

George Voulgaris

Distinguished Emeritus Professor / Affiliate Faculty
School of the Earth, Ocean and Environment
College of Arts and Sciences
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Education

- 1987-1992 Ph.D. in Oceanography. Department of Oceanography, University of Southampton, Southampton, UK (Thesis title: Suspended Sediment Transport in the Nearshore Zone). Awarded February 1st, 1993.
- 1982-1986 B.Sc. in Geology. (4-year Honors Degree). Department of Geology, University of Patras, Patras, Greece. Awarded September 9th, 1986.

Professional Experience

Appointments

- 05/24 – present Distinguished Professor Emeritus / Affiliate Faculty, School of the Earth, Ocean and Environment, University of South Carolina, Columbia, SC, USA
- 08/22 - present Program Director, U.S. National Science Foundation, Geosciences Directorate, Division of Ocean Sciences, Alexandria, VA, USA.
- 07/08 – 05/24 Professor, School of the Earth, Ocean and Environment, University of South Carolina, Columbia, SC, USA
- 01/16 – 08/20 Program Director (Intergovernmental Personnel Assignment), National Science Foundation, Geosciences Directorate, Division of Ocean Sciences, Physical Oceanography Program, Alexandria, VA, USA
- 08/16 – 12/16 Associate Director, School of the Earth, Ocean and Environment.
- 09/14 – 08/16 Chair of Department of Earth and Ocean Sciences
- 09/06 – 06/08 Graduate Studies Director, Department of Geological Sciences, University of South Carolina, Columbia, SC, USA
- 01/05 – 06/08 Associate Professor, Marine Science Program & Department of Geological Sciences, University of South Carolina, Columbia, SC, USA
- 01/00 – 12/10 Visiting Scientist, Applied Physical Oceanography and Engineering. Woods Hole Oceanographic Institution. Woods Hole, MA, USA
- 01/00 – 01/13 Associated Faculty, School of the Environment, University of South Carolina, Columbia, SC, USA
- 04/99 – 05/24 Research Associate, Belle W. Baruch Institute for Marine Biology and Coastal Research, University of South Carolina, Columbia, SC, USA
- 01/99 – 31/04 Assistant Professor, Marine Science Program & Department of Geological Sciences, University of South Carolina, Columbia, SC, USA
- 10/99 – 10/04 Visiting Fellow, School of Ocean & Earth Science, Southampton Oceanography Centre, University of Southampton, Southampton, UK.
- 07/02 – 12/02 Interim Undergraduate Studies Director, Marine Science Program & Department of Geological Sciences, University of South Carolina, Columbia, SC, USA
- 08/98 – 12/98 Visiting Assistant Professor, Marine Science Program & Department of Geological Sciences, University of South Carolina, Columbia, SC, USA
- 10/97 – 08/98 Senior Research Fellow, Southampton Oceanography Centre, Dept. of Oceanography, Southampton, UK
- 10/95 – 09/97 Postdoctoral Scholar, Woods Hole Oceanographic Institution, Woods Hole, MA, USA

1991 – 95 Research Fellow, Dept. of Oceanography, The University, Southampton, UK
 1990 – 91 Research Assistant, Dept. of Oceanography, The University, Southampton, UK
 1987 Research Assistant, Agricultural University of Athens, Athens, Greece

Editorship

2015 – 2021 Associate Editor, Continental Shelf Research.
 2013 – 2015 Member of Editorial Board, Continental Shelf Research.
 2013 Guest Editor, Journal of Coastal Research.
 2006 - 2009 Associate Editor, Journal of Geophysical Research, Oceans. American Geophysical Union.

External Advisor

External Member of Department Evaluation Panels

2013 External reviewer for the Hellenic Quality Assurance and Accreditation Agency (HQAA):
 Evaluation of the School of Mining and Metallurgical Engineering at the National Technical
 University of Athens, Greece. (available at:
http://www.hqaa.gr/external/NTUA_MiningMetalEng_2013.pdf)
 2012 External reviewer for the Hellenic Quality Assurance and Accreditation Agency (HQAA):
 Evaluation of the Department of Geological and Geographical Sciences of the University of
 Athens, Greece. (available at: http://www.hqaa.gr/external/UniAthens_Geology_2012.pdf)
 2012 External evaluation of the Department of Geology, East Carolina University, NC.

