Jiachen DING

Assistant Professor
School of Atmospheric Sciences
Nanjing University, Nanjing, Jiangsu, China
ATMO Building A504 | No. 163, Xianlin Ave., Qixia District, 210023
E-mail: jdingali@nju.edu.cn

Educational Background

Ph.D., Atmospheric Sciences, Texas A&M University (TAMU) 08/2014-05/2019

B.S., Information Engineering (Optoelectronics), Nanjing University (NJU) 09/2010-07/2014

Appointments

Assistant Professor, School of Atmospheric Sciences, NJU
01/2026-present

Assistant Research Scientist, Department of Atmospheric Sciences, TAMU
12/2022-11/2025

Postdoctoral Research Associate, Department of Atmospheric Sciences, TAMU
06/2019-11/2022

Graduate Research Assistant, Department of Atmospheric Sciences, TAMU
09/2014-05/2019

Honors & Awards

Peter C. Waterman Award, ELS XXI Meeting 05/2025

Outstanding Research Staff Member Award of Dept. Atmos. Sci., TAMU 12/2023

Outstanding Graduate Student Research Award of Dept. Atmos. Sci., TAMU 12/2017

Heep Fellowship, TAMU 11/2015

Outstanding Graduate of NJU 06/2014

National Scholarship, NJU 09/2013

Honorable Mention in Mathematical Contest in Modeling (MCM) 04/2013

Outstanding Student, Outstanding Model Student of NJU 12/2012

Samsung Scholarship by NJU and Samsung Company 12/2012

Second Prize and Excellent Theoretical Plan Award in National University Students' Opt-Sci-Tech Competition (The Chinese Optical Society) 08/2012

Professional Association

Member of American Geophysical Union

Member of American Meteorology Society

External Services

Reviewer for:

- *Appl. Opt.*
- *Appl. Sci.*
- *Atmosphere*
- *Axioms*
- *Chin. Opt. Lett.*
- *Electronics*
- *Geosci. Model Dev.*
- *Meteorol. Atmos. Phys.*
- *J. Appl. Meteorol. Climatol.*
- *J. Atmos. Sci.*
- *J. Geophys. Res.*
- *J. Hydrometeor.*
- *J. Meteorol. Res.*
- *J. Opt. Soc. Amer. A*
- *J. Quant. Spectrosc. Radiat. Transfer*
- *Opt. Expr.*
- *Opt. Lett.*
- *OSA Contin.*
- *Perspectives Earth Space Sci.*
- *Remote Sens.*

- *Remote Sens. Environ.*
- *Sensors*
- *Turk. J. Phys.*

Volunteer judge of AGU Outstanding Student Presentation Awards.

Volunteer judge of AMS ACCI Symposium Best Student Presentation Awards.

Book & Book Chapters

1) Yang, P., **J. Ding**, M. Saito, and G. Kattawar, 2026: Physical-Geometric Optics for Light-Scattering by Nonspherical Particles: Applications to Remote Sensing and Climate Science. Cambridge University Press.

2) Yang, P., **J. Ding**, and G. Kattawar, 2023: Applications of Maxwell's equations to light scattering by dielectric particles. Chapter 7 in *Light*, *Plasmonics and Particles*, Eds. M. Pınar Mengüç and Mathieu Francoeur, Elsevier, pp. 600.

3) Yang, P., **J. Ding**, and G. Kattawar, 2023: Maxwell's equations and particle single-scattering properties. Chapter 2 in *Light*, *Plasmonics and Particles*, Eds. M. Pınar Mengüç and Mathieu Francoeur, Elsevier, pp. 600.

4) Contribution to the Chapter 5 of "Sun, B., L. Bi, P. Yang, M. Kahnert, and G. Kattawar, 2019: *Invariant Imbedding T-matrix Method for Light Scattering by Nonspherical and Inhomogeneous Particles*, Elsevier, ISBN 978-0-12818090-7, pp. 262."

