

Design of Floating Production Systems (DFPS)

May 22-26, 2023

The University of Texas at Austin

Instructor Biographies



DR. SPYROS A. KINNAS

Faculty-In-Charge

The University of Texas at Austin



- Hudson Matlock Professor, Civil, Architectural and Environmental Engineering, University of Texas at Austin, Cockrell School of Engineering
- Associate Director, Offshore Technology Research Center
- In charge of Ocean Engineering Graduate program at UT Austin
- Diploma, Naval Architecture and Marine Engineering, National Technical University of Athens, Greece
- Ph.D., Massachusetts Institute of Technology (M.I.T.)
- 10+ years' experience in research and teaching at M.I.T. (Dept. of Ocean Engineering)
- Founded in 1993 consortium on cavitation of high speed propulsors (currently in Phase VIII)
- Fields of specialization include marine propulsors, thrusters, and tidal/ocean current turbines; cavitating and separated flows; wave theory and wave body interaction; computational hydrodynamics with applications on the prediction of performance and design of devices used for the propulsion or control of ocean vehicles and offshore structures
- Website: <http://www.caee.utexas.edu/prof/kinnas/home.html>

DR. STEPHEN HODGES

SBH Creative Consulting



- SBH Creative Consulting: Offshore Consultant, Career Coach, Mentor
- Over 35 years in the Offshore Industry
- Gulf Oil Company – 1984
- Shell International Exploration and Production, Inc. – 1989 – 2019
- During the 30 years with Shell
 - Worked on the design, fabrication and installation of most of Shell's deepwater developments worldwide to include hydrodynamics, global performance, structural design, construction site engineering, project management and organizational management
 - Serves as the Engineering Manager for Riser Systems for many years
 - Senior Principal Advisor for Pipelines, Flowlines and Risers – accountable for assessment and appointment of technical authorities, development and maintenance of technical standards and technical assurance for major projects
 - Coach and Mentor to Junior Engineers
- B.S. in Civil Engineering from Northwestern University, and M.S. and Ph.D. degrees from the University of California, Berkeley in Naval Architecture & Offshore Engineering, focusing on hydrodynamics and ship motions, whilst consulting in the offshore industry, conducting model tests for various clients, and more than occasionally setting sail on the San Francisco Bay

DR. RICHARD MERCIER

Texas A&M University



- Director, OTRC and Professor, Civil Engineering, Texas A&M University
- Ph.D., Oceanographic Engineering, MIT/Woods Hole Oceanographic Institution
- S.M., Massachusetts Institute of Technology
- B.A.Sc., University of Waterloo (Canada)
- Experience includes 17 years of research, design, project management and team leadership experience with Shell Oil, focused on technology development for design of Shell's deepwater oil and gas production platforms in the Gulf of Mexico and worldwide. Member of global design team for Shell's Auger, Mars, Ram/Powell and Ursa Tension Leg Platforms in 3000 – 4000 foot water dept. Leader of global design team for Shell's Na Kika Semisubmersible Floating Production System in 6400 foot water depth. Global design lead for several spar and tanker-based FPSO concept development studies for the Gulf of Mexico, offshore West Africa and the Northern North Sea

