

# Recent Publications

(Alphabetized by lead author; EMC authors in boldface)

2021

**Abdolali, A., Van Der Westhuysen, A., Ma, Z., Mehra, A.,** Roland, A., and Moghimi, S., 2021: Evaluating the accuracy and uncertainty of atmospheric and wave model hindcasts during severe events using model ensembles. *Ocean Dynamics*, **71**, 19 pp. <https://doi.org/10.1007/s10236-020-01426-9> or <https://rdcu.be/cdfjB>

Hazelton, A., **Z. Zhang, B. Liu, J. Dong,** G. Alaka, **W. Wang,** T. Marchok, **A. Mehra,** S. Gopalakrishnan, X. Zhang, M. Bender, **V. Tallapragada,** and F. Marks, 2021: 2019 Atlantic Hurricane Forecasts from The Global-Nested Hurricane Analysis and Forecast System: Composite Statistics and Key Events. *Wea. Forecasting*, **36**, <https://doi.org/10.1175/WAF-D-20-0044.1>

Qian, W.H., **J. Du,** and Y. Ai, 2021: A Review: anomaly-based versus full-field based weather analysis and forecasting. *Bull. Amer. Meteor. Soc.*, **102**, DOI: <https://doi.org/10.1175/BAMS-D-19-0297.1>

2020

**Abdolali, A.,** Roland, A., **Van Der Westhuysen, A., Meixner, J., Chawla, A.,** Hesser, T., Smith, J.M. and M. Dutour Sikiric, 2020, Large-scale Hurricane Modeling Using Domain Decomposition Parallelization and Implicit Scheme Implemented in WAVEWATCH III Wave Model, *Coastal Engineering*, **157**, 103656, <https://doi.org/10.1016/j.coastaleng.2020.103656>

Alaka Jr., G.J., **D. Sheinin, B. Thomas,** L. Gramer, **Z. Zhang, B. Liu, H.-S. Kim and A. Mehra,** 2020: A Hydrodynamical Atmosphere/Ocean Coupled Modeling System for Multiple Tropical Cyclones. *Atmosphere*, **11**, 22 pp. <https://www.mdpi.com/2073-4433/11/8/869/pdf>

Bakhtyar, R., K. Maitaria, P. Velissariou, B. Trimble , H. Mashriqui, S. Moghimi, **A. Abdolali, A.J. Van der Westhuysen, Z. Ma,** T. Flowers (2020), A new 1D/2D Coupled Modeling Approach for a Riverine-Estuarine System under Storm Events: Application to Delaware River Basin, *Journal of Geophysical Research: Oceans*, <https://doi.org/10.1029/2019JC015822>

**Black, T.,** 2020: A documentation of the NMMB's nesting capabilities and mechanisms. NOAA/NCEP Office Note 503. <https://repository.library.noaa.gov/view/noaa/23887>

Campos, R. M., **V. Krasnopolsky, J.-H. Alves**, S. G. Penny, 2020: Improving NCEP's global-scale wave ensemble averages using neural networks. *Ocean Modelling*, **149**, May 2020, <https://doi.org/10.1016/j.ocemod.2020.101617>

Cangialosi, J. P., E. Blake, M. DeMaria, A. Penny, A. Latta, E. Rappaport, and **V. Tallapragada**, 2020: Recent Progress in Tropical Cyclone Intensity Forecasting at the National Hurricane Center. *Wea. Forecasting*, **35**, 1913-1922. <https://doi.org/10.1175/WAF-D-20-0059.1>

Chen, J., J. Z. Wang, **J. Du**, 2020: Forecast bias correction through model integration: A dynamical wholesale approach. *Quart. J. Roy. Meteor. Soc.*, **146**, 1149-1168, <https://doi.org/10.1002/qj.3730>.

**Dong, J., B. Liu, Z. Zhang, W. Wang, A. Mehra, A.T. Hazelton, H.R. Winterbottom, L. Zhu, K. Wu, C. Zhang, V. Tallapragada**, X. Zhang, S. Gopalakrishnan, F. Marks, 2020: The Evaluation of Real-Time Hurricane Analysis and Forecast System (HAFS) Stand-Alone Regional (SAR) Model Performance for the 2019 Atlantic Hurricane Season. *Atmosphere* 2020, **11**, 617. <https://doi.org/10.3390/atmos11060617>

Hao, Z., W. Li, V. P. Singh, **Y. Xia**, X. Zhang, and F. Hao, 2020: Impact of dependence changes on the likelihood of hot extremes under drought conditions in the United States, *J. Hydrol.*, **581**, 124410, <https://doi.org/10.1016/j.jhydrol.2019.124410>.