Peer-reviewed Publications

1) **Ding, J.**, and P. Yang, 2026: Modeling Radiative Transfer in Aligned and Chiral Aerosols, *Journal of Geophysical Research: Atmosphere*, under review.

2) Saito, M., P. Yang, L. Tsang, H. Okamoto, and **J. Ding**, 2026: Exploration of coherent backscattering mechanisms for nonspherical particles in geometric optics regime, *Journal of Quantitative Spectroscopy & Radiative Transfer*, accepted.

3) **Ding, J.**, and P. Yang, 2025: Separation of Variables Method for Light Scattering by Two-Layer Spheroids with Size Parameters up to 1000, *Optics Express*, 33(19), 40532-40564.

4) Wang, S., **J. Ding**, and P. Yang, 2025: Deep-learning application to the separation of variables method for light scattering by spheroids: Optimal number of expansion terms and improved prolate radial spheroidal function calculation, *Optics Express*, 33(16), 34407-34422.

5) **Ding, J.**, and P. Yang, 2025: Improving Numerical Stability of the Separation of Variables Method for Light Scattering by Spheroids with Size Parameters up to 1000, *Journal of Quantitative Spectroscopy & Radiative Transfer*, 347, 109644.

6) La Luna, A, Z. Zhang, J. Zheng, Q. Song, H. Yu, **J. Ding**, P. Yang, and M. Saito, 2025: Scattering properties and Lidar Characteristics of Asian Dust Particles Based on Realistic Shape Models, *Atmospheric Chemistry and Physics*, 25(20), 13359-13377.

7) **Ding, J.**, and P. Yang, 2023: Lorenz-Mie Theory-Type Solution for Light Scattering by Spheroids with Small-to-Large Size Parameters and Aspect Ratios, *Optics Express*, 31(24), 40937-40951.

8) Cikota, A., **J. Ding**, L. Wang, D. Baade, S. Cikota, P. Höflich, J. Maund, and P. Yang, 2023: An independent determination of the distance to supernova SN 1987A by means of the light echo AT 2019xis, *The Astrophysical Journal Letters*, 949(1), L9.

9) **Ding, J**, P. Yang, and G. Videen, 2023: On the Relation Between Ice-Crystal Scattering Phase Function at 180° and Particle Size: Implication to Lidar-based Remote Sensing of Cirrus Clouds, *Optics Express*, 31(11), 18680-18692.

10) **Ding, J.**, P. Yang, M. T. Lemmon, and Y. Zhang, 2023: Simulations of Halos Produced by Carbon Dioxide Ice Crystals in the Martian Atmosphere, *Geophysical Research Letter*s, 50, e2023GL103457.

11) Zhang, Y., **J. Ding**, P. Yang, and G. Videen, 2023: Evaluating the accuracy of single-scattering computations by the geometric optics approximation using Platonic solids, *Journal of Quantitative Spectroscopy & Radiative Transfer*, 108591.

12) **Ding, J.**, P. Yang, L. Wang, E. Oran, N. G. Loeb, W. L. Smith Jr., and P. Minnis, 2023: Quantification of Global Cloud Properties with Use of Spherical Harmonic Functions, *Earth and Space Science*, 10(3), e2022EA002718.

13) **Ding, J.**, and P. Yang, 2023: Tangent-Linear and Adjoint Models for the Transfer of Polarized Radiation, *Journal of Atmospheric Sciences*, 80(1), 73-89.

14) Ren, T., P. Yang, K. Garrett, Y. Ma, **J. Ding**, and J. Coy, 2022: A microphysics-scheme consistent snow optical parameterization for the Community Radiative Transfer Model, *Monthly Weather Review*, 151(2), 383-402.

15) Song, Q., Z. Zhang, H. Yu, J. F. Kok, C. Di Biagio, S. Albani, J. Zheng, and **J. Ding**, 2022: Size-resolved Dust Direct Radiative Effect Efficiency Derived from Satellites Observations, *Atmospheric Chemistry and Physics*, 22, 13115–13135.