External Evaluator of Faculty Tenure and/or Promotion

2015 Greek Ministry of Education of Greece, University of Athens, Department of Geology and
 Geoenvironment (External Evaluator).
 2015 Greek Ministry of Education of Greece, University of Patras, Department of Geology. (Member of
 Electorate Committee).
 2013 Woods Hole Oceanographic Institution, Department of Physical Oceanography, Woods Hole, MA.
 2013 Department of Geology, University of Patras, Patras, Greece (2 occasions).
 2012 Greek Ministry of Education of Greece, Technological Educational Institute (TEI) of Larissa, School
 of Technological Applications, Dept. of Infrastructure Engineering, Larissa, Greece.
 2012 Greek Ministry of Education of Greece, Technological Educational Institute (TEI) of Lamia,
 Department of Environmental Management, Lamia, Greece (Alternate member).
 2012 Greek Ministry of Education of Greece, Technological Educational Institute (TEI) of Messolonghi,
 Dept. of Aquaculture & Fisheries Management, Messolonghi, Greece.
 Sep.2012 Stevens Institute of Technology, NJ, (application to tenure)
 Sep 2011 Rosentiel School of Marine Sciences (promotion to res. professor)
 Sep 2011 Rosentiel School of Marine Sciences (tenure and promotion)
 Sep 2010 Rosentiel School of Marine Sciences (transfer from research to tenure track position)

Advisory Appointments

2012 – 2020 Member of Board of Directors for the SE Coastal Ocean Observing Regional Association
 (SECOORA).
 2010 – 2014 Member of the Scientific Committee of the Key Laboratory for Coast and Island. Development,
 Ministry of Education, Nanjing University, China.
 2008 - 2014 Member of Science Committee for the SE Coastal Observing Research Association (SECOORA).
 2009 Chair of Review Panel, Science Foundation of Ireland, Dublin, Ireland.
 2008 - 2009 European Union (6th Framework Program), Project Reviewer, Brussels.
 2008 Panelist for NOAA/NY Sea Grant Program.
 2007 US Department of Energy, External Reviewer for NA22, Savannah, GA, USA.
 2005 - 2009 Member of Review Panel, Science Foundation of Ireland, Dublin, Ireland.

2006 Expert for the European Commission, European Union 6th Framework Program, Brussels, Belgium.

External Examiner

2016 External PhD Examiner for Indian Institute of Technology, Kharagpur, Dept. Ocean Eng. And Naval Architecture, India
2013 External PhD Examiner for Anna University, Center for Research, Chennai, India
2007 External PhD Examiner for Pondicherry University, India
2008 External PhD committee Member for Dept. Marine Sciences, University of North Carolina at Chapel Hill

Professional / Technical Advisor

2015 DeBordieu Colony Community Association (Consultant).
2011 Research Planning Inc., Columbia, SC, USA (Consultant).
2009 Research Planning Inc., Columbia, SC, USA (Consultant).
2007 CWS Consulting Inc. Charlotte, NC, USA.
2008 - 2010 Technical Advisory Committee for the SC Energy Office on Offshore Wind Energy.
2008 - 2011 Member of Advisory Board for Coastal Processes, NOAA/SC Sea Grant Consortium
2003 - 2009 Research Planning Inc., Columbia, SC, USA.
2000 - 2002 Laboratory of Hydraulic Engineering, Department of Civil Engineering, University of Cartagena, Cartagena, Colombia.
1997 - 1998 Southern Water Authority, Southern Science Ltd., Hampshire Laboratory, Sparrowgrove, Otterbourne, Winchester, Hants SO21 2SW, U.K.
1995 - 1998 Associate for the Applied Coastal Research unit of the Department of Oceanography, University of Southampton.
1996 & 2004 Korea Ocean Research & Development Institute. Marine Geology Laboratory. Ansan, P.O. Box 29, Seoul 425-600, Korea.
1989 University of Patras, Dept. of Geology. Laboratory of Marine Geology and Physical Oceanography. Patras-Rion, Greece.

Professional Societies

American Geophysical Union (AGU)
American Association for the Advancement of Science (AAAS)
Marine Technology Society (MTS)

Research Interests

Shoreline evolution; nearshore and beach processes; surf-zone and continental shelf circulation and sediment transport; wave-current interaction; sediment re-suspension; hydrodynamic and turbulence measurements in the field and laboratory; time-series analysis; tidal propagation in estuaries and lagoons; numerical model applications to coastal zone; operational oceanography; HFR Surface Radar measurements; Ocean Observing technologies.

Prizes / Scholarships / Awards

2014 Recipient of 2014 USC Educational Foundation Award for Research in Science and Engineering.
2010-11 DAAD (Deutscher Akademischer Austauschdienst) Research Visit Award (2 months, Institute of Oceanography, University of Hamburg, Hamburg, Germany).