He, X., T. Xu, **Y. Xia**, S. M. Bateni, Z. Guo, S. Liu, K. Mao, Y. Zhang, H. Feng, and J. Zhao, 2020: Bayesian Three-Cornered Hat (BTCH) Method: Improving the Terrestrial Evapotranspiration Estimation. *Remote Sens.*, **12**, 878. <https://doi.org/10.3390/rs12050878>

Hristova-Veleva, S. M., P. P. Li, B. Knosp, Q. Vu, F. J. Turk, W. L. Poulsen, Z. Haddad, B. Lambrigtsen, B. W. Stiles, T.-P. Shen, N. Niamsuwan, S. Tanelli, O. Sy, E.-K. Seo, H. Su, D. G. Vane, Yi Chao, P. S. Callahan, R. S. Dunbar, M. Montgomery, M.Boothe, **V. Tallapragada**, S. Trahan, A. J. Wimmers, R. Holz, J. S. Reid, F. Marks, T. Vukicevic, S. Bhalachandran, H. Leighton, S. Gopalakrishnan, A. Navarro, and F. J. Tapiador, 2020: An Eye on the Storm: Integrating a Wealth of Data for Quickly Advancing the Physical Understanding and Forecasting of Tropical Cyclones. *Bull. Amer. Meteor. Soc.*, **101**, E1718-E1742. <https://doi.org/10.1175/BAMS-D-19-0020.1>

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**Liu, Q.**, X. Zhang, M. Tong, **Z. Zhang, B. Liu, W. Wang, L. Zhu**, B. Zhang, X. Xu, S. Trahan, L. Bernardet, **A. Mehra**, and **V. Tallapragada**, 2020: Vortex Initialization in the NCEP Operational Hurricane Models. *Atmosphere*, 11(9), <https://www.mdpi.com/2073-4433/11/9/968/pdf>

**Ma, Z., Liu, B., Mehra, A.; Abdolali, A., van der Westhuysen, A., Moghimi, S.;** Vinogradov, S., **Zhang, Z., Zhu, L., Wu, K., Shrestha, R.;** Kumar, A., **Tallapragada, V.,** Kurkowski, N., 2020: Investigating the Impact of High-Resolution Land–Sea Masks on Hurricane Forecasts in HWRF. *Atmosphere* 2020, 11(9), 888, <https://doi.org/10.3390/atmos11090888>

Moghimi, S.; **Van der Westhuysen, A., Abdolali, A.;** Myers, E.; Vinogradov, S.; **Ma, Z.;** Liu, F.; **Mehra, A.;** Kurkowski, N. (2020), Development of an ESMF Based Flexible Coupling Application of ADCIRC and WAVEWATCH III for High Fidelity Coastal Inundation Studies. *J. Mar. Sci. Eng.* 2020, 8, 308. <https://doi.org/10.3390/jmse8050308>

**Morris, M. T., J. R. Carley, E. Colón, A. Gibbs, M. S. F. V. De Pondeca, and S. Levine,** 2020: A Quality Assessment of the Real-Time Mesoscale Analysis (RTMA) for Aviation. *Wea. Forecasting*, **35**, 977–996, <https://doi.org/10.1175/WAF-D-19-0201.1>.

Potvin, C.K., **J.R. Carley**, A.J. Clark, L.J. Wicker, P.S. Skinner, A.E. Reinhart, B.T. Gallo, **J.S. Kain**, G.S. Romine, **E.A. Aligo**, K.A. Brewster, D.C. Dowell, L.M. Harris, I.L. Jirak, F. Kong, T.A. Supinie, K.W. Thomas, X. Wang, Y. Wang, and M. Xue, 2019: Systematic Comparison of Convection-Allowing Models during the 2017 NOAA HWT Spring Forecasting Experiment. *Wea. Forecasting*, **34**, 1395–1416, <https://doi.org/10.1175/WAF-D-19-0056.1>.

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**Zhang, Z.**, M. Tong, J. A. Sippel, **A. Mehra**, B. Zhang, **K. Wu**, **B. Liu**, **J. Dong**, **Z. Ma**, **H. Winterbottom**, **W. Wang**, **L. Zhu**, **Q. Liu**, **H.-S. Kim**, **B. Thomas**, **D. Sheinin**, **L. Bi**, and **V. Tallapragada**, 2020 : The Impact of Stochastic Physics-Based Hybrid GSI/EnKF Data Assimilation on Hurricane Forecasts Using EMC Operational Hurricane Modeling System, *Atmosphere*, **11**, 20 pp. <https://www.mdpi.com/2073-4433/11/8/801/pdf>

## 2019

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