16) Zhang, Y., **J. Ding***, P. Yang, and R. L. Panetta, 2022: Vector Spherical Wave Function Truncation in the Invariant Imbedding T-matrix Method, *Optics Express*, 30(17), 30020-30037. (*Corresponding author)

17) Silber, I., R. C. Jackson, A. M. Fridlind, A. S. Ackerman, S. Collis, J. Verlinde, and **J. Ding**, 2022: The Earth Model Column Collaboratory (EMC 2) v1. 1: An Open-Source Ground-Based Lidar and Radar Instrument Simulator and Subcolumn Generator for Large-Scale Models, *Geoscientific Model Development*, 15, 901-927.

18) Okeudo, N., **J. Ding**, P. Yang, and R. Saravanan, 2022: Edge effect correction formula for sperspheroids using the Debye series, *Optics Express*, 30, 146-165.

19) **Ding, J.**, Wang, L., Brown, P., and Yang, P., 2021: Radiative Transfer Modeling of An SN 1987A Light Echo —AT2019xis, *The Astrophysical Journal*, 919, 104.

20) Saito, M., P. Yang, **J. Ding**, and X. Liu, 2021: A comprehensive database of the optical properties of irregular aerosol particles for radiative transfer simulations, *Journal of Atmospheric Sciences*, 78, 2089-2111.

21) **Ding, J.**, P. Yang, M. I. Mishchenko, and R. D. Nevels, 2020. Identify the limits of geometric optics ray tracing by numerically solving the vector Kirchhoff integral, *Optics Express* 28, 10670-10682.

22) **Ding, J.**, P. Yang, M. D. King, S. Platnick, X. Liu, K. G. Meyer, and C. Wang, 2019. A Fast Vector Radiative Transfer Model for the Atmosphere-Ocean Coupled System, *Journal of Quantitative Spectroscopy & Radiative Transfer*, p.106667.

23) Yang, P., **J. Ding**, R. L. Panetta, K. N. Liou, G. W. Kattawar, and M. I. Mishchenko, 2019: On the convergence of numerical computations for both exact and approximate solutions for electromagnetic scattering by nonspherical dielectric particles (invited review), *Progress In Electromagnetics Research*, 164, 27-61.

24) Stegmann, P. G., B. Sun, **J. Ding**, P. Yang, and X. Zhang, 2019: Study of the effects of phytoplankton morphology and vertical profile on lidar attenuated backscatter and depolarization ratio, *Journal of Quantitative Spectroscopy & Radiative Transfer*, 225, 1-15.

25) Li, R., G. Tang, **J. Ding**, T. Logan, S. Brooks, D. Collins, P. Yang, and G. Kattawar, 2018: Laboratory measurements of light scattering properties of kaolinite dust at 532 nm, *Aerosol Science and Technology*, 52, 666-678.

26) **Ding, J.**, P. Yang, G. W. Kattawar, M. D. King, S. Platnick, and K. G. Meyer, 2017: Validation of quasi-invariant ice cloud radiative quantities with MODIS satellite-based cloud property retrievals, *Journal of Quantitative Spectroscopy & Radiative Transfer*, 194, 47-57.

27) **Ding, J.**, L. Bi, P. Yang, G. W. Kattawar, F. Weng, Q. Liu, and T. Greenwald, 2017: Single-scattering properties of ice particles in the microwave regime: temperature effect on the ice refractive index with implications in remote sensing, *Journal of Quantitative Spectroscopy & Radiative Transfer*, 190, 26-37.

28) Heinson, Y. W., J. Maughan, **J. Ding**, A. Chakrabarti, P. Yang, and C. Sorensen, 2016: Q-space analysis of light scattering by ice crystals, *Journal of Quantitative Spectroscopy & Radiative Transfer*, 185, 86-94.

29) **Ding, J.**, P. Yang, R. E. Holz, S. Platnick, K. G. Meyer, M. A. Vaughan, Y. Hu, and M. D. King, 2016: Ice cloud backscatter study and comparison with CALIPSO and MODIS satellite data, *Optics Express*, 24, 620-636.