2010	Invited Visiting Professor at the University of Rouen, France (1 month, Laboratoire UMR 6143 Morphodynamique Continentale et Côtière).
2004	University of South Carolina Two Thumbs Up Award for Faculty/Staff for their effort in making a difference.
2001	University of South Carolina Two Thumbs Up Award for Faculty/Staff for their effort in making a difference.
1999/00/01/02	University of South Carolina, School of the Environment Travel Award.
1995-97	Postdoctoral Award in Ocean Science and Engineering. Woods Hole Oceanographic Institution.
1987-90	State Scholarship Foundation of Greece scholarship for Doctorate thesis (awarded after examinations).
1986	Yannis Papastamatiou prize for the best graduate; awarded by the Greek Institute of Geological and Mineralogical Exploration (IGME) (Award No: 38/2/25-1-84).
1984	State Scholarship Foundation of Greece award for academic performance during year 1983/84.
1983	State Scholarship Foundation of Greece award for academic performance during year 1982/83.

Research & Other Grants Awarded

- (48) Precision Processing of Autonomous Maritime Perception System Data - Phase III. PI Yi Wang (Mechanical Engineering), Co-PIs: G. Voulgaris, Yan Tong (Comp. Sci & Engineering) and David Matolak (Electrical Eng).
Sponsor: Office of Naval Research
Total Awarded: \$7,040,000
Duration: 04/19/2024 - 04/18/2027
- (47) Disaster Relief Supplemental Act (DRSA) - Repair and Replacement of Observing Assets, Real Property, and Equipment in the Gulf of Mexico, Southeast, and Caribbean Regions Non-competitive Request for Applications (RFA) - NOAA-NOS-IOOS-2023-2008259 Disaster Relief Supplemental Appropriations Act, 2023
Sponsor: NOAA-IOOS via SECOORA
Total Requested: \$137,596 (Award pending funding allocation)
Duration: 03/01/2024 – 02/28/2026
- (46) Advanced Perception for Autonomous Platforms in the Littorals” PI Yi Wang (Mechanical Engineering), Co-PIs: G. Voulgaris, Yan Tong (Comp. Sci & Engineering) and David Matolak (Electrical Eng).
Sponsor: Office of Naval Research
Duration: 08/11/2023 - 08/10/2026
Total Awarded: \$6,597,189
- (45) Collaborative Research: Dynamics of Cross-Shelf Plumes under Upwelling Wind Conditions. Co-PI Alexander Yankovsky (due to conflict with current position transferred to Dr Yankovsky).
Sponsor: U.S. National Science Foundation
Duration: 08/01/2022 - 07/31/2026
Total Awarded: \$867,987
- (44) Southeast Coastal Ocean Observing Regional Association (SECOORA): Delivering actionable coastal and ocean information from high-quality science and observations for the Southeast.
Sponsor: Southeast Coastal Ocean Observing Regional Association (SECOORA)/NOAA IOOS
Total Awarded: \$550,000
Duration: 7/1/2021 – 6/30/2025

