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The Investigation of Wind Waves in Persian Gulf by Multi-level Long-term Hindcasts and In-situ Measurements YING-PO LIAO, Zachry Department of Civil Engineering, Texas A&M University, College Station TX, USA, ARINDAM SINGHA, Department of Mechanical Engineering, Texas A&M University, Education City, Doha, Qatar, JAMES M. KAIHATU, Zachry Department of Civil Engineering, Texas A&M University, College Station TX, USA, REZA SADR, Department of Mechanical Engineering, Texas A&M University, Education City, Doha, Qatar — In this study, we employ both numerical and experimental methodologies to investigate the spatially and seasonally varying wind-wave features in the Persian Gulf and near Qatar due to the seasonal shamal. We perform a multi-level nested long-term wave hindcast using the SWAN wave model and five years of wind data from COAMPS (2004-2008), with emphasis on the area near Doha Port. A weather station, a stack of anemometers, and two video cameras are installed at Doha Port and will measure wind velocity profiles and wave kinematics/dynamics. These will be used to validate the climatology, as well as providing new insights into the physics of wind wave generation.

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