DR. RAFAEL J. RAMOS

Woods Hole Group - CLS



- Regional Manager and Metocean Criteria & Consulting Team Leader at Woods Hole Group – CLS.
- Ph.D. in Applied Marine Physics at the University of Miami and Post-Doctorate appointment at the *Center for Southeastern Tropical Advance Remote Sensing*.
- M.Sc. in Ocean Engineering from Texas A&M University.
- More than 32 years of experience working in many aspects of ocean engineering, oceanography, and atmospheric sciences for government entities, research institutions, and the offshore energy industry. Involved in multiple aspects of design and requalification of fixed offshore Oil & Gas platforms and has participated/lead several projects related to the generation of operational, design, and fit-for-purpose assessment criteria for offshore infrastructure including wind and solar farms. Also involved in the formulation and implementation of engineering recommended practices.
- Participated in several field experiments focused on further understanding atmospheric, oceanographic, and air-sea interaction phenomena, ranging from internal waves to momentum and heat transfer on the ocean surface.
- Author or coauthor of more than 30 peer-reviewed technical articles and several conference proceedings papers dealing with modeling and interpretation of data collected by shore-based (HF radar), vessel-based (X-Band radar), and satellite-based (altimeter, scatterometer, SAR) remote sensing systems as well as moored (buoy) and non-moored instrumentation.
- Participated in several studies in the Gulf of Mexico that include real-time monitoring of the Macondo oil spill with satellite imagery (US DHLS Science and Technology Impact Award), characterization of the Loop Current and Loop Current Eddies that shed from it (using measurements collected from dedicated vessels), assessment of accuracy of existing simplified and regional circulation models, and deployment (and associated data analysis) of metocean instrumentation in moorings and Mobile Offshore Drilling Units. Also participates and has been integral part of several studies concerning the characterization of the Loop Current System for Joint Industry Projects and public entities (e.g., CASE EJIP, NASEM UGOS).
- Member of several technical organizations such as the American Society of Civil Engineers (COPRI Chapter), AGU, MTS, SNAME, and participates actively in scientific review committees in the US and abroad.

JOHN STIFF

ABS Consulting (Retired)



- Retired from ABS Consulting
- B.S., Civil Engineering, Leeds University; UK, 1976
- *Experience:* Senior Consultant, ABS Consulting; Vice President Risk Analysis, Noble Denton and Associates Inc.; Field Engineer, Pullman Kellogg; Engineer, Noble Denton and Associates Ltd., London, UK; 30+years as a Marine Warranty Surveyor and Risk Analyst in the Offshore Oil Industry involved in transportation, installation and analysis of jackets, jack-up, semi-submersibles and other offshore equipment
- Registered Professional Engineer, Texas; Chartered Engineer, UK

BRUCE MARTIN

Principal Power Inc.



- Senior R&D Engineer
- M.S.E Naval Architecture & Marine Engineering, University of Michigan, 2011
- B.S.E Naval Architecture & Marine Engineering, University of Michigan, 2009
- Former Engineer – Floating Systems, SBM Offshore
- Areas of specialization:
 - Global Performance
 - Hydrodynamics
 - Floating Offshore Wind
 - Mooring Design & Analysis
 - Tendon Design & Analysis
 - Hydrodynamic Model Testing
 - Metocean Analysis
 - Field Development
 - Concept Development

JOHN KENNEY

Retired - Shell International Exploration and Production Inc

- B.S. Civil Engineering (w/ Architectural Option), University of Wyoming, 1981
- M.E. Civil Engineering, Tulane University 1983
- Registered Professional Engineer in the States of Texas and Louisiana
- Member and Past Chairman of American Petroleum Institute Subcommittee 2 (API SC2)
- American Welding Society (AWS) Certified Welding Inspector (CWI)
- Voting Member of American Welding Society D1 Committee and Chairman of the Tubular Task Group
- Author or co-author of eight OTC papers relative to design and construction of offshore structures
- Holder of two patents relative to offshore structures
- 40.5 years with Shell in various positions related to the design and construction of offshore structures
- Current: Offshore structures design and construction advisor for oil and gas and offshore wind developments

Highlights: Retired as Principal Technical Expert and TA1 - Offshore Structures. Provided coaching and mentoring for developing staff and approved all offshore structures Technical Authorities. Design and construction expert directly involved in all of Shell's Deepwater projects worldwide. Registered Professional Engineer of Record for Shell' Brutus TLP and Shell's Nakika semisubmersible hulls. On-site construction engineer for Shell's Ram/Powell and Mars TLP hulls, the Auger TLP topsides, the Merluza Platform and Shell's Bullwinkle Platform.

