

Professor Ronald W. Yeung, Ph.D.

Academic Curriculum Vitae

Education

University of California, Berkeley: Ph.D. in Engineering	December 1973
University of California, Berkeley: M.S. (Naval Architecture)	June 1970
University of California, Berkeley: B.S.* (Mechanical Engineering), * University Gold Medalist	June 1968

Positions Held

Inaugural Faculty Holder of the American Bureau of Shipping Endowed Chair in Ocean Engineering	2012 - 2017
Distinguished Professor, University of California at Berkeley	1994 - present
Professor of Hydromechanics & Ocean Engineering, University of California at Berkeley	1982 - present
Distinguished Guest Professor, Harbin Engineering University, Harbin, China	2017-2022
Alexander v. Humboldt Professor, Gerhard Mercator University of Duisburg, Germany	Fall 1998
Visiting Professor, Center of Excellence for Ship and Offshore Structures (CESOS), Norwegian University of Science and Technology, Trondheim, Norway.	Spring, 2007
Chair, Naval Arch. & Offshore Engineering, University of California at Berkeley	1989 - 1997
Visiting Professor, Kyushu Institute of Applied Mechanics, Kyushu University, Japan	April 1998
Humboldt Professor, Institut für Schiffbau, University of Hamburg, W. Germany	1988 - Jan 1989
Fulbright-Hayes Senior Scholar, University of Adelaide, S. Australia	Jan - May 1981
Associate Professor of Naval Architecture (with tenure), Mass. Inst. of Tech., MA	1980 - 1982
Assistant / Associate Professor of Naval Architecture, Mass. Inst. of Tech., MA	1974 -78 / 1978-80
Research Associate, Dept. of Ocean Engineering, Mass. Inst. of Tech., MA	1973 - 1974
Instructor, University of California Los Angeles Extension, Los Angeles, CA	1971 - 1971
Naval Architect, Litton Ship Systems, Advanced Marine Technology Division, Culver City, CA	1970 - 1971

Awards & Honors

- Distinguished Achievement Award for Individuals*, Offshore Technology Conference (OTC 2020), May 4, '20 (<http://2020.otcnet.org/awards/distinguished-achievement-awards-event>)
- Honorary Past-Section Chairman Certificate*, NorCal SNAME Section, September 15, 2017.
- Albert Nelson Marquis (Who's Who) Lifetime Achievement Award*, 2017.
- OOAE-ASME Lifetime Achievement Award (LTA): "In grateful recognition of significant lifetime contribution to hydromechanics and ocean engineering of a distinguished scholar"*@ OMAE2016–Busan, S. Korea, 6/21/16
- Captain Ralph R. & Florence Peachman Lecturer*, University of Michigan, April 13, 2016
- Honoree: *OMAE-2012 Special Symposium in Honor of Ronald W. Yeung on Offshore and Ship Hydrodynamics*, July 1-6, 2012, Rio de Janeiro, Brazil.
- Honorary Professor, Conferred May 12, 2010, Harbin Engineering University, Harbin China.
- SOBENA International Researcher Award 2008*, Sociedade Brasileira de Engenharia Naval ("SOBENA"), Brazilian Society of Marine Engineers, Rio de Janeiro.
- Pi Tau Sigma 2006 Professor of the Year* for Excellence in Teaching, Pi Tau Sigma National Honor Society of Mechanical Engineering, Pi-Omega Chapter, University of California at Berkeley.
- Bill Zimmie Award and Lecturer*, 2006 of The University of Michigan, Ann Arbor for Support of Marine Education.
- Kenneth Davidson Gold Medalist*, Society of Naval Architects and Marine Engineers, for Lifetime Outstanding Scientific Accomplishment in Marine Research, October 2004.
- Georg Weinblum Lecturer*, Schiffbautechnische Gesellschaft - Institut für Schiffbau (Germany) & Society of Naval Architect and Marine Engineers - Naval Studies Board of National Academy of Sciences, 2002-2003.
- Elected Fellow*, Society of Naval Architects and Marine Engineers, April 1998
- U.S. Distinguished Scientist Award*, Alexander von Humboldt Foundation, Germany, 1988 & 1998.
- Fulbright-Hayes Senior Scholar, University of Adelaide, South Australia, 1981.
- Selected Listee: *Who's Who in the World, Who's Who in America, Who's Who in Science & Engineering, American Men & Women of Science, Who's Who in Technology, Who's Who Among Asian Americans.*
- Best Paper Award*, Ocean Renewable Energy Symposium 2009, with Y.-L. Young & M. R. Motley, American Society of Mechanical Engineers (ASME), 28th International Conference of Offshore Mechanics & Arctic Engineering, Honolulu, USA, for paper titled: "Hydroelastic Response of Wind or Tidal Turbines".

