

Curriculum Vitae  
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**KYEONG PARK**

Department of Marine and Coastal Environmental Science  
Texas A&M University at Galveston  
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**EDUCATION**

B.S. (1985) in Mineral and Petroleum Engineering, Seoul National University (Korea)  
M.S. (1987) in Marine Environmental Sciences, State University of New York at Stony  
Brook, NY  
Ph.D. (1993) in Marine Science, College of William and Mary, VA

**ACADEMIC POSITIONS**

***Primary Appointments***

Professor and Department Head (2020-present), Department of Marine and Coastal  
Environmental Science, Texas A&M University at Galveston (TAMUG), TX  
Professor and Department Head (2014-2020), Department of Marine Sciences, TAMUG,  
TX (Tenured: September 3, 2014)  
Professor (2012-2014), Department of Marine Sciences, University of South Alabama, AL  
Associate Professor (2003-2012), Department of Marine Sciences, University of South  
Alabama, AL (Tenured: August 15, 2006)  
Senior Marine Scientist (2003-2014), Dauphin Island Sea Lab, AL  
Associate Professor (1999-2003), Department of Oceanography, Inha University, Korea  
Assistant Professor (1995-1999), Department of Oceanography, Inha University, Korea

***Other Appointments***

Graduate Faculty (2015-P), Marine Biology-IDP, Texas A&M University at Galveston, TX  
Graduate Faculty (2014-P), Department of Oceanography, Texas A&M University, TX  
Visiting Scientist (May-August 2014), Department of Environmental Engineering,  
Chungnam National University, Korea: Brain Pool Program of the National Research  
Foundation (NRF) of Korea  
Affiliate Professor (2013-2014), School of Fisheries, Aquaculture, and Aquatic Sciences,  
Auburn University, AL  
Faculty Researcher (2001-2002), School of Marine Science (SMS)/Virginia Institute of  
Marine Science (VIMS), College of William and Mary (CWM), VA  
Visiting Research Associate Professor (2000-2001), SMS/VIMS, CWM, VA  
Visiting Scientist (January-February 1999), SMS/VIMS, CWM, VA  
Post Doctoral Research Associate (1993-1995), SMS/VIMS, CWM, VA

## RESEARCH INTERESTS

Observational and modeling studies of physical transport processes (residual circulation, scalar transport, turbulent mixing, wind-driven flow, estuary-shelf exchange, estuarine plume dynamics, along-shelf and across-shelf transport, bottom boundary layer dynamics, sediment transport, etc.) in tidal rivers, estuaries and coastal seas

Modeling studies of water quality (anoxia/hypoxia, eutrophication, pollutant dispersion, etc.) and living resources (larval transport, etc.) in tidal rivers, estuaries and coastal seas

## EXPERIENCE (since 2010)

Member (2020-2021), Science & Technology Committee for White Paper on the U.S. Beach Water Quality Monitoring, American Shore and Beach Preservation Association (ASBPA)

Panelist (2019), 2019 Regional Ocean Acidification Observing Optimization Study (OOS-OA19), April 30 - May 2, 2019, Washington, D.C.

Consultant (2017-2018), Review of the *Four Major Rivers Restoration Project* by Korea National Institute of Environmental Research, The Board of Audit and Inspection of Korea

Member (2017-2018), Review Committee, *Development of Integrated Estuarine Management System*, Myoungji University, Korea

Candidate (2/24/2017-2/24/2020), Fulbright Specialist Roster

Panelist (2015), Workshop on Environmental and Ecological Modeling in terms of Coastal Environmental Management in Geum River Estuary, Korea (hosted by Myongji University), April 30, 2015, Seoul National University, Korea

Member (2014), Organizing Committee, GCOOS Ecological Modeling Workshop, Houston, TX, April 7-9, 2014

Panelist (2013-2014), 2014 NSF Graduate Research Fellowship Program (GRFP)

Member (2012-2014), GCOOS (Gulf of Mexico Coastal Ocean Observing System) Modeling Task Team

Member (2012-2014), Team for the Development of an Ocean Monitoring System for the Five Gulf States, GOMURC (Gulf of Mexico University Research Collaborative)

Lecturer (2012), 2012 GGSG Intensive Course on Estuarine Dynamics: *Importance of Water Column Stratification on Material Transport in Estuarine and Coastal Environment*, May 29, 2012 (4-hr lecture), Gyeong-Gi Sea Grant Program, Inha University and Ministry of Land, Transport and Maritime Affairs, Korea