- (43) Intergovernmental Personnel Assignment (IPA).
 Sponsor: U.S. National Science Foundation
 Total Awarded: \$700,553 (includes \$62,195 USC's cost-share)
 Duration: 01/09/2017 – 01/08/2020
- (42) Southeast Coastal Ocean Observing Regional Association (SECOORA): Supporting Resilient Ecosystems, Communities and Economies”- Operate and Maintain University of South Carolina IOOS Priority High Frequency Radars in SECOORA
 Sponsor: Southeast Coastal Ocean Observing Regional Association (SECOORA)/NOAA IOOS
 Total Awarded: \$270,000
 Duration: 6/1/2016 – 5/31/2019
- (41) RAPID - Plume Dynamics under Increased Sediment Discharge following Floods (13040-FC42)
 Co-PI A. Yankovsky.
 Sponsor: National Science Foundation
 Total Awarded: \$70,129
 Duration: 11/15/2015 – 10/31/2016
- (40) SCFLOODS: Rapid Assessment of Bridge Scouring and Recovery Following Extreme Flood Events. Co-PIs E. Viparelli, P. Ziehl & I. Rekleitis
 Sponsor: Office of Vice President for Research, University of South Carolina.
 Total Awarded: \$27.183
 Duration: 10/23/2015 – 05/15/2015
- (39) Southeast Coastal Ocean Observing Regional Association (SECOORA): A Framework for Monitoring, Prediction and Assessment to Support Decision-Makers Needs for Coastal and Ocean Data and Tools - USC HF Radar (13040-FC33)
 Sponsor: Southeast Coastal Ocean Observing Regional Association (SECOORA)/NOAA
 Total Awarded: \$117,276
 Grant # IOOS.11(033)USC.GV.OBS.5, 06/01/2015 - 05/31/2016
- (38) Coastal Processes and Deltaic Environments: Research and Global Education.
 Sponsor: Office of the Provost, University of South Carolina (13040-A021)
 Total Awarded: \$7,357
 Grant # 13040-15-38938, 08/01/2015 - 09/30/2015
- (37) Southeast Coastal Ocean Observing Regional Association (SECOORA): A Framework for Monitoring, Prediction and Assessment to Support Decision-Makers Needs for Coastal and Ocean Data and Tools - USC HF Radar (13040-FC16)
 Sponsor: Southeast Coastal Ocean Observing Regional Association (SECOORA)/NOAA
 Total Awarded: \$104,286
 Grant # IOOS.11(033)USC.GV.OBS.3, 09/01/2013 - 08/31/2014
- (36) Benthic Boundary Layer Processes and Sediment Transport during Hurricane Sandy on Fire Island, NY (13040-FC14)
 Sponsor: U.S. Geological Survey (USGS)/DOI
 Total Awarded: \$220,000
 Grant # G13AC00246, 08/01/2013 - 02/01/2014
- (35) Southeast Coastal Ocean Observing Regional Association (SECOORA): An Environmental Monitoring and Assessment Program to Support Decision-Makers Needs for Coastal and Ocean Data and Products - USC HF Radar (13040-FC05)
 Sponsor: Southeast Coastal Ocean Observing Regional Association (SECOORA)/NOAA
 Total Awarded: \$104,286
 Grant # IOOS.11(033)USC.GV.OBS.2, 09/01/2012 - 08/31/2014
- (34) Integration of Coastal Observations and Assets in the Carolinas in Support of RCOOS Development in SECOORA (13040-FB42)
 Sponsor: Univ of North Carolina Wilmington/DOC
 Total Awarded: \$888,302
 Grant # 515170-07-1, 11/01/2007 - 08/31/2012

- (33) Southeast Coastal Ocean Observing Regional Association (SECOORA): An Environmental Monitoring and Assessment Program to Support Decision-makers Needs for Coastal and Ocean Data and Products: SC HF Radar & Rip-Current Modeling Tasks (13040-FB94)
Sponsor: Southeast Coastal Ocean Observing Regional Association (SECOORA)/NOAA/DOC
Total Awarded: \$666,231
Grant # IOOS.11(033)USC.GV.OBS.1, 06/01/2011 - 08/31/2014
- (32) Characterization of Wave and Current Energy Levels in Estuarine Waters for Ecological and Particulate Dispersion Studies: Case Study Winyah Bay, SC (13040-FB83)
Sponsor: South Carolina Sea Grant Consortium (SCSGS)/NOAA
Total Awarded: \$58,091
Grant # M269, 02/01/2011 - 07/31/2012
- (31) RAPID: Collaborative Research: HF Radar Surface Current Measurements in Support of Constraining Shelf Edge Exchange in the SAB under Wind, Tidal and Gulf Stream Influence (13040-FB86)
Sponsor: National Science Foundation (NSF)
Total Awarded: \$111,273
Grant # OCE-1132130, 04/01/2011 - 03/31/2014
- (30) Implementation of Regional Integrated Ocean Observing Systems Support of RCOOS Development in SECOORA: HF Radar & SC Station Maintenance-FWRI (Year 3: 08/01/2010-07/31/2011) (13040-FB80)
Sponsor: SC Sea Grant Consortium/NOAA
Total Awarded: \$59,999
Grant # S661, 08/01/2010 - 07/31/2012
- (29) Water Quality Dynamics in Long Bay, SC (13040-GA20)
Sponsor: SC Sea Grant Consortium/OCRM-SCDHEC
Total Awarded: \$13,660
Grant # E103, 07/01/2010 - 09/23/2011
- (28) Characterization of Wave and Current Energy Levels in Estuarine Waters for Ecological and Particulate Dispersion Studies: Case Study Winyah Bay, SC (13040-FB76)
Sponsor: SC Sea Grant Consortium (SCSGS)/NOAA
Total Awarded: \$58,091
Grant # M169, 02/01/2010 - 09/30/2011
- (27) Implementation of Regional Integrated Ocean Observing Systems Support of RCOOS Development in SECOORA: HF Radar - University of South Carolina FWRI (Year 2: 08/01/2009 - 07/31/2010) (13040-FB71)
Sponsor: SC Sea Grant/NOAA
Total Awarded: \$37,499
Grant # S554, 08/01/2009 - 11/30/2010
- (26) Benthic Boundary Layer Sediment Transport in the Carolinas (13040-FB56)
Sponsor: U.S. Geological Survey (USGS)/DOI
Total Awarded: \$34,989
Grant # G03AC00007, 07/01/2008 - 06/30/2013
- (25) Physical Controls on Benthic Fluxes of Microalgae and Particulate Organic Matter in Estuarine Environments (13040-FB65)
Sponsor: SC Sea Grant Consortium/NOAA
Total Awarded: \$126,909
Grant # R469, 02/01/2009 - 07/31/2010
- (24) In Situ Validation of a HF Coastal Radar (Training on WERA Operation and Maintenance) (13040-FB58)
Sponsor: Skidaway Institute of Oceanography/SC Sea Grant Consortium/NOAA
Total Awarded: \$15,000
Grant # 373/300009,09/01/2008 - 08/31/2009