Best Paper Award, J.V. Wehausen Symposium of Ship Waves, Hydrodynamics and Ocean Engineering, 2002, with Dr. J. A. Hamilton, 21st International Conference of Offshore Mechanics & Arctic Engineering, Oslo, Norway, for paper titled: "A Perfectly Transparent Spectral Shell for Unsteady Wave-Body Interaction."

Outstanding Paper Award for Originality and Significance, 1992, with Dr. C.-F. Wu, American Society of Mechanical Engineers - Offshore Mechanics & Arctic Engineering Division, for paper titled: "Viscosity Effects on Radiation Hydrodynamics of Two-dimensional Cylinders".

Supervisor of the following fourteen Best Student Paper / Best Student Project Awards:

Mr. Dongchi Yu & Mr. Pierre Lecoindre, *Graduate Paper Honor Prize*, 2016, Society of Naval Architects & Marine Engineers for paper entitled "Numerical and Experimental Analysis of Wave-Resistance Reduction of Asymmetric Di-Hull Systems by Exploiting Interference Effects", March 16, 2016.

Mr. Nathan Tom, Recipient of 2013 OMAE *Subrata Chakrabarti - Young Professional Award (All-Conference)* for his presentation and technical contribution of Paper #OMAEE2013-11247: "Non-Linear Model Predictive Control Applied to a Generic Ocean-Wave Energy Extractor," Nantes, France.

Mr. Lu Wang, *Graduate Paper Honor Prize*, 2014, Society of Naval Architects & Marine Engineers for paper entitled "Nonlinear Waves Generated by a Moving Pressure Patch in Arbitrary Water Depth and the Implied Zero-Wave-Resistance (ZWR) Conditions", presented Mar 19, 2014, also published in *SNAME Annual Transactions*, 2014, pp. 334-350.

Mr. Christophe Cochet, *Graduate Paper Prize*, 2012, Society of Naval Architects & Marine Engineers for paper entitled "Hydrodynamic Performance of a Compound Cylinder Extracting Ocean-Wave Energy", presented Feb 22, 2012, also published in *SNAME Annual Transactions*, 2012, pp. 395-415

Mr. Jonathan Elkin, *Graduate Paper Honor Prize*, 2008, Society of Naval Architects & Marine Engineers for paper entitled "Hydrodynamic Peculiarities of Catamaran-Like Hull Sections."

Mr. Robert Seah, *Graduate Paper Honor Prize*, 2006, Society of Naval Architects & Marine Engineers (SNAME), for paper entitled "Resonant Modes of Rectangular Twin Hulls"

Mr. Gregoire Poupard and Mr. Jean O. Toilliez, *Graduate Paper Honor Prize*, 2004, Society of Naval Architects & Marine Engineers for paper entitled "Fast Evaluators for Optimal Multi-hull Configurations."

Mr. Yiannis Constantinides, *Graduate Paper Honor Prize*, 2002, Society of Naval Architects & Marine Engineers for paper entitled "Vortex-Induced Vibrations of Cylinders with Fins."

Mr. Dominique Roddier & Mr. Shihwei Liao, *Graduate Paper Honor Prize*, 1999, Society of Naval Architects & Marine Engineers, for paper entitled "Simulation of Breaking Waves – Theory and Experiments."

Mr. Anthony Fotsch, *Graduate Paper Honor Prize*, 1998, Society of Naval Architects & Marine Engineers for paper entitled "Inertia and Damping of Plates and Blocks in Finite-Depth Water."

Mr. Shiwei Liao & Mr. Dominique Roddier, *Best Graduate Student Project Award*, 1998, American Society of Mechanical Engineers, Ocean Engineering Division, for project and paper entitled "Generation of Plunging Breakers - Laboratory and Numerical Simulation."

Mr. Andrew Hamilton, *Graduate Paper Honor Prize*, 1995, Society of Naval Architects & Marine Engineers, for paper entitled "Shell Function Methodology for Unsteady Hydrodynamics".

Mr. Xing Yu, *Best Graduate Student Project Award*, 1993, American Society of Mechanical Engineers, Ocean Engineering Division, for project entitled "Interaction of Transient Waves with a Circular Structure".

Mr. Craig Jimenez, *Best Graduate-Student Paper Award*, 1988, Society of Naval Architects & Marine Engineers, for paper entitled "Hydrodynamics of Sail Boards".

Professional Service & Activities

Conference Co-Chair, ASME 39th International Conference on Ocean, Offshore and Arctic Engineering (OMAEE2020 - Virtual), Fort Lauderdale, FL, August 3-7, 2020

National Advisory Board Member of: Univ. of Michigan, Naval Architecture and Marine Engineering (1997-present); Center for Ocean Engineering, Mass. Inst. of Technology (2008-present).

Chair, First Chilean Wave & Tidal Energy Workshop, Valdivia, Chile, October 29-31, 2014.

Conference Chair, ASME 33rd International Conference on Ocean, Offshore and Arctic Engineering (OMAEE2014), San Francisco, CA (1,400 attendees)

Member, International Advisory Panel for Numerical Tank Project, Harbin Engineering University, China, 2013-2014.