30) Li, Y., M. Li, Y. Poo, **J. Ding**, M. Tang, and Y. Lu, 2014: Performance analysis of OOK, BPSK, QPSK modulation schemes in uplink of ground-to-satellite laser communication system under atmospheric fluctuation, *Optics Communications*, 317, 57-61.

31) **Ding, J.**, M. Li, M. Tang, and Y. Song, 2013: BER performance of MSK in a ground-to-satellite laser uplink system under the influence of atmospheric turbulence and detector noise, *Optics Letters*, 38(18), 3488-3491.

32) Tang, M., M. Li, Y. Li, **J. Ding**, and G. Xu, 2013: Investigation of the performance of OOK, 2DPSK, QDPSK in downlink of ground-to-satellite laser communication systems, *Applied Mechanics and Materials*, 411, 749-752.

33) Li, Y., M. Li, **J. Ding**, M. Tang, and Y. Lu, 2013: Performance of OOK, 2PSK, QPSK modulation format in downlink of ground-to-satellite laser communication under the fluctuation of atmosphere. *Applied Mechanics and Materials*, 411, 753-756.

34) **Ding, J.**, M. Li, M. Tang, Y. Li, and Y. Song, 2013: The Performance of MSK in downlink of ground-to-satellite laser communication systems. *Applied Mechanics and Materials*, 411, 757-760.

Conference Presentations

- Yang, P., **J. Ding**, J. Wei, K. Meyer, and X. Liu, 2025: Studies of phytoplankton in the ocean and aligned and chiral aerosols in the atmosphere based on advanced light-scattering and vector radiative transfer modeling capabilities. AGU 2025 Meeting, New Orleans, LA, 11-19 December.
- La Luna, A, Z. Zhang, J. Zheng, Q. Song, H. Yu, **J. Ding**, P. Yang, and M. Saito, 2025: Lidar Scattering Properties of Large Absorbing Dust Particles: Geometric Optics Interpretation and Implications. AGU 2025 Meeting, New Orleans, LA, 11-19 December.
- Yang, P., **J. Ding**, D. Li, and S. Wang, 2025: Simulations of the optical properties of nonspherical dust aerosols using state-of-the-art light-scattering computational capabilities. AGU 2025 Meeting, New Orleans, LA, 11-19 December.
- **Ding, J.**, and P. Yang, 2025: Optical Properties of Spheroidal Particles Simulated by the Separation of Variables Method in Spheroidal Coordinates. SPIE Optics + Photonics Conference, San Diego, CA, 3-7 August.
- Wei, J., P. Yang, and **J. Ding**, 2025: Assessing the Sensitivity of Satellite Polarimetric Observations to the Optical Properties of Phytoplankton in the Ocean. SPIE Optics + Photonics Conference, San Diego, CA, 3-7 August.
- **Ding, J.**, and P. Yang, 2025: Light Scattering by Two-layer Spheroids: Separation of Variables Method in Spheroidal Coordinates. The 21th Electromagnetic and Light Scattering Conference, Milazzo, Italy, 23-27 June.
- Yang, P., **J. Ding**, and J. Wei: 2025: Texas A&M University-Vector Radiative Transfer Model (TAMU-VRTM) for Atmospheric and Oceanic Polarimetric Remote Sensing. The 21th Electromagnetic and Light Scattering Conference, Milazzo, Italy, 23-27 June.
- **Ding, J.**, and P. Yang, 2024: Accurate Simulation of Optical Properties of Spheroids with Semi-axis Size Parameter up to 1000. AGU 2024 Meeting, Washington, D.C., 9-13 December.
- **Ding, J.**, and P. Yang, 2024: A Comprehensive Optical Property Database of Spheroids in Support of Atmospheric and Oceanic Remote Sensing. International Geoscience and Remote Sensing Symposium (IGARSS), Athens, Greece, 7-12 July.
- **Ding, J.**, and P. Yang, 2024: Lorenz-Mie Theory-Type Solutions for the Optical properties of Spheroids with Small-to-Large Size Parameters and Aspect Ratios. AMS 104th Annual Meeting, Baltimore, MD, 28 January-1 February.
- **Ding, J.**, and P. Yang, 2023: Light Scattering by a Large Dielectric Spheroid Based on the Separation of Variable Method in Spheroidal Coordinates. AGU Fall Meeting 2023, online, 11-15 December.
- Zhang, Y., **J. Ding**, and P. Yang, 2023: A single-scattering property database for two-layer oceanic particles. AGU Fall Meeting, San Francisco, CA, 11-15 December.
- Okeudo, N., **J. Ding**, P. Yang, and G. Videen, 2023: R. Saravanan, Simulating the reflectance and normalized modified polarized reflectance of aerosol dust particles using irregular convex shapes. AGU Fall Meeting, online, 11-15 December.