Member (2012), Review Committee for Mobile Bay Hydrodynamic and Water Quality Model, Mobile Bay National Estuary Program

Member (2012), Evaluation Committee, *Environmental Impact Assessment for Construction of a Tidal Power Plant in Karolim Bay, Korea*, Korea Environment Institute, Seoul, Korea

Member (2011), Advisory Committee for Development of DO Criteria, Florida Department of Environmental Protection

Lecturer (2011), 2011 GGSG Intensive Course on Estuarine Dynamics: *Water Quality Modeling in Coastal and Estuarine Waters*, Jul 27-28, 2011 (14-hr lecture over 2 days),

Gyeong-Gi Sea Grant Program, Inha University and Ministry of Land, Transport and Maritime Affairs, Korea  
Chair (2010-2011), Gulf of Mexico Research Initiative: *MESC study on the Impacts of the Deepwater Horizon events on Alabama's coastal resources - Theme #2: Physical distribution, dispersion and dilution of contaminants under the action of ocean currents and tropical storms*, Marine Environmental Sciences Consortium, Dauphin Island, AL  
Member (2010-2011), Advisory and Evaluation Committee, *Study of Development of USN Ocean Cluster for Coastal Waters: a Case Study for Sounchun Bay*, Korea Hydrographic and Oceanographic Administration, Incheon, Korea

## ADVISING STUDENTS

As advisor/mentor:

Four Ph.D. and 11 M.S. students, and four post-docs

Five REUs (Research Experiences for Undergraduates, NSF) and one undergraduate research fellow

Committee member or external examiner:

23 Ph.D. and 21 M.S. students

## COURSES TAUGHT

Graduate      *Physical Oceanography, Estuarine and Coastal Hydrodynamics, Application of Estuarine and Coastal Hydrodynamics, Estuarine and Coastal Water Quality Modeling, and Biological-Physical Interactions in the Sea*

Undergraduate      *Introductory Physical Oceanography, Introduction to Estuarine and Coastal Hydrodynamics, Introduction to Tides and Waves, Introduction to Applied Physical Oceanography, Introductory Geophysical Fluid Dynamics, Oceanographic Experiences, Seminar in Marine Science, and Marine Science Matters*

## DISSERTATION AND THESIS

**Park K** (1987) Leaching behavior of incineration residues from municipal solid wastes. M.S. Thesis, Marine Sciences Research Center, State University of New York at Stony Brook, Stony Brook, NY (advisor: Frank J. Roethel).

**Park K** (1993) A model study of hydrodynamic and water quality characteristics of the Rappahannock Estuary, Virginia. Ph.D. Dissertation, School of Marine Science/Virginia Institute of Marine Science, College of William and Mary, Gloucester Point, VA (advisor: Albert Y. Kuo).

## PEER-REVIEWED PUBLICATIONS IN JOURNALS / BOOKS

: Name indicates author was a student or a post-doc of mine at the time of research.

: [CA] indicates corresponding author.