- Member, Committee on Naval Engineering in the 21st Century, Transportation Research Board of the National Academies, 2009-2011.
- Member, External Review Board (2005-06) - Delft University of Technology, Marine Technology Program.
- Member of: American Society of Engineering Education, Naval Architects & Marine Engineers (SNAME), Society of Naval Architects of Japan, *Tau Beta Pi*, *Pi Tau Sigma*, *Phi Beta Kappa*.
- Scholarship Committee & Education Committee of SNAME; Academic Liaison & Executive Committee of Northern California Section of SNAME.
- Member of Advisory Board: *Journal of Ocean Engineering and Marine Energy* (2014-), *Journal of Hydrodynamics* (2014-); Editorial Board Member: *International Journal for Computers and Fluids* (1983-), *Journal of Marine Sciences & Technology* (2005-), *Ocean Engineering Journal* (2005-2016), *Brazilian Journal of Marine Systems & Ocean Technology* (2006-), *Journal of Ship Research* (1975-1996), *Journal of Engineering Mathematics* (1986-2008).
- Teaches undergraduate and graduate courses in naval architecture, ocean engineering, marine hydrodynamics, fluid mechanics, and computational methodology.
- Current research interests: Ship and offshore hydromechanics, ship-shore interaction, numerical fluid mechanics, mathematical modeling, surface-waves phenomena, vortical flows, roll-motion damping, "green ship" by design, moon-pool resonance, alternative renewable marine energy. Research for publications have been sponsored by the National Science Foundation, Sea Grant Program of NOAA, Office of Naval Research, the U.S. Navy, KAUST, and marine industry.
- Reviewer for: *J. Fluid Mech.*, *J. Ship Res.*, *Appl. Ocean Res.*, *J. Engrg. Math*, *Int'l J. of Computers & Fluids*, *J. Comput. Physics*, *ASME J. - OMAE*, *Int'l J. of Offshore & Polar Engrg.*, *Wave Motion*, *Int'l J. Numer. Meth. in Fluids*, *J. of Marine Sciences & Technology*, *Ocean Engineering Journal*, *J. of Marine System and Ocean Technology*, *J. Renewable Energy*, *J. Applied Energy*, *National Science Foundation*, *California Inst. of Energy Research*, *Naval Studies Board*, *Australian Research Council*.
- Expert witness: ship-ship interaction hydrodynamics. Principal of "Ronald W. Yeung, Consulting Naval Architect & Ocean Engineer" - provides services for marine and coastal related technical issues, various private firms and government agencies.

Fund Raising

- One of two principal faculty members to solicit and establish an American Bureau of Shipping Endowment of \$4.5 million for Ocean Engineering program at UC Berkeley.
- Initiated and mobilized the establishment of the John V. Wehausen Memorial Graduate Scholarship in 2006, present value of endowment ~\$250K.

Selected Key Publications

- Yeung, R. W., "Sinkage and Trim in First-Order Thin-Ship Theory", *Journal of Ship Research*, vol. 16, no. 1, pp. 47-59, March 1972.
- Yeung, R. W., "A Singularity-Distribution Method for Free-Surface Flow Problems with an Oscillating Body", Report NA73-6, College of Engineering, University of California, Berkeley, 124 pp., August 1973.
- Cummings, D., Yeung, R. W., Kern, E., and Shursky, S., "Mathematical Model of an Air-Cushion Vehicle", Tech. Report 73-C-0138-1, Naval Training Equipment Center, Orlando, Florida, Dec. 1973.
- Sibul, O. J., Yeung, R. W., Scragg C., and Webster W. C., "Prediction of Sinkage and Trim for Ships", Report NA74-1, College of Engineering, University of California, Berkeley, CA, January, 1974.
- Yeung, R. W and Bai, K. J., " Numerical Solutions to Free-Surface Flow Problems", *Proceedings*, 10th Symp. on Naval Hydrodynamics, Cambridge, MA, pp. 609-646, June, 1974.
- Yeung, R. W., "A Hybrid Integral-Equation Method for Time-Harmonic Free-Surface Flows", *Proceedings*, 1st International Conference on Numerical Ship Hydrodynamics, Gaithersburg, Maryland, pp. 581-607, Oct, 1975.
- Yeung, R. W., "Surface Waves due to a Maneuvering Air-Cushion Vehicle", *Journal of Ship Research*, vol. 19, no. 4, pp. 581-607, 1975.
- Yeung, R. W., "Documentation of Four Ocean-related Computer Modules", Report MITSG 76-18, MIT Sea Grant Program, Mass Inst. of Tech., Cambridge, MA, 67 pp, November, 1976.
- Yeung, R. W., and Hwang, W. Y., "Nearfield Hydrodynamic Interactions of Ships in Shallow Water", *Journal of Hydronautics*, vol 11, no. 4, pp. 128-135, 1977.