- Yang, P., and **J. Ding**, 2023: Advanced Light-Scattering Computational Capability for Solving the Optical Properties of Nonspherical Particles. SPIE Optics + Photonics Conference, San Diego, CA, 20-24 August. (*Invited talk*).
- **Ding, J.**, and P. Yang, 2023: A Radiative Transfer Model with Jacobian Computational Capabilities for Polarimetric Remote Sensing of the Earth System. SPIE Optics + Photonics Conference, San Diego, CA, 20-24 August.
- Yang, P., **J. Ding**, K. Meyer, K. Knobelspiesse, and S. Gassó, 2023: Radiative Transfer of Polarized Light in the Atmosphere and Oceans: Techniques and Remote Sensing Applications. International Geoscience and Remote Sensing Symposium (IGARSS), Pasadena, CA, 16-21 July.
- **Ding, J.**, and P. Yang, 2023: Analytical Solution of Light Scattering by a Spheroid. International Geoscience and Remote Sensing Symposium (IGARSS), Pasadena, CA, 16-21 July.
- Panetta, R. Lee, Y. Zhang, **J. Ding**, and P. Yang, 2023: Optimal Truncation of Vector Spherical Harmonic Expansions in Single Homogeneous Particle IITM Scattering Calculations: Going beyond Dependence on Size Parameter Alone. The 20th Electromagnetic and Light Scattering Conference, Almuñécar, Spain, 15-19 May.
- Ren, T., M. Saito, **J. Ding**, P. Yang, and J. Coy, 2023: The Consistency of Ice Clouds Optical Models for Spaceborne Active and Passive Remote Sensing Applications. The 38th CERES Science Team Meeting, Hampton, VA, 9-11 May.
- **Ding, J.**, P. Yang, L. Wang, E. Oran, N. G. Loeb, W. L. Smith Jr., and P. Minnis, 2023: Quantification of Global Cloud Properties with Use of Spherical Harmonic Functions. Texas Center for Climate Studies High-Resolution Modeling Workshop, College Station, TX, 23-25 January.
- Song, Q., Z. Zhang, H. Yu, J. F. Kok, C. Di Biagio, S. Albani, J. Zheng, and **J. Ding**, 2023: Deriving Global Dust Optical Depth and Size-Resolved Direct Radiative Effects Efficiency from Satellite Observations. AMS 103rd Annual Meeting, online, 8-12 January.
- **Ding, J.**, P. Yang, K. Meyer, K. Knobelspiesse, and S. Gassó, 2023: Circular Polarization in Reflected Radiation from Dust Aerosol: A Modeling Study. AMS 103rd Annual Meeting, online, 8-12 January.
- Coy, J., M. Saito, **J. Ding**, and P. Yang, 2022: A Broad Spectrum Two-Habit Model Optical Property Database for the Improvement of Active-Passive Retrieval Consistency of Downstream Remote Sensing Applications. AGU Fall Meeting 2022, online, 12-16 December.
- **Ding, J.** and P. Yang, 2022: Revisiting the Analytical Solution to Light Scattering by a Dielectric Spheroid. AGU Fall Meeting 2022, online, 12-16 December.
- Coy, J., M. Saito, **J. Ding**, and P. Yang, 2022: Improving Ice Cloud Backscattering and Determining an Optimal Ice Particle Optical Property Database for Lidar-Based Applications. 13th LIP Meeting 2022, 21-26, August.
- Coy, J., M. Saito, **J. Ding**, and P. Yang, 2022: A New Ice Particle Optical Property Database with Improved Shortwave Backscattering for Downstream Active Remote Sensing Applications. The Third Advancement of POLarimetric Observations (APOLO-2022) Conference, online, 9-12, August.