- 1) Kuo AY, **Park K**, Moustafa MZ (1991) Spatial and temporal variabilities of hypoxia in the Rappahannock River. *Estuaries*, 14(2), 113-121.
- 2) Kuo AY, **Park K** (1992) Transport of hypoxic waters: An estuary-subestuary exchange. In: *Dynamics and Exchanges in Estuaries and the Coastal Zone* (Prandle D, ed.), Coastal and Estuarine Studies 40, AGU, Washington, DC, pp. 599-615.
- 3) **Park K**, Kuo AY (1994) Numerical modeling of advective and diffusive transport in tidal Rappahannock Estuary, Virginia. In: *Estuarine and Coastal Modeling III* (Spaulding ML, Bedford KW, Blumberg AF, Cheng RT, Swanson JC, eds.), ASCE, NY, pp. 461-474.
- 4) Kuo AY, **Park K** (1995) A framework for coupling shoals and shallow embayments with main channels in numerical modeling of coastal plain estuaries. *Estuaries*, 18(2), 341-350.
- 5) **Park K** (1996) Concept of surface water quality modeling in tidal rivers and estuaries. *Environmental Engineering Research*, 1(1), 1-13.
- 6) **Park K**, Kuo AY (1996) A multi-step computation scheme decoupling kinetic processes from physical transport in water quality models. *Water Research*, 30(10), 2255-2264.
- 7) **Park K**, Kuo AY (1996) Effect of variation in vertical mixing on residual circulation in narrow, weakly nonlinear estuaries. In: *Buoyancy Effects on Coastal and Estuarine Dynamics* (Aubrey DG, Friedrichs CT, eds.), Coastal and Estuarine Studies 53, AGU, Washington, DC, pp. 301-317.
- 8) **Park K**, Kuo AY, Neilson BJ (1996) A numerical model study of hypoxia in the tidal Rappahannock River of Chesapeake Bay. *Estuarine, Coastal and Shelf Science*, 42(5), 563-581.
- 9) **Park K**, Kuo AY (1997) Calibration and verification of a tidal prism eutrophication model for the Lynnhaven Bay (U.S.A). *Journal of the Korean Fisheries Society*, 30(6), 964-973.
- 10) Kim S-C, Chen J, **Park K**, Choi J-K (1998) Coastal surges from extratropical storms on the west coast of the Korean Peninsula. *Journal of Coastal Research*, 14(2), 660-666.
- 11) **Park K**, Oh J-H (1998) Calibration and verification of a hydrodynamic model in Chunsu Bay and adjacent coastal water. *Journal of Korean Society of Coastal and Ocean Engineers*, 10(3), 109-119.
- 12) **Park K**, Shen J, Kuo AY (1998) Application of a multi-step computation scheme to an intratidal estuarine water quality model. *Ecological Modelling*, 110(3), 281-292.
- 13) Kim NY, Kim K-H, **Park K** (1999) Distribution characteristics of major water quality parameters in the Kyung Gi Bay, Yellow Sea. *Journal of the Korean Earth Science Society*, 20(5), 564-579. [in Korean with English abstract]
- 14) Kim CK, Chang KI, **Park K**, Suk MS (2000) The South Sea circulation of Korea: two-dimensional barotropic model. *The Sea, Journal of the Korean Society of Oceanography*, 5(4), 257-266. [in Korean with English abstract]
- 15) Kim K-H, Kim NY, **Park K** (2000) Factors controlling geochemical behavior of water quality parameters - case study of Kyunggi Bay, Yellow Sea. *Journal of the Korean Society for Environmental Analysis*, 3(2), 73-83. [in Korean with English abstract]
- 16) Lee K-S, **Park K**, Oh J-H (2000) Development of a three-dimensional, semi-implicit hydrodynamic model with wetting-and-drying scheme. *Journal of Korean Society of Coastal and Ocean Engineers*, 12(2), 70-80. [in Korean with English abstract]
- 17) Song Y-S, Lee JH, **Park K** (2000) Estimation of optimal weight in tidal modeling with the adjoint method. *The Sea, Journal of the Korean Society of Oceanography*, 5(3), 177-185. [in Korean with English abstract]