- (23) Collaborative Research: Regional Ocean - Benthic Observatory and Technology Testbed on the Mid Shelf--Understanding Processes (13040-FB06)
Sponsor: National Science Foundation (NSF)
Total Awarded: \$292,869
Grant # OCE-0535893, 01/01/2006 - 12/31/2012
- (22) Physical Controls on Benthic Fluxes of Microalgae and Particulate Organic Matter in Estuarine Environments (13040-FB49)
Sponsor: SC Sea Grant Consortium/NOAA
Total Awarded: \$126,909
Grant # R369, 02/01/2008 - 07/31/2009
- (21) Collaborative Research: Observation and Modeling of Inner Shelf Sediment Dynamics and Large-Scale Sorting: Cross-shelf or Alongshelf Transport? (13040-FB13)
Sponsor: National Science Foundation (NSF)
Total Awarded: \$369,695
Grant # OCE-0451989, 04/01/2006 - 03/31/2011
- (20) In Situ Validation of a HF Coastal Radar (13040-FB43)
Sponsor: Skidaway Institute of Oceanography/SC Sea Grant Consortium/NOAA
Total Awarded: \$15,000
Grant # 372/0000003485, 11/15/2007 - 09/30/2008
- (19) Numerical Study of the Physical Conditions that Lead to Hypoxia Events in Long Bay, SC. (13040-FB10, 13040-FB35)
Sponsor: SC Sea Grant Consortium/NOAA
Total Awarded: \$167,724
Grant # R269, 02/01/2007 - 11/30/2008
- (18) CRISIS: Understanding and predicting resiliency of barrier islands: The extreme case condition for SC beaches. (13040-KA11)
Sponsor: University of South Carolina / Research Foundation
Total Awarded: \$24,593
Duration: 9/23/05-3/23/06.
- (17) An Integrated Response to Nearshore Hypoxia Events through Coastal Ocean Observing Systems. (21600 – FL02, multi institutional)
Sponsor: SC Sea Grant Consortium/NOAA
PI. Braxton Davis, (Submitted through Baruch Institute), *Co-PIs:* D. Porter, D. Sanger (OCRM), D. Hernandez (OCRM), S. Libes (CCU), G. Voulgaris, E. Koepfler (CCU), J. Bennett (CCU), E. Smith (Baruch).
Total Awarded: \$94,845.
Duration: 1/7/05 – 30/6/06.
- (16) SC Coastal Erosion Study: Shelf Circulation, Wave Propagation and Sediment Transport in Long Bay, SC: Measurements and Modeling (13040-FB08, 13040-FB28)
Sponsor: U.S. Geological Survey (USGS)/DOI
Total Awarded: \$172,293
Duration: 09/01/2005 - 08/31/2007
- (15) Acoustic measurements of POC concentrations in the coastal ocean (13040-FA87, with M. Goni, USC)
Sponsor: NOAA / OAR. Organic Carbon Cycle Program
Total Awarded: \$333,987
Duration: 05/01/04 – 04/30/07
- (14) Southeast Atlantic Coastal Ocean Observing Systems (SEA-COOS) (with M. Fletcher & D. Porter, USC) (21600-FA93)
Sponsor: Office of Naval Research.
Total Awarded: \$838,000
Duration 09/1/04-08/31/05.