- Yeung, R. W., "On the Interaction of Slender Ships in Shallow Water", *Journal of Fluid Mechanics*, vol. 85, part 1, pp. 143-159, 1978.
- Yeung, R. W., and Bouger, Y. C., "A Hybrid Integral-Equation Method for Two-Dimensional Ship Waves", *Proceedings*, 2nd Int'l Conf. on Numerical Ship Hydrodynamics, Berkeley, CA, pp. 160-175, September, 1979.
- Yeung, R. W., "Applications of Slender Body Theory to Ships Moving in Restricted Shallow Water", *Proceedings*, Int'l Symp. on Aspects of Navigability, Delft, The Netherlands, vol. 3, Paper 28, April, 1978.
- Yeung, R. W. and Y. C. Bouger, "A Hybrid Integral-Equation Method for Two-Dimensional Ship Waves", *International Journal for Numerical. Methods in Engineering*, vol 14, pp. 317-336, 1979.
- Yeung, R. W. and Tan, W. T., "Hydrodynamic Interaction of Ships with Obstacles in Shallow Water", *Journal of Ship Research*, vol. 24, no. 1, pp. 50-59, 1980.
- Yeung, R. W., "Added Mass and Damping of a Vertical Cylinder in Finite-Depth Waters", *Applied Ocean Research*, vol. 3, no. 3, pp. 119-133, 1981.
- Yeung, R. W., "Numerical Methods in Free-Surface Flows", Report Y81-01, Dept. of Applied Mathematics, University of Adelaide, Adelaide, South Australia, April, 1981.
- Yeung, R. W. and S. H. Kim, "Radiation Forces on Ships with Forward Speeds", *Proceedings*, 3rd International Conference on Numerical Ship Hydrodynamics, Paris, France, pp. 499-515, June, 1981.
- Yeung, R. W., "The Transient Heaving Motion of Floating Cylinders", *Journal of Engineering Mathematics*, vol. 16, no. 2, pp. 97-119, 1982.
- Yeung, R. W., "Numerical Methods in Free-Surface Flows", *Annual Review of Fluid Mechanics*, vol. 14, pp. 395-442, 1982.
- Tuck, E. O., Yeung, R. W., and Helfgott, A., "Cambered (Heart) Valve Leaflets that Maximize Initial Rate of Closure", *Journal of Fluid Mechanics*, vol. 121, pp. 517-529, 1982.
- Yeung, R. W., *The International Workshop on Ship and Platform Motions*, editor., Univ. of Calif. Press, October 1983, 605 p.
- Yeung, R. W., and Kim, S. H., "A New Development in the Theory of Oscillating and Translating Slender Ships", *Proceedings*, 15th Symp. on Naval Hydrodyn., Hamburg, W. Germany, pp. 195-212, 1984.
- Mei, C. C., Yeung, R. W., and K-F. Liu "Lifting of a Large Object from a Seabed", *Journal of Fluid Mechanics*, vol. 152, pp. 203-215, 1985.
- Yeung, R. W., "A Comparative Evaluation of Numerical Methods in Free-Surface Flows", Invited review, *Proceedings*, IUTAM Symp. on Hydrodynamics of Utilization of Ocean-Wave Energy, Lisbon, Portugal, pp. 325-356, July 1985.
- Grosenbaugh, M. A. and Yeung, R. W., "Flow Structure Near a Ship Bow - an Experimental Investigation", Rept. NA85-1, Dept. of Naval Arch. & Offshore Engineering, University of California, Berkeley, CA, October 1985.
- Liou, G-S., Penzien, J., and Yeung, R. W., "Response of Tension-Leg Platforms to Vertical Seismic Excitations", Rept. UCB/EERC-85-14, Earthquake Engineering Research Center, Univ. of California, Berkeley, CA, December 1985.
- Liou, G-S., Penzien, J., and Yeung, R. W., "Dynamic Response of Tension Leg Platforms to Seismic Excitations", *Proceedings*, 5th International Offshore Mechanics & Arctic Engineering Conference, Tokyo, Japan, 1986.
- Wu, C-F. and Yeung, R. W., "Nonlinear Wave-Body Motion in a Closed Domain", *Proceedings*, 2nd Int'l. Workshop on Water Waves & Floating Bodies, Univ. of Bristol, England, February 1987.
- Liou, G-S., Penzien, J., and Yeung, R. W., "Response of Tension Leg Platforms to Vertical Seismic Excitations", with *Earthquake Engineering and Structural Dynamics*, vol. 16, pp. 157-182, 1988.
- Grosenbaugh, M. A. and Yeung, R. W., "Nonlinear Free-surface Flows at a Two-dimensional Bow", , *Proceedings*, 3rd International Workshop on Water Waves & Floating Bodies, Woods Hole, MA, April 1988.
- Grosenbaugh, M. A. and Yeung, R. W., "Nonlinear Bow Flows: An Experimental and Theoretical Investigations", *Proceedings*, 17th Symp. on Naval Hydrodynamics, Den Haag, The Netherlands, 1988.

