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COMMITTEE ROLE:

- **Hurricane Forecast Improvement Project (HFIP)** – Ocean Model Impact Tiger Team (OMITT), 2014 – 2018
- **2016 Ocean Sciences Meeting** – Understanding Air-Sea Coupling in Tropical Cyclones for Improving Model Intensity Forecasts, 2016
- **GOMO Extreme Events-Ocean Observation Task Team (EEOOTT)**: Oct 2019 – present
- **GOOS-Ocean Observing Co-Design: TC Exemplar**: May 2022 – present
- **NOAA Modeling Board (NMB) Model Strategy Working Group**: May 2022 – present
- **NMB Operational Ocean Forecasting Working Group**: Jun 2022 - present

TEAM ROLE:

- **Advancement of coupled hurricane-ocean modeling system HAFS (Hurricane Analysis and Forecast System);**
- **Transition HWRF and HMON to operation each year since 2014 and 2017, respectively**

NUMERICAL MODELS TRANSITION TO OPERATIONAL:

- **Coupled HWRF** (Hurricane Weather Research Forecasting),
- **Coupled HMON** (Hurricanes in a Multi-scale Ocean-coupled Non-hydrostatic)

EDUCATION:

Ph.D., Physical Oceanography, University of Rhode Island, 1994
M.S., Physical Oceanography, University of Rhode Island, 1991

SELECTED PEER REVIEW PUBLICATIONS

Kim, H.-S., J. Meixner, B. Thomas, B. Reichl, B. Liu, A. Mehra and A. Wallcraf, 2022: Skill Assessment of NCEP Three-way Coupled HWRF-HYCOM-WW3 Modeling System: Hurricane Laura Case Study. *Wea. Forecasting.* https://doi.org/10.1175/WAF-D-21-0191.1

Liu, L. A. Mehra, D. Kleist, G. Vernieres, T. Sluka, K. Bhargava, P. Stegmann, H.-S. Kim, S. Paturi, J. Xu, and I. Rivin, 2022: Impact of assimilating satellite and glider observations on Hurricane Isaias (2020) forecasting using marine JEDI. Weat. Forecasting (in review).

Chiodi, A., H. Hristova, G. Foltz, J. Zhang, C. Mordy, C. Edwards, C. Zhang, C. Meinig, D. Zhang, E. Mazza, E. Cokelet, E. Burger, F. Bringas, G. Goni, H.-S. Kim, J. Trinanes, K.

Bailey, K. O'Brien, M. Morales-Caez, N. Lawrence-Slava, S. Chen and X. Chen, 2020: Surface ocean warming in the core of Hurricane Sam and its representation in forecast models. Geophysical Research Letters (submitted).

Zhang, C. G.R. Foltz, A. Chiodi, C. Mordy, C. R. Edwards, C. Meinig, D. Zhang, E. Mazza, E. Cokelet, E. Burger, F. Bringas, G. Goni, H. Hristova, H.-S. Kim, J. Trinanes, J. A. Zhang, K. Bailey, K. O'Brien, M. Morales-Caez, N. Lawrence-Slavas, R. Jenkins, S. S. Chen, X. Chen, 2022: Surveillance of Hurricanes using Unscrewed Systems. BAMS (in review).

Zhang, Z., M. Tong, J. 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*(8), p.801.

Domingues, R., M. Le Hénaff, G. Halliwell, J. A. Zhang, F. Bringas, P. Chardon; H.-S. Kim, J. Morell, and G. Goni. 2020: The Impact of Ocean Conditions on the Intensification and Forecasts of three Major Atlantic Hurricanes from 2017. *Monthly Weather Review* (MWR-D-20-0100).

Domingues, R., Kuwano-Yoshida, A., Chardon-Maldonado, P., Todd, R. E., Halliwell, G., Kim, H., Lin, I., Sato, K., Narazaki, T., Shay, L. K., Miles, T., Glenn, S., Zhang, J. A., Jayne, S. R., Centurioni, Le Henaff, M., Foltz, G. R., Bringas, F., Ali, M. M., DiMarco, S. F., Hosoda, S., Fukuoka, T., LaCour, B., Mehra, A., Sanabia, E. R., Gyakum, J. R., Dong, J., Knaff, J. A., & Goni, G., 2019: Ocean observations in support of studies and forecasts of tropical and extratropical cyclones. *Frontiers in Marine Science*, 6, 446.

Mehra, A., Tallapragada, V., Zhang, Z., Liu, B., Zhu, L., Wang, W. and Kim, H.S., 2018: Advancing the state of the art in operational tropical cyclone forecasting at NCEP. *Tropical Cyclone Research and Review*, *7*(1), pp.51-56.