- **Ding, J.**, and P. Yang, 2022: Adjoint model of polarized radiative transfer and application in sensitivity analysis, The Third Advancement of POLarimetric Observations (APOLO-2022) Conference, online, 9-12, August.
- Yang, P., **J. Ding**, M. Saito, T. Ren, J. Coy, Y. Zhang, and G. Videen, 2022: Advanced Capabilities for Modeling the Optical Properties of Nonspherical and Inhomogeneous Particles: Applications to the Solutions to Light Scattering By Ice Crystals and Dust Aerosol, American Meteorological Society Collective Madison Meeting, online, 8-12 August.
- Okeudo, N., **J. Ding**, P. Yang, and R. Saravanan, 2022: Evaluating a Triangular Bipyramid Shape as a Surrogate of Dust Aerosol in Vector Radiative Transfer Simulations, AMS Collective Madison Meeting, online, 8-12 August.
- Zhang, Y., **J. Ding**, and P. Yang, 2022: Evaluate the performance of the physical geometric optics method with use of Platonic solids, AMS Collective Madison Meeting, online, 8-12 August.
- **Ding, J.**, P. Yang, L. Wang, and E. Oran, 2022: Application of the Spherical Harmonic Expansion Technique to the Study of Global Cloud Properties. IEEE IGARSS 2022, Online/Kuala Lumpur, Malaysia, 17-22 July.
- Okeudo, N., **J. Ding**, P. Yang, and R. Saravanan, 2022: Shape Factor Parameterizations of the Edge Effect Correction Using the Debye Series for Super-spheroids to Represent Convex Particles, Texas Academy of Science 2022 Annual meeting, Houston, TX, 25-27 February.
- Zhang, Y., **J. Ding**, P. Yang, and R. L. Panetta, 2022: Convergence and Truncation Criteria in Invariant-Imbedding T-Matrix Method for Non-Spherical Particles, Texas Academy of Science 2022 Annual meeting, Houston, TX, 25-27 February.
- Ren, T., **J. Ding**, J. Coy, P. Yang, 2022: A microphysics-based snow optical parameterization scheme for the Community Radiative Transfer Model, Texas Academy of Science 2022 Annual meeting, Houston, TX, 25-27 February.
- **Ding, J.**, and P. Yang, 2022: Light Scattering Computation for Dielectric Spheroidal Particles, Texas Academy of Science 2022 Annual meeting, Houston, TX, 25-27 February.
- **Ding, J.**, and P. Yang, 2022: Advances in Modeling Nonspherical Dust Aerosol Optical Properties Using Spheroidal Shape Particles, AMS 102th Annual Meeting, Houston, TX & Online, 23-27 January.
- Yang, P., M. Saito, **J. Ding**, and X. Liu, 2022: Optical Properties of Dust Aerosol Particles: Theoretical Computations and Applications, AMS 102th Annual Meeting, Houston, TX & Online, 23-27 January.
- Ren, T., **J. Ding**, J. Coy, P. Yang, and K. Garrett, 2022: Implementation of Microphysics-Based Snow and Graupel Bulk Optical Properties into the Community Radiative Transfer Model, AMS 102th Annual Meeting, Houston, TX & Online, 23-27 January.
- Okeudo, N., **J. Ding**, P. Yang, and R. Saravanan, 2022: Modeling Atmospheric Dust Particle Optical Properties Using the Triangular Bipyramid Shape, AMS 102th Annual Meeting, Houston, TX & Online, 23-27 January.
- Coy, J., **J. Ding**, T. Ren, P. Yang, and K. Garrett, 2022: New Optical Property Databases for the Accurate Representation of Snow and Graupel Particles, AMS 102th Annual Meeting, Houston, TX & Online, 23-27 January.