DR. ROBERT GILBERT

The University of Texas at Austin



- Brunswick-Abernathy Professor and Department Chair, Civil, Architectural and Environmental Engineering Department, The University of Texas at Austin, Cockrell School of Engineering
- B.S., Civil Engineering, University of Illinois at Urbana-Champaign
- M.S., Civil Engineering, University of Illinois at Urbana-Champaign
- Ph.D., Civil Engineering, University of Illinois at Urbana-Champaign
- Experience: consultant on the design and assessment of numerous fixed and floating offshore structures
- University instruction: undergraduate courses in Soil Mechanics, Foundation Engineering and Probability and Statistics; graduate courses in Foundation Engineering, Slope Stability, Geo-environmental Engineering and Decision, Risk and Reliability Analysis; and short- course instruction in Design and Construction QA/QC for Waste Containment Systems, Slope Stability, Risk-Based Decision Making, and Risk and Reliability Analysis for Levees and Dams
- Awards and Fellowships: Numerous award and fellowships, including U.S. Army Corps of Engineers Medal for Outstanding Civilian Service for Hurricane Katrina work

DR. THOMAS KWAN

Kwan Engineering Services



- Formerly employed by Exxon Production Research Company
- Ph.D., Civil Engineering, University of Houston
- Fields of specialization include mooring, riser, and floating structures
- Past chairman, API Mooring Resources Group (1982-2006)
- Tom Kwan holds a Ph.D. degree in structural engineering and has more than 40 years of experience in mooring, riser, and floating structure design.
- From 1982 to 2006, Tom was chairman of the API Mooring Task Group, responsible for the development of API RP 2SK for mooring design, API RP 2I for mooring inspection, and API RP 2SM for fiber rope mooring.
- He has initiated, steered, and conducted a number of joint industry projects including several DeepStar projects to advance mooring technology. Tom worked with ABS to conduct a JIP on polyester rope stiffness modeling and revised the ABS Guidance Notes on the Application of Fiber Ropes for Offshore Mooring.
- Tom worked for The Offshore Company from 1972 to 1978, and Exxon Production Research Company from 1978 to 2000, and later works as a consultant for a large number of companies such as JD Marine, SparTEC, Chevron, and IntecSea.

ROBERT LITTLE

Chevron Energy Technology Company



- Offshore Geotechnical Engineer
- B.S. summa cum laude and M.S., Civil Geotechnical Engineering, Texas A&M University
- Experience includes leading offshore site investigations worldwide. His experience in foundation design ranges from sites with under-consolidated deltaic clays to those with sediments having a density similar to that of concrete. His analytical and numerical experience includes: finite element modeling of the subsidence and seabed displacements resulting from offshore sulfur mining; wave-induced seabed instability and mudflow effects on platforms in the Mississippi delta; quantification of the risk of earthquake-induced slope failures and subsequent debris flow and turbidity current effects on development infrastructure; and the effects on subsea facilities and well stability that can result from the dissociation of naturally occurring gas hydrates in the shallow seabed during hydrocarbon production
- Immediately prior to joining Chevron, Rob was Engineering Manager and Senior Consultant at Fugro GeoConsulting, Inc. He has worked as a consultant, project manager and engineer for offshore geotechnical firms for the previous 26 years
- Working to establish international standards for offshore foundation design of fixed and floating structures
- Areas of Expertise: Design of offshore foundations and the application of geotechnical engineering concepts in the evaluation of geological hazards

DR. ORIOL RIJKEN

SBM Offshore



- Manager, Floating Systems
- Educational background: Masters, Mechanical Engineering, Delft University of Technology, 1989
Masters, Ocean Engineering, Texas A&M University, 1991
PhD, Civil Engineering, Texas A&M University, 1997
- Atlantia Offshore now SBM Atlantia; 1997 - present
- Areas of specialization:
 - Tension Leg Platforms & Semi Submersibles
 - Model testing
 - Data monitoring
 - Global Performance
 - Semi-Submersible Vortex Induced Motion
 - Weight control & Ballast Systems

ASHISH BUDHIRAJA

- 30 years of experience in Offshore Oil and Gas and Marine industry
- Experience: SBM Offshore, KBR, and American Bureau of Shipping
- MS Degree in Structural /Civil engineering
- Registered Professional Engineer (PE) in Texas