Goni, G., R.E. Todd, S.R. Jayne, G. Halliwell, S. Glenn, J. Dong, R.Curry, R. Dominques, F. Bringas, L. Centurioni, S. F. DiMarco, T. Miles, J. Morell, L. Pomales, **H.-S. Kim**, P.E. Robbins, G. G. Gawarkiewicz, J. Wilkin, J. Heiderich, B. Baltes, J.J. Cione, G. Seroka, K. Knee, and E.R. Sanabia, 2017: Autonomous and Lagrangian Ocean Observations for Atlantic Tropical Cuclone Studies and Forecasts. *Oceanography*, June 2017, 84-95.

Halliwell, G.R., M. Mehari, L.K. Shay, V.H. Kourafalou, H. Kang, **H.-S. Kim**, J. Dong, and R. Atlas, 2017: OSSE quantitative assessment of rapid-response prestorm ocean surveys to improve coupled tropical cyclone prediction. J. Geophys. Res. Oceans, 122, doi:10.1002/2017JC-12760.

Dong, J., R. Domingues, G. Goni, G. Halliwell, **H. Kim**, S. Lee, M. Mehari, F.Bringas, J. Morell, and L. Pomales, 2017: Impact of assimilating underwaterglider data on Hurricane Gonzalo (2014) forecast. Wea. Forecasting. doi:10.1175/WAF-D-16-0182.1.

Domingues, R., G. Goni, F. Bringas, S.-K. Lee, **H.-S. Kim**, G. Halliwell, J. Dong, J. Morell, and L. Pomales, 2015: Upper-ocean response to Hurricane Gonzalo (2014): salinity effects revealed by sustained and targeted observations from underwater gliders. Geophysical Res. Lett.

Kim, H-S., C. Lozano, V. Tallapragada, D. Iredell, , D. Sheinin, H. L. Tolman, V. M. Gerald, and J. Sims, 2014: Performance of Ocean Simulations in the Coupled HWRF-HYCOM Model. Journal of Atmospheric and Oceanic Technology, 2, 545-559.

Gangopadhyay, A., P. F. J. Lermusiaux, L. Rosenfeld, A. R. Robinson, L. Calado, **H.-S. Kim**, W. G.Leslie, and P. J. Haley Jr., 2011: The California Current System: A multiscale overview and the development of a feature-oriented modeling system (FORMS). Dynam. Atmos. Oceans. 52, 131-169.

Bisagni, J. J., **H.-S. Kim**, and A. Chaudhuri, 2009. Interannual Variability of the Shelf-Slope front Position Between 75° and 50°W. *Journal of Marine Systems*. 337-350.

Kim, H.-S., A. Gangopadhyay, L. K Rosenfeld, and F. Bub, 2007. Developing a High-Resolution Climatology for the Central California Coastal Region. *Continental Shelf Research.* 27: 2135-2161

Bisagni, J. J., **H.-S. Kim**, and K. F. Drinkwater, 2006. Observations and modeling of shelf-slope front seasonal variability between 75° and 50°W. *Deep-Sea Res. II*, 53(23-24):2477-2500.

Swanson, J. C., **H.-S. Kim**, and S. Sankaranarayanan, 2006. Modeling of Temperature Distributions in Mount Hope Bay Due to Thermal Discharges from the Brayton Point Station. *Northeastern Nationalist*, 13, Special Issue 4, 145-172.

Kim, H.-S. and J. C. Swanson, 2001. Modeling of double flood currents in the Sakonnet River. *Estuarine and Coastal Modeling* (ECM 7), St. Pete Beach, Fl, November 5-7, 2001.

Kim, H.-S., C. N. Flagg, and S. D. Howden, 2001. Northern Arabian Sea Variability from TOPEX/Poseidon Altimetry Data, An Extension of the JGOFS/ONR Shipboard ADCP study. *Deep Sea Research II*, 48:1069-1096.

Bohm, E., M. Morrison, V. J. A. Manghani, **H.-S. Kim**, and C. N. Flagg, 1999. Remotely sensed and acoustic Doppler observations of the Ras al Hadd jet in 1994-1995. *Deep-Sea Research* II, 46:1531-1549.

Flagg, C. N., and **H.-S. Kim**, 1998. Upper ocean currents in the northern Arabian Sea from ADCP measurements during the 1994-1996 JGOFS program. *Deep-Sea Research* II, 45:1917-1959.