- (13) Towards Quantifying Coastal Erosion in SC: Ship Time and Marine Operations.
Sponsor: NOAA/OAR
Total Awarded: \$22,000
Duration 11/1/03 – 09/30/04.
- (12) Coastal Erosion Study: Shelf Circulation, Wave Propagation and Sediment Transport in Long Bay, SC: Measurements and Modeling.
Sponsor: US Geological Survey / DOI.
Total Awarded: \$291,300
Grant #13040-FB28, Duration: 9/1/03-8/31/05.
- (11) CORMP 2003-2004: Particle Size Characterization of the Cape Fear Plume.
Sponsor: Univ. of North Carolina Wilmington/DOC
Total Awarded: \$35,000
Duration 08/01/03 – 07/30/2004.
- (10) Towards Quantifying Coastal Erosion in SC. Offshore Shoals as Sediment Sinks and Controls for Shoreline Change.
Sponsor: SC Sea Grant Consortium.(with P. Work, Clemson Univ.)
Total Awarded: \$145,578
Duration: 03/03 – 02/05
- (9) Intertidal Marsh Hydrology and Geomorphology (with R. Torres, USC).
Sponsor: National Science Foundation (NSF-Hydrology).
Total Awarded: \$113,000
Duration: 01/03 – 1/05.
- (8) EPA/EPSCoR. A Multidisciplinary Approach to Quantify and Model the Transport and Deposition of Organic Pollutants in Coastal Environments. (with M. Goni and J. Ferry, USC)
Sponsor: Environmental Protection Agency/EPSCoR
Total Awarded: \$402,555
Duration: 06/01 – 05/03.
- (7) Sediment Mobility in the Charleston Disposal Site.
Sponsor: US Army Corps of Engineers / SC DNR
Total Awarded: \$22,000
Duration: 08/01-04/02
- (6) Coastal Erosion Study, Phase II. Variation and Controls of Beach Morphology Along the Coast of South Carolina.
Sponsor: US Geological Survey (DOI) / SC Sea Grant (NOAA)
Total Awarded: \$48,946
Duration: 09/00 – 08/02.
- (5) Coastal Erosion Study, Phase II. Hydrodynamic Framework of Long Bay, SC: Measurements of Waves and Coastal Currents (with P. Work, Clemson Univ.)
Sponsor: US Geological Survey (DOI) / SC Sea Grant (NOAA)
Total Awarded: \$18,500
Duration: 09/00 – 08/03.
- (4) Nearshore Impacts of Offshore Dredging for Beach Nourishment. (with P. Work, Clemson Univ)
Sponsor: SC Sea Grant Consortium / NOAA
Total Awarded: \$39,901
Duration: 03/00 – 02/02.
- (3) Towards Enhanced Modeling Benchmarks and Predictability in Coastal Margins: Can Two Wrongs Make a Right?
Sponsor: Office of Naval Research:
Total Awarded: \$32,055
Duration: 04/99 – 01/02.

- (2) Spatial Variability of Bottom Turbulence over a Linear Sand Bank.
Sponsor: Natural Environment Research Council (NERC), UK.
Total Awarded: \$73,342
Duration: 04/99 – 11/ 00.
- (1) Turbulence and Fractional Sediment Transport in Salt Marshes.
Sponsor: USC – Research & Productive Scholarship Award.
Total Awarded: \$6,000
Duration: 11/99 to 11/00.

Courses Taught

- (1) Coastal Environments of the SE USA (200 level for non-science majors)
- (2) Coastal Processes (500 level)
- (3) Marine Hydrodynamics (700 level)
- (4) Seminar in Sedimentology (800 level)
- (5) Oceanographic Techniques (700 level)
- (6) Ocean Data Analysis (300 & 700 level)
- (7) Physical Oceanography (300 level)

Research Program Supervised

Faculty Host

- (4) Dr. Serafeim Poulos, Associate Professor. Department of Geology and Geo-environment, National and Kapodistrian University of Athens, Athens, Greece. August 9 – September 10, 2015
- (3) Dr. Jianhua Gao, Assistant Professor. Ministry of Education Key Laboratory of Coastal and Island Development. Nanjing University, Nanjing, China. Visiting Assistant Professor. October, 2012 – October 2013.
- (2) Dr. Dwarakish, Assistant Professor, Dept. of Applied Mechanics & Hydraulics, National Institute of Technology Karnataka, Surathkal, India. Visiting Assistant Professor. February 2012.
- (1) Dr. Yaping Wang, Associate Professor. Ministry of Education Key Laboratory of Coastal and Island Development. Nanjing University, Nanjing, China. Visiting Associate Professor. October, 2011 – February 2012.