- Ananthakrishnan P. and Yeung, R. W., "Solution of Nonlinear Water-wave and Wave-body Interaction Problems using a new Boundary-fitted Coordinate Method", *Proceedings, 4th International Workshop on Water Waves & Floating Bodies*, Øystese, Norway, May 1989.
- Yeung, R. W. and Sphaier, S. H., "Wave-Interference Effects on a Truncated Cylinder in a Channel", *Journal of Engineering Mathematics*, vol. 23, pp. 95-117, 1989.
- Grosenbaugh M. A. and Yeung, R. W., "Flow Structure near the Bow of a Two-Dimensional Body", *Journal of Ship Research*, vol 33, no. 4, pp. 269-283, 1989.
- Wu C.-F. and Yeung, R. W., "Nonlinear Wave-Body Motions in a Closed Domain", with C-F. Wu, *International Journal of Computers & Fluids*, vol. 17, no. 2, pp. 351-370, 1989.
- Yeung, R. W. and Sphaier, S. H., "Wave-Interference Effects on a Floating Body in a Towing Tank", with S. H. Sphaier, *Proceedings, 4th International Symposium on Practical Design of Ships & Mobile Units*, Varna, Bulgaria, Paper 95, October 1989.
- Grosenbaugh M. A. and Yeung, R. W., "Nonlinear Free-surface Flows at a Two-dimensional Bow", *Journal of Fluid Mechanics*, vol. 209, pp. 57-75, 1989.
- Yeung, R. W. and Wu C.-F., "Über nichtlineare Wellenbewegung in einem geschlossenen Gebiet", *Jahrbuch der Schiffbau-technischen Gesellschaft*, Band 83, pp. 29-41, 1989.
- Vaidhyanathan M. and Yeung, R. W., "Wave Diffraction over Submerged Obstacles", *Proceedings, 5th International Workshop on Water Waves & Floating Bodies*, Manchester, England, March 1990.
- Ananthakrishnan P. and Yeung, R. W., "Large-Amplitude Oscillation of Two-dimensional bodies in a Viscous Fluid with a Free Surface," *Proceedings, 6th International Workshop on Water Waves & Floating Bodies*, Woods Hole, MA, April 1991.
- Yeung, R. W., "Nonlinear Bow and Stern Waves - Inviscid and Viscous Solutions", Chapter 26 in *Mathematical Approaches in Hydrodynamics*, SIAM Publisher, Philadelphia, PA, May, 1991.
- Yeung, R. W. and Wu, C-F. "Viscosity Effects on the Radiation Hydrodynamics of Two-dimensional Cylinders," *Proceedings, 10th International Offshore Mechanics & Arctic Engineering Conference*, Stavanger, Norway, 1991.
- Yeung, R. W. and Chau, F. P., "Motion of a Barge in Regular and Irregular Waves", Report NAOE 91-1, Dept of Naval Architecture & Offshore Engineering, Univ. of California, Berkeley, June 1991.
- Yeung, R. W. and Wu, C-F., "Viscosity Effects on the Radiation Hydrodynamics of Horizontal Cylinders", *Journal of Offshore Mechanics & Arctic Engineering*, vol. 113, pp. 334-343, 1991.
- Yeung, R. W. and Ananthakrishnan, P., "Oscillation of a Floating Body in a Viscous Fluid", with, *Journal of Engineering Mathematics*, vol. 26, pp. 211-230, 1992.
- Vaidhyanathan, M. and Yeung, R. W., "Non-linear Interaction of Water Waves with Submerged Obstacles", *International Journal for Numerical Methods in Fluids*, vol. 14, pp. 1111-1130, 1992.
- Ananthakrishnan P. and Yeung, R. W., "Oscillation of a Slightly Submerged Cylinder in a Viscous Fluid", *Proceedings, 7th Int. Workshop on Water Waves & Floating Bodies*, Val de Reuil, France, May 1992.
- Yeung, R. W. and Vaidhyanathan, M., "Unsteady Separated Flows About Blunt Bodies", *Proceedings, 2nd International Offshore & Polar Engineering Conference*, San Francisco, June 1992.
- Vaidhyanathan, M. and Yeung, R. W., "Nonlinear Diffraction of Surface Waves over a Submerged Cylinder", *Proceedings, 5th Asian Congress of Fluid Mechanics*, Taejon, S. Korea, August 1992.
- Yeung, R. W. and Ananthakrishnan, P., "Vortical Flows With and Without a Surface-Piercing Body", *Proceedings, 19th Symposium on Naval Hydrodynamics*, Seoul, S. Korea, August 1992.
- Yeung, R. W., Sphaier, S. H., and M. Vaidhyanathan, "Unsteady Flows About Bluff Cylinders", *International Journal of Offshore & Polar Engineering*, vol. 3, no. 2, pp. 81-92, 1993.
- Cermelli, C. and Yeung, R. W., "Shell Functions: A Global Method for Computing Time-Dependent Free-surface Flows", with C. Cermelli, *Proceedings, 8th Int. Workshop on Water Waves & Floating Bodies*, St. Johns, Newfoundland, Canada, May 1993.
- Yeung, R. W. and Vaidhyanathan, M., "Flow Past Oscillating Cylinders", with M. Vaidhyanathan, *Proceedings, 12th International Offshore Mechanics & Arctic Engineering (OMAE) Conference*, Glasgow, Scotland, June, 1993; also *ASME Journal of Offshore Mechanics and Arctic Engineering*, v. 115, no. 4, pp. 197-205, 1993.

