Hwang, University of Miami (graduated 2009)
B.S. Research Advisor, Derek Ortt, University of Miami (graduated 2005)
B.S. Research Advisor, Luke Kosar, University of Miami (graduated 2004)
B.S. Research Advisor, Ryan Ellis, University of Miami (graduated 2003)
B.S. Research Advisor, Jennifer Edmonds, University of Miami (graduated 2003)
B.S. Research Advisor, John Cangialosi, University of Miami (graduated 2002)

SERVICE

University Committee & Administrative Responsibilities:

- Member of the Faculty Senate (2011-2017)
- Faculty Senate General Welfare Committee (2014-2015)
- Faculty Senate Budget and Compensation Committee (2012-2016)

Community and Outreach/Diversity Activities:

- 2011: Lecturer and mentor for Underrepresented Youth at the Miami Science Museum
- 2010-2012: Science advisor and mentor for the UCAR Significant Opportunities in Atmospheric Research and Science (SOARS) students:
 - Diamilet Perez-Betancourt (currently PhD student at MIT)
 - Rosimar Rios Berrios (currently PhD student at SUNY-Albany)
- 2007-2013: Science advisor and mentor for undergraduate students from the University of Puerto Rico as part of the NSF and NOAA minority students training programs, and hosted 10 summer interns at the University of Miami.