Post-Doctoral

- (4) Tanja Mildner (PhD in Oceanography, 2013, University of Hamburg). Part-time post-Doctoral Research Associate, December 2013 – December 2015.
- (3) Jeffery P. Morin (Ph.D. in Oceanography, 2008. University of Texas, A&M). Post-Doctoral Research Associate. January 2007 - March 2010.
- (2) Rosario Sanay (Ph.D. in Physical Oceanography, 2003. Old Dominion University, Center for Physical Oceanography). Post-Doctoral Research Fellow, February 2004 – December 2007.
- (1) Hector Perales (Ph.D. in Computational Fluid Dynamics, 2003, Morelos State University, Mexico). Post-Doctoral Research Fellow, February 2004 – December 2007.

Doctoral

- (11) Douglas Cahl (MS Maine University). Ph.D. Thesis. "HF Radar: Shining a Light on Ocean Currents". School of the Earth, Ocean and Environment, Geological Sciences, University of South Carolina, May 2023. <https://scholarcommons.sc.edu/etd/7434>
- (10) Zaid Rahman (BS Physics, Iraq). Ph.D. Thesis: "*HF Radar Signal Inversion for Wind and Swell Ocean Waves*". School of the Earth, Ocean and Environment, Geological Sciences, University of South Carolina, December 2020.
- (9) Xiaodong Wu (MS Nanjing University, China). Ph.D. Thesis: "*Shelf Circulation Under Synoptic Weather Systems: The Effect of Shoreline Orientation, Bathymetry and Surface Cooling*". Marine Science Program. University of South Carolina, December 2017.
- (8) William R. Doar (BS East Carolina University). Ph.D. Thesis: "*The Geologic Implications of the Factors that Affected Relative Sea-level Positions in South Carolina During the Pleistocene and the Associated Preserved High-stand Deposits*". Department of Earth & Ocean Sciences, University of South Carolina, December 2014.
- (7) Nirnimesh Kumar (BS Ocean Engineering, IIT, India). Ph.D. Thesis: "*Hydrodynamic and Sediment Dynamic Processes in the inner shelf and surf zone*". Marine Sciences Program, University of South Carolina, August 2013.
- (6) Timothy Nelson, (BS Geology, University of Kentucky), Ph.D., Thesis: "*Bed Morphology and Sediment Resuspension Processes on the Inner Shelf*". Department of Earth and Ocean Sciences, University of South Carolina, December 2013
- (5) Mauro Maza (BS Civil Engineering, University of Cartagena, CO), Ph.D. Thesis: "*Inner shelf circulation off Cartagena de Indias, Caribbean coast of Colombia*", Marine Sciences Program, University of South Carolina, 2011
- (4) Kerry McCarney (MS Geology, University of Reading, UK). Ph.D Thesis: "*Simulating anthropogenic and climatic influences of fluvial sediment load in the southern US and central Europe*". Department of Earth and Ocean Sciences, University of South Carolina, November 2010.
- (3) Benjamin Gutierrez (MS WHOI/MIT Joint Program, MA), Ph.D. Thesis: "*The Development and Maintenance of Sedimentary Features on Wind-Driven Shelves*". Department of Geological Sciences, University of South Carolina. December 2006.
- (2) Yong Hoon Kim (MS Oceanography, Seoul National University, Korea), Ph.D. Thesis: "*Sediment and Contaminant Transport in Estuaries: Case Study Winyah Bay, SC*", Department of Geological Sciences, University of South Carolina. December 2006.
- (1) Genevieve Healy, (MS Geology, Rosenstiel School of Marine and Atmospheric Science, FL) Ph.D. Thesis: "*A Cognitive Assessment on the Integration of GIS into K-12 Geoscience Curriculum*", Department of Geological Sciences. University of South Carolina. January 2005.

Masters

- (7) Christopher Papageorgiou (BS Geology, University of Athens, Greece). MS Marine Sciences. "*ROBOCAT: An Autonomous Surface Vehicle (ASV) for Near-Surface Hydrodynamic Measurements in Buoyant Plumes. Design, Development, and the Winyah Bay Case Study.*", December 2023
- (6) Conor Ofsthun (BS Geology, Tufts University). MS Geological Sciences. "*Alongshore Momentum Balance over Shoreface-Connected Ridges, Fire Island, NY*", August 2016.
- (5) Gwen Simmons, (BS, Geology, Hamilton College). MS Marine Sciences. "*Characterization of Wave and Current Energy Levels in Estuarine Waters for Particulate Dispersion Studies: Case Study Winyah Bay, South Carolina*", September, 2012.