- Yu, X., Ananthakrishnan, P., and Yeung, R. W., "Interaction of Transient Waves with a Circular Surface-Piercing Structure", Report NAOE 93-1, Naval Architecture & Offshore Engineering, University of California, Berkeley, August 1993.
- Yu, X. and Yeung, R. W., "Transient Waves Near a Circular Cylinder in Closed and Open Domains", *Proceedings*, 9th International Workshop on Water Waves and Floating Bodies, Kuju, Japan, April 1994.
- Ananthakrishnan P. and Yeung, R. W., "Free-Surface and Submerged-Body Interactions in a Viscous Fluid", *Symposium on Vorticity and Free-Surface Interactions*, 12th US. National Congress of Applied Mechanics, Seattle, Washington, June 1994.
- Vaidhyanathan, M. and Yeung, R. W., "Wave Effects on Separated Flow about Bodies in a Free Surface", *Symposium on Vorticity and Free-Surface Interactions*, 12th U.S. National Congress of Applied Mechanics, Seattle, Washington, June 1994.
- Ananthakrishnan P. and Yeung, R. W., "Nonlinear Interaction of a Vortex Pair with Clean and Surfactant-covered Free Surfaces", *Wave Motion*, vol. 19, pp. 343-365, 1994.
- Yeung, R. W. and Yu, X., "Three-Dimensional Flow Around a Surface-Piercing Body", with X. Yu, *Proceedings*, 20th Symposium on Naval Hydrodynamics, Santa Barbara, CA, August 1994.
- Yeung, R. W. and Vaidhyanathan, M., "Highly Separated Flows Near a Free Surface", *Proceedings*, International Conference on Hydrodynamics, Wuxi, China, October 1994.
- Yu, X. and Yeung, R. W., "Interaction of Transient Waves with a Circular Surface-Piercing Body", *ASME Journal of Fluid Engineering*, vol. 11, no. 9, 382-388, 1995.
- Yu, X. and Yeung, R. W., "Unsteady Waves Near a Circular Cylinder in a Viscous Fluid", *Proceedings*, 10th International Workshop on Water Waves and Floating Bodies, Oxford, England, April 1995.
- Yeung, R. W. and Yu, X., "Wave-Structure Interaction in a Viscous Fluid", *Proceedings*, 14th International Offshore Mechanics & Arctic Engineering (OMAE) Conference, Copenhagen, Denmark, June 1995.
- Yeung, R.W., "3-D Interaction of Surface Waves with a Cylinder in a Viscous Fluid", *Proceedings*, International Congress of Industrial and Applied Mathematics (ICIAM) - 95, Hamburg, Germany, July 1995.
- Yeung, R. W., Cermelli C. and Liao, S.-W. "Vorticity Fields Due to Rolling Bodies in a Free Surface - Experiment and Theory", *Proceedings*, 21st Symposium on Naval Hydrodynamics, Trondheim, Norway, June 1996.
- Hamilton, J. A. and Yeung, R. W., "Shell-Function Solutions for Three-Dimensional Nonlinear Body-Motion Problems", *Schiffstechnik*, Band 44, No. 1, pp. 62-70, 1997.
- Yeung, R. W. and Ananthakrishnan, P., "Viscosity and Surface-Tension Effects on Wave Generation by Translating Bodies", *Journal of Engineering Mathematics*, vol. 32, pp. 257-280, 1997.
- Nguyen, T. C. and Yeung, R. W., "Steady Waves Systems in a Two-Layer Fluid of Finite Depth", *Proceedings*, 12th International Workshop on Water Waves and Floating Bodies, Marseille, France, March 1997.
- Yeung, R. W. and Cermelli, C., "Vortical Flow Generated by a Rolling Plate in a Free Surface", in *Advances in Fluid Mechanics*, Chapter 1, Computational Mechanics Publisher, pp. 1-35, 1998.
- Yeung, R. W., Liao, S.-W. and Roddier D., "On Roll Hydrodynamics of Rectangular Cylinders", *Proceedings*, 8th International Conference of Society of Offshore and Polar Engineers, vol. III, pp. 445-453, Montreal, 1998.
- Nguyen, T. C. and Yeung, R. W., "Radiation and Diffraction of Waves in a Two-Layer Fluid", *Proceedings*, 22nd Symposium on Naval Hydrodynamics, Washington, DC, August 1998.
- Yeung, R. W. and Kim, J. W., "Structural Drag and Deformation of a Moving Load on a Floating Plate", *Proceedings*, 2nd International Conference on Hydroelasticity in Marine Technology, Fukuoka, Japan, pp. 77-88, December 1998.
- Yeung, R. W., Liao S.-W., and D. Roddier, D., "Hydrodynamic Coefficients of Rolling Rectangular Cylinders", *International Journal of Offshore and Polar Engineers*, vol. 9, no. 4., pp. 241-250, 1998.
- Yeung, R. W. and Nguyen, T. C., "Waves Generated by a Moving Source in a Two-Layer Ocean of Finite Depth", *Journal of Engineering Mathematics*, vol. 35, no. 1-2, pp. 85-107, 1999.
- Yeung, R. W., "Special Issue on Ocean Mechanics - and a Dedication to Sir James Lighthill", *Journal of Engineering Mathematics*, vol. 35, no. 1-2, pp. 1-4, 1999.