- Zhang, Y., **J. Ding**, P. Yang, and R. L. Panetta, 2022: Improved Truncation Criteria of the Invariant-Embedding T-Matrix Method for Nonspherical Particles, AMS 102th Annual Meeting, Houston, TX & Online, 23-27 January.
- Silber, I., R. Jackson, A. Fridlind, A. Ackerman, S. M. Collis, J. Verlinde, and **J. Ding**, 2021: The Earth Model Column Collaboratory (EMC²) Ground-Based Lidar and Radar Instrument Simulator and Subcolumn Generator for Large-Scale Models, AGU Fall Meeting, New Orleans, LA & Online, 13-17 December.
- Okeudo, N., **J. Ding**, P. Yang, and R. Saravanan, 2021: Edge Effect Correction Formula to the Physical Geometric Optics Method Using the Debye Series for Spheres in the Case of Aggregates, AGU Fall Meeting, New Orleans, LA & Online, 13-17 December.
- Coy, J., M. Saito, **J. Ding**, and P. Yang, 2021: A Single-Scattering Optical Property Database for the Improvement of Downstream Lidar Calculations, AGU Fall Meeting, New Orleans, LA & Online, 13-17 December.
- Zhang, Y., **J. Ding**, P. Yang, and R. L. Panetta, 2021: Zhang, Y., J. Ding, P. Yang, and R. L. Panetta, 2021: Vector Spherical Harmonics Expansion Truncation in the Invariant Imbedding T-matrix Method, AGU Fall Meeting, New Orleans, LA & Online, 13-17 December.
- **Ding, J.**, and P. Yang, 2021: Jacobian Computation in Vector Radiative Transfer Model of the Atmosphere-Ocean System, AGU Fall Meeting, New Orleans, LA & Online, 13-17 December.
- **Ding, J.**, P. Brown, L. Wang, N. Suntzeff, and P. Yang, 2021: Interstellar Dust Extinction Constrained by Photometry and Polarimetry of Type Ia Supernova, Texas A&M Astrosymposium 2021, Online, 27 August.
- Zhang, Y., **J. Ding**, P. Yang, and R. L. Panetta, 2021: Vector Spherical Harmonics Expansion Truncation in the Invariant Imbedding T-matrix Method, The 19th Electromagnetic and Light Scattering Conference, Online, 12-16 July.
- Okeudo, N., **J. Ding**, P. Yang, and R. Saravanan, 2021: Edge Effect Correction to the Physical Geometric Optics Method (PGOM) Using the Debye Series for Super-Spheroid Non-Spherical Particles, The 19th Electromagnetic and Light Scattering Conference, Online, 12-16 July.
- **Ding, J.**, and P. Yang, 2021: Development of Jacobian Computational Capability in Vector Radiative Transfer Model, The 19th Electromagnetic and Light Scattering Conference, Online, 12-16 July.
- Yang, P., **J. Ding**, M. Saito, J. Coy, and R. L. Panetta, 2021: Simulations of the Optical Properties of Nonspherical Dielectric Particles in the Atmosphere, IEEE IGARSS 2021, Online, 11-16 July.
- Silber, I., R. Jackson, A. Ackerman, A. M. Fridlind, S. M. Collis, J. Verlinde, and **J. Ding**, 2021: Using the Earth Model Column Collaboratory (EMC²) Ground-Based Lidar and Radar Forward Simulator and Subcolumn Generator to Test a Global Climate Model, 2021 Joint ARM User Facility and ASR PI Meeting, Online, 21-24 June.
- Yang, P., T. Ren, J. Coy, **J. Ding**, and M. Saito, 2021: Databases of the optical properties of snow, graupel, ice clouds, and dust aerosol in support of CRTM, 18th JCSDA Technical Review Meeting and Science Workshop, Online, 7-11 June.
- Coy, J., M. Saito, **J. Ding**, and P. Yang, 2021: A New Database for the Optical Properties of Ice Crystals, AMS 101th Annual Meeting, Online, 10-15 January.