- (4) Nirimesh Kumar (BS Ocean Engineering, IIT, India), 2010. MS Geological Sciences. Thesis Title: “3-D Modeling of Nearshore Circulation using ROMS-SWAN: Model Updates and Evaluation”. March 2010.
- (3) Wayne Baldwin (BS Geology, Coastal Carolina University, SC), 2002. MS Geological Sciences. Thesis Title: “Effects of Local and Regional Antecedent Geology on the Modern Inner Continental Shelf: Southern Long Bay, South Carolina”, April 2002.
- (2) Peter Slovinsky (BA Geology, Franklin & Marshall College, PA), 2001. MS Geological Sciences. Thesis Title: “Spatial Variation of Beach Morphology Along Coastal South Carolina”, November 2001.
- (1) Samuel T. Meyers (BS Geology, Eckerd College, FL), 2001. MS Marine Science Program. Thesis Topic: “Short-term, Small-scale Effects of Turbulence, Flocculation, and Meteorological Events on Sediment Transport in the Bly Creek Tidal Channel, North Inlet, South Carolina”, November 2001.

Other Supervision

- (9) Junbiao Tu, Fall 2016 & Spring 2017. Visiting Graduate (Ph.D.) Student, School of Ocean and Earth Science, State Key Laboratory of Marine Geology, Tongji University, Shanghai, China.
- (8) M. Bayee, Summer 2010 & Summer 2011. Visiting Graduate (Ph.D.) Student, University of Ghent, Belgium.
- (7) A. Beudin, Summer 2009. Graduate Student Intern in my Lab at USC. Ecole Nationale des Travaux Publics de l’Etat, France
- (6) P. Salles, 1997-2001. Stability of Multiple Tidal Inlets, MIT/WHOI Joint Program graduate student (2nd advisor).
- (5) B.T. Gutierrez, 1996-1997. Holocene Coastal Evolution on the South Shore of Cape Cod, Massachusetts, MIT/WHOI Joint Program graduate student (2nd advisor).
- (4) T. Mason, 1994-1997. Hydrodynamics and sediment transport processes on macrotidal, mixed beaches. PhD Thesis. Southampton University, Oceanography Department (co-advisor).
- (3) M. Pinkerton, 1993. Suspended sand transport under wave-current interaction at La Salie, Archachon, France. MSc Thesis, Southampton University, Oceanography Department, 54pp. (co-advisor)
- (2) L. Crosnier, 1993. Shear stress due to combined action of waves and currents, using field measurements from Christchurch Bay, S. England. ERASMUS exchange student project. Southampton University, Oceanography Department, 35pp. (Major advisor)
- (1) E.C. Kent, 1988. An experimental determination of longshore drift in the Poole Bay area. MSc Thesis, Southampton University, Oceanography Department, 122pp. (2nd advisor)

Reviewer

I have been a reviewer for the following journals: Continental Shelf Research; Journal Atmospheric and Oceanic Technology; Journal of Geophysical Research, Oceans; Geophysical Research Letters; IEEE Journal of Ocean Engineering; Estuarine and Coastal Processes; Estuaries; Earth Surface Processes and Landforms; Sedimentology; Marine Geology; Earth Surface Processes and Landforms; Journal of Sedimentary Petrology; New Zealand Journal of Geology and Geophysics; Journal of Coastal Research; Limnology & Oceanography.

Also, I have been a reviewer for proposals submitted to the following agencies: NOAA / National Undersea Research Center at UNCW and New Jersey; the Natural Environmental Research Council (NERC), UK; National Science Foundation (NSF); US Civilian Research and Development Foundation; Science Foundation of Ireland (SFI, Panel member and chair); EU-6th Framework Program (Expert); NOAA-CREST program; Greek Ministry of Education (Thalis and Archimedes research initiatives).

Books & Book Chapters

- (3) **Voulgaris, G.**, Lab 12: Coastal Processes, Beaches and Waves. In: Department of Earth and Ocean Sciences, USC, Laboratory Manual and Workbook for GEOL 101, Introduction to the Earth. A Departmental Lab Manual for Students taking GEOL 101 at USC.
- (2) **Voulgaris, G.**, N. Kumar and J.C. Warner, 2011. *Chapter 5: Methodology for Prediction of Rip Currents Using a Three-Dimensional Numerical, Coupled, Wave Current Model*. In: **Rip Currents: Beach Safety, Physical Oceanography, and Wave Modeling**. Editor(s): Stephen Leatherman, *Florida International University, Miami, FL, USA*; John Fletemeyer, pp. 87-106.
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Refereed Journal & Proceeding Papers (+ denotes graduate student)

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