

# Recent Publications (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>

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>

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**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>

**Ma, Z., Liu, B., Mehra, A.; Abdolali, A., van der Westhuisen, 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,  
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Moghimi, S.; **Van der Westhuisen, 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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**Yang, R., R. J. Purser, J. R. Carley, M. Pondeca, Y. Zhu, and S. Levine**, 2020: Application of a Nonlinear Transformation Function to the Variational Analysis of Visibility and Ceiling Height. NCEP Office Note 502. 36 pp.  
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Zhang, B., **Y. Xia**, B. Long, M. Hobbins, X. Zhao, C. Hain, Y. Li, and M. Anderson, 2020: Evaluation and comparison of multiple evapotranspiration data models over the contiguous United States: Implications for the next phase of NLDAS (NLDAS-Testbed) development, *Agri. Forest Meteor.*, **280**,  
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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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Lynn K. Shay, Travis Miles, Scott Glenn, Jun A. Zhang, Steven Robert Jayne, Luca R Centurioni, Matthieu Le Hénaff, Gregory Foltz, Francis Bringas, MM Ali, Steven DiMarco, Shigeki Hosoda, Takuya Fukuoka, Benjamin LaCour, **Avichal Mehra**, Elizabeth R. Sanabia, John R. Gyakum, **Jili Dong**, John Knaff, Gustavo Jorge Goni, 2019: Ocean Observations in Support of Studies and Forecasts of Tropical and Extratropical Cyclones, *Frontiers in Marine Science*.  
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**Guan, H., Y. Zhu, E. Sinsky, W. Li, X. Zhou, D. Hou, C. Melhauser and R. Wobus**, 2019: Systematic Error Analysis and Calibration of 2-m Temperature for the NCEP GEFS Reforecast of SubX Project. *Wea. Forecasting*, **34**, 361–376.  
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