- 18) **Park K**, Oh J-H, Kim H-S, Im H-H (2002) Case study: Mass transport mechanism in Kyunggi Bay around Han River mouth, Korea. *Journal of Hydraulic Engineering*, 128(3), 257-267.
- 19) Yoo JW, Hong JS, Yang SR, **Park K** (2002) Nitrogen budget analysis using a box model for Hajeon tidal flat in the west coast of Korea. *The Sea, Journal of the Korean Society of Oceanography*, 7(4), 257-266. [in Korean with English abstract]
- 20) Lin J, Wang HV, Oh J-H, **Park K**, Kim S-C, Shen J, Kuo AY (2003) A new approach to model sediment resuspension in tidal estuaries. *Journal of Coastal Research*, 19(1), 76-88.
- 21) **Park K**, Jung H-S, Kim H-S, Ahn S-M (2003) Estuarine and coastal water quality modeling: Concept and a case study in Korea. In: *Determining Environmental Carrying Capacity of Coastal and Marine Areas: Progress, Constraints, and Future Options* (Yu H, Bermas N, eds.), PEMSEA (Programme on Building Partnerships in Environmental Management for the Seas of East Asia), Quezon City, Philippines, pp. 98-114.
- 22) Kuo AY, **Park K** [CA], Kim S-C, Lin J (2005) A tidal prism water quality model for small coastal basins. *Coastal Management*, 33(1), 101-117.
- 23) **Park K**, Jung H-S, Kim H-S, Ahn S-M (2005) Three-dimensional hydrodynamic-eutrophication model (HEM-3D): application to Kwang-Yang Bay, Korea. *Marine Environmental Research*, 60(2), 171-193.
- 24) **Park K**, Kim C-K, Schroeder WW (2007) Temporal variability in summertime bottom hypoxia in shallow areas of Mobile Bay, Alabama. *Estuaries and Coasts*, 30(1), 54-65.
- 25) **Park K**, Valentine JF, Sklenar S, Weis KR, Dardeau MR (2007) The effects of Hurricane Ivan in the inner part of Mobile Bay, Alabama. *Journal of Coastal Research*, 23(5), 1332-1336.
- 26) **Park K**, Wang HV, Kim S-C, Oh J-H (2008) A model study of the estuarine turbidity maximum along the main channel of the upper Chesapeake Bay. *Estuaries and Coasts*, 31(1), 115-133.
- 27) Johnson MW, Powers SP, Senne J, **Park K** (2009) Assessing *in situ* tolerances of Eastern oysters (*Crassostrea virginica*) under moderate hypoxic regimes: Implications for restoration. *Journal of Shellfish Research*, 28(2), 185-192.
- 28) Dzwonkowski B, **Park K** (2010) Influence of wind stress and discharge on the mean and seasonal currents on the Alabama shelf of the northeastern Gulf of Mexico. *Journal of Geophysical Research*, 115, C12052, doi:10.1029/2010JC006449.
- 29) Kim C-K, **Park K**, Powers SP, Graham WM, Bayha KM (2010) Oyster larval transport in coastal Alabama: dominance of physical transport over biological behavior in a shallow estuary. *Journal of Geophysical Research*, 115, C10019, doi:10.1029/2010JC006115.
- 30) Carassou L, Dzwonkowski B, Hernandez FJ, Powers SP, **Park K**, Graham WM, Mareska J (2011) Environmental influences on juvenile fish abundances in a river-dominated coastal system. *Marine and Coastal Fisheries*, 3(1), 411-427, doi:10.1080/19425120.2011.642492.
- 31) Dzwonkowski B, **Park K** [CA], Ha HK, Graham WM, Hernandez FJ, Powers SP (2011) Hydrographic variability on a coastal shelf directly influenced by estuarine outflow. *Continental Shelf Research*, 31(9), 939-950, doi:10.1016/j.csr.2011.03.001.
- 32) Dzwonkowski B, **Park K**, Jiang L (2011) Subtidal across-shelf velocity structure and surface transport effectiveness on the Alabama shelf of the northeastern Gulf of Mexico. *Journal of Geophysical Research*, 116, C10012, doi:10.1029/2011JC007188.