- Zhang, Y., **J. Ding**, and P. Yang, 2021: Convergence problems of invariant-imbedded T-Matrix method for particles with arbitrary shapes, AMS 101th Annual Meeting, Online, 10-15 January.
- Okeudo, N., **J. Ding**, P. Yang, R. Saravanan, 2021: Simulating Faceted Atmospheric Dust Particles with the Physical Geometric Optics Method and the Debye Series, AMS 101th Annual Meeting, Online, 10-15 January.
- Ren, T., **J. Ding**, and P. Yang, 2021: Modeling the Optical Properties of Snow and Graupel Particles, AMS 101th Annual Meeting, Online, 10-15 January.
- **Ding, J.**, and P. Yang, 2021: A Multiple Scattering Jacobian Computational Approach in a Vector Radiative Transfer Model, AMS 101th Annual Meeting, Online, 10-15 January.
- Okeudo, N., **J. Ding**, P. Yang, R. Saravanan, 2020: Edge Effect Correction to the Physical Geometric Optics Method in the Case of a Hexagonal Column, AGU Fall Meeting, Online, 1-17 December.
- Zhang, Y., **J. Ding**, and P. Yang, 2020: Investigation of invariant-imbedding T-Matrix method computational efficiency for particles with complicated geometries, AGU Fall Meeting, Online, 1-17 December.
- Coy, J., M. Saito, **J. Ding**, and P. Yang, 2020: Improvements to the Two-Habit Model Single-Scattering Database: Irregular Hexagonal Column Ensemble, New Size Characterization, and Improved Backscattering, AGU Fall Meeting, Online, 1-17 December.
- **Ding, J.** P. Yang, and E. J. Mlawer, 2020: An Improved Two-Stream Radiative Transfer Scheme Using Small-Angle Approximation for Multiple Scattering Computation in a Cloudy Atmosphere, AGU Fall Meeting, Online, 1-17 December.
- **Ding, J.**, L. Wang, and P. Yang, 2020: Automatic Pixel-by-pixel Contrail Cloud Detections, Texas A&M Scientific Machine Learning (SciML) Workshop, Online, 27 October.
- **Ding, J.**, L. Wang, Peter Brown and P. Yang, 2020: Radiative Transfer Modeling of An SN1987A Light Echo-AT2019xis, The Rise of Metals and Dust in Galaxies through Cosmic Time, Online, 27 October.
- **Ding, J.** and P. Yang, 2020: Modeling the optical properties of graupel, hailstone and snowflake with varied shapes and density, Texas A&M 4th Annual Postdoctoral Research Symposium, Online, 18 September.
- Coy, J., M. Saito, T. Ren, **J. Ding**, and P. Yang, 2020: Updates on a two-habit model for the optical properties of ice clouds, 34rd CERES-II Science Team Meeting, Online, 15-17 September.
- **Ding, J.**, L. Wang, and P. Yang, 2020: Radiative Transfer Modeling of An SN1987A Light Echo-AT2019xis, Texas A&M Astrosymposium 2020, Online, 17 August.
- Coy, J. **J. Ding**, M. Saito, and P. Yang, 2020: Progress in simulating the optical properties of ice clouds and graupel/Snow in support of the CERES Science Team, 33rd CERES-II Science Team Meeting, Online, 28-30 April 2020.
- Okeudo, N., **J. Ding**, P. Yang, and R. Saravanan, 2020: A Study of the Physical Geometric Optics Method In the Case of a Spheroid, AMS 100th Annual Meeting, Boston, MA, 12-16 January 2020.
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