- Yeung, R. W., *Special Issue on Ocean Mechanics*, Journal of Engineering Mathematics, Editor, with J. N. Newman, Vol. 35, no. 1-2, 250 p, 1999.
- Liao, S.-W. and Roddier, D. and Yeung, R. W., "Interaction of Regular and Extreme Waves with Submerged Cylinders", *Proceedings*, 14th International Workshop of Water Waves and Floating Bodies, Port Huron, Michigan, April 1999.
- Yeung, R. W. and Liao, S.-W., "Time-Domain Solution of Freely-Floating Cylinders in a Viscous Fluid", with S.-W. Liao, *Proceedings*, 9th International Conference of Society of Offshore and Polar Engineers, vol. III, pp. 454-462, Brest, France, May 1999.
- Hamilton, J. A. and Yeung, R. W., "Nonlinear Motion of a Submerged Body in Waves", *Proceedings*, 15th International Workshop of Water Waves and Floating Bodies, Caesarea, Israel, February 2000.
- Yeung, R. W., Roddier D., and S.-W. Liao S.-W., "On Freely-Floating Cylinders Fitted with Bilge Keels", *Proceedings*, 10th International Conference of Society of Offshore and Polar Engineers, Seattle, USA, May 2000.
- Yeung, R. W., Roddier, D., Alessandrini, B., Gentaz, L. V., and Liao S.-W., "On Roll Hydrodynamics of Cylinders Fitted with Bilge Keels", *Proceedings*, 23rd Symposium on Naval Hydrodynamics, Val de Reuil, France, September 2000.
- Yeung, R. W. and Kim, J. W., "Effects of a Translating Load on a Floating Plate – Structural Drag and Plate Deformation", *Journal of Fluids and Structures*, vol. 14, pp. 993-1011, 2000.
- Yeung, R. W. and Liao, S.W., "Investigation of the Mathieu Instability of Roll Motion by a Time-Domain Viscous-Fluid Method", *Proceedings*, 16th Int'l Workshop of Water Waves and Floating Bodies, Hiroshima, Japan, April 2001.
- Yeung, R. W. and Yu, X., "Three-Dimensional Free-Surface Flow with Viscosity – A Spectral Solution", with X. Yu, *Hydrodynamics in Ship and Ocean Engineering*, Special Volume in Honor of M. Ohkusu, RIAM, Kyushu University Publisher, Fukuoka, Japan, April 2001, pp. 87-115.
- Yeung, R. W., Seah R. K.M., and Constantinides, Y., "Roll Damping of Ship Sections with Bilge Keels", Report # OEGG02-1, Ocean Engineering Graduate Group, University of California at Berkeley, iii+50pp. February 2002.
- Yeung, R. W., Seah R. K.M., and Celano T., "The Roll Decay of Floating Cylinders with Bilge Keels", *Proceedings*, 17th International Workshop of Water Waves and Floating Bodies, Cambridge, England, April 2002.
- Yeung, R. W. and Hamilton, J. A., "A Perfectly Transparent Spectral Shell for Unsteady Wave-Body Interaction", *Proceedings* of 21st International Conference on Offshore Mechanics and Arctic Engineering, Oslo, Norway, June 2002.
- Yeung, R. W. "Fluid Dynamics of Finned Bodies - From VIV to FPSO", Plenary Lecture, *Proceedings*, 12th Conference of the International Society of Offshore and Polar Engineers, ISOPE 2002, Kitakyushu, Japan, Vol. 2, pp 1-11, May 2002.
- Yeung, R. W. and Hamilton, J. A., "A Spectral-Shell Solution for Viscous Wave-Body Interaction", *Proceedings*, 24th Symposium on Naval Hydrodynamics, vol. 2, Fukuoka, Japan, July 2002.
- Yeung, R. W. and Seah, R. K-M., "Sway and Roll Hydrodynamics of Cylindrical Sections", *Proceedings*, 13th Conference of the International Society of Offshore and Polar Engineers (ISOPE 2003) Honolulu, HI, vol. 3, pp. 516-523, May 2003.
- Yeung, R. W. and Hamilton, J. A., "Spectral Shell and Perfectly Transparent Open-Boundary Condition for Unsteady Wave-Body Interaction", *Journal of Offshore Mechanics and Arctic Engineering*, vol. 125, pp. 9-16, 2003.
- Hamilton, J. A. and Yeung, R. W., "Viscous and Inviscid Matching for Surface-Piercing Wave-Body Interaction Problems", *Proceedings*, 18th International Workshop of Water Waves and Floating Bodies, Le Croisic, France, April 6-9, 2003
- Seah R. K-M. and Yeung, R. W., "Sway and Roll Hydrodynamics of Cylindrical Sections", *International Journal of Offshore and Polar Engineers*, vol. 13, no. 4, pp. 241-248, December 2003.
- Seah R. K-M. and Yeung, R. W., "The Effects of Viscosity on the Hydrodynamic Properties of Bodies in a Free Surface", *Proceedings*, 19th International Workshop on Water Waves and Floating Bodies, Cortona, Italy, March 2004.
- Yeung, R. W., "Nonlinear Viscosity Effects on Hydrodynamic Inertia and Damping", Abstracts of the 40th Australian and New Zealand Industrial and Applied Mathematics Conference (ANZIAM-2004), Hobart, Australia, p. 50, February 1-6, 2004.