- 33) Ha HK, Maa JP-Y, **Park K**, Kim YH (2011) Estimation of high-resolution sediment concentration profiles in bottom boundary layer using pulse-coherent acoustic Doppler current profilers. *Marine Geology*, 279(1-4), 199-209, doi:10.1016/j.margeo.2010.11.002.
- 34) Jo HR, Lee HJ, **Park K** (2011) Role of winter waves in sand transport at the mouth of Garolim Bay, west coast of Korea. *Geosciences Journal*, 15(4), 379-386, doi:10.1007/s12303-011-0038-4.
- 35) Dzwonkowski B, **Park K** (2012) Subtidal circulation on the Alabama shelf during the Deepwater Horizon oil spill. *Journal of Geophysical Research*, 117, C03027, doi:10.1029/2011JC007664.
- 36) Ha HK, **Park K** (2012) High-resolution comparison of sediment dynamics under different forcing conditions in the bottom boundary layer of a shallow, micro-tidal estuary. *Journal of Geophysical Research*, 117, C06020, doi:10.1029/2012JC007878.
- 37) Kim C-K, **Park K** [CA] (2012) A modeling study of water and salt exchange for a micro-tidal, stratified northern Gulf of Mexico estuary. *Journal of Marine Systems*, 96-97, 103-115, doi:10.1016/j.jmarsys.2012.02.008.
- 38) Kim C-K, **Park K**, Powers SP (2013) Establishing restoration strategy of eastern oyster via a coupled biophysical transport model. *Restoration Ecology*, 21(3), 353-362, doi:10.1111/j.1526-100X.2012.00897.x.
- 39) Lee J, Webb BM, Dzwonkowski B, **Park K**, Valle-Levinson A (2013) Bathymetric influences on tidal currents at the entrance to a highly stratified, shallow estuary. *Continental Shelf Research*, 58, 1-11, doi:10.1016/j.csr.2013.03.002.
- 40) Dzwonkowski B, **Park K**, Lee J, Webb BM, Valle-Levinson A (2014) Spatial variability of flow over a river-influenced inner shelf in coastal Alabama during spring. *Continental Shelf Research*, 74, 25-34, doi:10.1016/j.csr.2013.12.005.
- 41) Jeong YH, Yang JS, **Park K** [CA] (2014) Changes in water quality after the construction of an estuary dam in the Geum River Estuary Dam System in Korea. *Journal of Coastal Research*, 30(6), 1278-1286, doi:10.2112/jcoastres-d-13-00081.1.
- 42) **Park K**, Powers SP, Bosarge GS, Jung H-S (2014) Plugging the leak: Barrier island restoration following Hurricane Katrina enhances habitat quality for oysters in Mobile Bay, Alabama. *Marine Environmental Research*, 94, 48-55, doi:10.1016/j.marenvres.2013.12.003.
- 43) **Park K**, Shen J, Kuo AY (2014) Discussion of “Adaptive time stepping-operator splitting strategy to couple implicit numerical hydrodynamic and water quality codes” by Gaurav Savant and R.C. Berger. *Journal of Environmental Engineering*, 140(4), 07014001, doi:10.1061/(ASCE)EE.1943-7870.0000777.
- 44) Twilley RR, Brandt S, Breaux D, Cartwright J, Chen J, Easson G, Fitzpatrick P, Fridley K, Graves S, Harper S, Kaiser C, Maestre A, Maskey M, McAnally W, McCorquodale J, Meselhe E, Miller-Way T, **Park K**, Pereira J, Richardson T, Tao J, Ward A, Wiggert J, Williamson D (2014) Simulation management systems developed by the Northern Gulf Coastal Hazards Collaboratory (NG-CHC): An overview of cyberinfrastructure to support the coastal modeling community in the Gulf of Mexico. In: *Remote Sensing and Modeling: Advances in Coastal and Marine Resources* (Finkl CW, Makowski C, eds.), Coastal Research Library (CRL) 9, Springer, New York, pp. 365-394.
- 45) Dzwonkowski B, **Park K**, Collini R (2015) The coupled estuarine-shelf response of a river-dominated system during the transition from low to high discharge. *Journal of Geophysical Research: Oceans*, 120, 6145-6163, doi:10.1002/2015JC010714.

- 46) Kroetz AM, Powers SP, Drymon JM, **Park K** (2015) Anthropogenic modifications to a barrier island influence Bonnethead (*Sphyrna tiburo*) movements in the northern Gulf of Mexico. *Animal Biotelemetry*, 3(1), 1-12, doi:10.1186/s40317-015-0067-2.
- 47) Tzeng MW, Dzwonkowski B, **Park K** (2016) Data processing for a small-scale long-term coastal ocean observing system near Mobile Bay, Alabama. *Earth and Space Science*, 3(12), 510-522, doi:10.1002/2016EA000188.
- 48) Du J, **Park K**, Shen J, Dzwonkowski B, Yu X, Yoon BI (2018) Role of baroclinic processes on flushing characteristics in a highly stratified estuarine system, Mobile Bay, Alabama. *Journal of Geophysical Research: Oceans*, 123(7), 4518-4537, doi:10.1029/2018JC013855.
- 49) Du J, Shen J, **Park K**, Wang YP, Yu X (2018) Worsened physical condition due to climate change contributes to the increasing hypoxia in Chesapeake Bay. *Science of the Total Environment*, 630, 707-717, doi:10.1016/j.scitotenv.2018.02.265.
- 50) Dzwonkowski B, Fournier S, **Park K**, Dykstra SL, Reager JT (2018) Water column stability and the role of velocity shear on a seasonally stratified shelf, Mississippi Bight, northern Gulf of Mexico. *Journal of Geophysical Research: Oceans*, 123(8), 5777-5796, doi:10.1029/2017JC013624.
- 51) Dzwonkowski B, Fournier S, Reager JT, Milroy S, **Park K**, Shiller AM, Greer AT, Soto I, Dykstra SL, Sanial V (2018) Tracking sea surface salinity and dissolved oxygen on a river-influenced, seasonally stratified shelf, Mississippi Bight, northern Gulf of Mexico. *Continental Shelf Research*, 169, 25-33, doi:10.1016/j.csr.2018.09.009.
- 52) Du J, **Park K**, Dellapenna TM, Clay JM (2019) Dramatic hydrodynamic and sedimentary responses in Galveston Bay and adjacent inner shelf to Hurricane Harvey. *Science of the Total Environment*, 653, 554-564, doi:10.1016/j.scitotenv.2018.10.403.  
Du J, **Park K**, Dellapenna TM, Clay JM (2019) Corrigendum to “Dramatic hydrodynamic and sedimentary responses in Galveston Bay and adjacent inner shelf to Hurricane Harvey” [*Sci. Total Environ.* 653 (2019), 554-564]. *Science of the Total Environment*, 697, 134219, doi:10.1016/j.scitotenv.2019.134219.
- 53) Du J, **Park K** (2019) Estuarine salinity recovery from an extreme precipitation event: Hurricane Harvey in Galveston Bay. *Science of the Total Environment*, 670, 1049-1059, doi:10.1016/j.scitotenv.2019.03.265.
- 54) Du J, **Park K**, Shen J, Zhang YJ, Yu X, Ye F, Wang Z, Rabalais NN (2019) A hydrodynamic model for Galveston Bay and the shelf in the northern Gulf of Mexico. *Ocean Science*, 15, 951-966, doi:10.5194/os-15-951-2019.
- 55) Gancel HN, Carmichael RH, **Park K**, Krause JW, Rikard S (2019) Field mark-recapture of calcein-stained larval oysters (*Crassostrea virginica*) in a freshwater-dominated estuary. *Estuaries and Coasts*, 42, 1558-1569, doi:10.1007/s12237-019-00582-6.
- 56) Shin H-J, Lee G-H, Kang K, **Park K** (2019) Shift of estuarine type in altered estuaries. *Anthropocene Coasts*, 2, 145-170, doi:10.1139/anc-2018-0013.
- 57) Coogan J, Dzwonkowski B, **Park K**, Webb B (2020) Observations of restratification after a wind mixing event in a shallow highly stratified estuary. *Estuaries and Coasts*, 43, 272-285, doi:10.1007/s12237-019-00689-w.
- 58) Dzwonkowski B, Coogan J, Fournier S, Lockridge G, **Park K**, Lee T (2020) Compounding impact of severe weather events fuels marine heatwave in the coastal ocean. *Nature Communications*, 11, 4623, doi:10.1038/s41467-020-18339-2.
- 59) Du J, **Park K**, Yu X, Zhang YJ, Ye F (2020) Massive pollutants released to Galveston Bay during Hurricane Harvey: Understanding their retention and pathway using Lagrangian

- numerical simulations. *Science of the Total Environment*, 704, 135364, doi:10.1016/j.scitotenv.2019.135364.
- 60) Coogan J, Dzwonkowski B, Lehrter J, **Park K**, Collini RC (2021). Observations of dissolved oxygen variability and physical drivers in a shallow highly stratified estuary. *Estuarine, Coastal and Shelf Science*, 259, 107482, doi:10.1016/j.ecss.2021.107482.
  - 61) Du J, **Park K**, Jensen C, Dellapenna TM, Zhang WG, Shi Y (2021). Massive oyster kill in Galveston Bay caused by prolonged low-salinity exposure after Hurricane Harvey. *Science of the Total Environment*, 774, 145132, doi:10.1016/j.scitotenv.2021.145132.
  - 62) Dzwonkowski B, Fournier S, Lockridge G, Coogan J, Liu Z, **Park K** (2021). Cascading weather events amplify the coastal thermal conditions prior to the shelf transit of Hurricane Sally (2020). *Journal of Geophysical Research: Oceans*, 126, e2021JC017957, doi:10.1029/2021JC017957.
  - 63) Gancel HN, Carmichael RH, Du J, **Park K** (2021). Use of settlement patterns and geochemical tagging to test population connectivity of eastern oysters (*Crassostrea virginica*). *Marine Ecology Progress Series*, 673, 85-105, doi:10.3354/meps13796.
  - 64) Hannides A, Elko N, Briggs TR, Kim S-C, Mercer A, **Park K**, Rosov B, Searcy R, Walther M (2021). An ASBPA White Paper: U.S. beach water quality monitoring. *Shore & Beach*, 89(3), 26-35, doi:10.34237/1008933.
  - 65) Huang W, Ye F, Zhang YJ, **Park K**, Du J, Moghimi S, Myers E, Pe'eri S, Calzada JR, Yu HC, Nunez K, Liu Z (2021). Compounding factors for extreme flooding around Galveston Bay during Hurricane Harvey. *Ocean Modelling*, 158, 101735, doi:10.1016/j.ocemod.2020.101735.
  - 66) Dellapenna TM, Hoelscher C, Hill L, Critides L, Salgado V, Bell M, Al Mukaimi ME, Du J, **Park K**, Knap AH (2022). Hurricane Harvey delivered a massive load of mercury-rich sediment to Galveston Bay, TX, USA. *Estuaries and Coasts*, 45, 428-444, doi:10.1007/s12237-021-00990-7.

## PUBLISHED SOFTWARE

- 1) Kuo AY, **Park K**, Mo C (1991) VIMS HEM-1D (One-Dimensional Hydrodynamic-Eutrophication Model), an one-dimensional eutrophication model, with built-in graphical interface, and pre- and post-processors.
- 2) **Park K**, Kuo AY (1993) VIMS HEM-2D (Two-Dimensional Hydrodynamic-Eutrophication Model), a vertical two-dimensional eutrophication model.
- 3) Kuo AY, **Park K** (1994) VIMS TPM (Tidal Prism Model), a tidal-average eutrophication model coupled with sediment process model, with built-in graphical interface, and pre- and post-processors.  
: Listed as a tool for TMDL (Total Maximum Daily Load) development by USEPA in 1997 (*EPA841-B-97-006* and *EPA/600/R-05/149*)
- 4) Hamrick JM, **Park K**, Kuo AY, Shen J (1995) VIMS HEM-3D (Three-Dimensional Hydrodynamic-Eutrophication Model, also referred to as EFDC, Environmental Fluid Dynamics Code), a three-dimensional eutrophication model coupled with sediment process model.  
: Listed as a tool for TMDL development by USEPA in 1997 (*EPA841-B-97-006* and *EPA/600/R-05/149*)



: Adopted as a tool for water quality and quantity management for the Four Major Rivers Restoration Project by Korea National Institute of Environmental Research and Korea Water Resources Corporation in 2011

- 5) Tzeng MW, Dzwonkowski B, **Park K** (2015) Data processing for a small-scale long-term coastal ocean observing system near Mobile Bay, Alabama: a Geoscience Papers of the Future (GPF) Software Set. Zenodo, doi:10.5281/zenodo.32741.

## CONFERENCE PROCEEDINGS

- 1) **Park K**, Kuo AY, Neilson BJ (1991). Calibration and verification of a water quality model for tidal estuary, pp. 443-450. In: *Proceedings of the International Conference on Computer Applications in Water Resources* (Yu SL, Shih KK, eds.), Tamkang University, Taiwan: Tamshui, Taiwan, July 3-6, 1991.
- 2) Neilson BJ, Kuo AY, **Park K** (1993). Waste load allocation for eutrophic tidal waters, pp. 687-694. In: *Proceedings of the Joint CSCE-ASCE National Conference on Environmental Engineering* (Young RN, Hadjinicolaou J, Mohamed AMO, eds.), ASCE, NY: Montreal, Quebec, Canada, July 12-14, 1993.
- 3) Kuo AY, **Park K** (1995). A PC-based tidal prism water quality model for small coastal basins, pp. 371-378. In: *Computer Modelling of Seas and Coastal Regions II* (Brebba CA, Traversoni L, Wrobel LC, eds.), Computational Mechanics Publications, Southampton, UK: Cancun, Mexico, September 6-8, 1995.
- 4) **Park K** (1995). Concept of water quality modeling in estuaries and tidal rivers: From the perspective of hydrodynamic characteristics, pp. 559-575. In: *Proceedings of '95 INHA Symposium on Basic Science*, Institute for Basic Science, Inha University, Korea: Incheon, Korea, December 8, 1995.
- 5) **Park K**, Kuo AY (1996). Application of a tidal prism water quality model to the Lynnhaven Bay, pp. 363-372. In: *Hydraulic Engineering Software VI* (Blain WK, ed.), Computational Mechanics Publications, Southampton, UK: Penang, Malaysia, September 18-20, 1996.
- 6) Kim C-K, Chang K-I, **Park K**, Suk M-S, Youn Y-H (1998). Two-dimensional circulation of South Sea forced with tide and mean current, pp. 39-44. In: *Proceedings of the Workshop on Transport in South Sea*, Korea Ocean Research and Development Institute, Ansan, Korea.
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