- Yeung, R. W., Poupard G., and Toilliez, J. O., "Interference-Resistance Prediction and Its Applications to Optimal Multi-hull Configuration Design", Paper D41, Society of Naval Architects and Marine Engineers Marine Technology Conference, September 29-October 1, Washington, DC, 2004.
- Yeung, R. W., "Interference Resistance of Multi-Hulls per Thin-Ship Theory", *Proceedings*, 20th International Workshop on Water Waves and Floating Bodies, Longyearbyen, Spitsbergen, Norway, May 2005.
- Seah R. K.M. and Yeung, R. W., "Symmetric Resonant Modes Between Twin Bodies", , *Proceedings*, 21st International Workshop on Water Waves and Floating Bodies, Loughborough, England, April 2006.
- Seah R. K.M. and Yeung, R. W., "On the Behavior of Twin-Hull Heave Hydrodynamic Coefficients," *Proceedings*, 16th International Offshore & Polar Engineering Conference (ISOPE-2006), vol. 3, pp. 230-238, San Francisco, CA, May 2006.
- Yeung, R. W. and Seah R. K.M., "On Helmholtz and Higher-Order Resonance of Twin Floating Bodies", *Journal of Engineering Mathematics*, vol. 58, 251-265, 2007.
- Elkin J. and Yeung, R. W., "Sway and Roll Hydrodynamics of Twin Rectangular Cylinders", *Proceedings*, 22nd Int'l Workshop on Water Waves and Floating Bodies, Cortona, Italy, March 28-31, 2007.
- Yeung, R. W. and Wan, H., "Multi-Hull Configuration Design - A Framework for Powering Minimization", *Proceedings*, 26th Int'l Conf. on Offshore Mechanics and Arctic Engineering (OMAE-2007), Paper # OMAE-2007-29723, 10 p, San Diego, CA, June 10-15, 2007.
- Yeung, R. W. and Wan, H., "Multi-hull and Surface-Effect Ship Configuration Design: A Framework for Powering Minimization", *Journal of Offshore Mechanics & Arctic Engineering*, vol. 130(3), 2008, <http://link.aip.org/link/?JOM/130/031005/1>.
- Yeung, R. W., Wan, H., and Lew, J-M., "Interference Drag of Multiple Pressure Cushions", *Proceedings*, 23rd Int'l Workshop of Water Waves and Floating Bodies, Jeju City, S. Korea, March 28-31, 2008.
- Yeung, R. W., Seah, R. K.M., and Imamura, J., "Separated Flow About a Slender Body in Forward and Lateral Motion", *Proceedings*, 27th Int'l Conference on Offshore Mechanics & Arctic Engineering, Estoril, Portugal, June 15-20, 2008,
- Seah, R. K.M. and Yeung, R. W., "Vortical-Flow Modeling for Ship Hulls in Forward and Lateral Motion", *Proceedings*, 27th Symposium on Naval Hydrodynamics, Seoul, S. Korea, 21 pp, September 2008.
- Aubault, A. and Yeung, R. W., "Multi-Hull Interference Wave-Resistance in Finite-Depth Waters", *Proceedings*, 24th Int'l Workshop on Water Waves and Floating Bodies, Zelenogorsk, Russia, April 19-22, 2009.
- Young, Y. L., Motley, M. R., and Yeung, R. W., "Hydroelastic Response of Wind or Tidal Turbines", *Proceedings*, 28th Int'l Conference on Offshore Mechanics & Arctic Engineering, 7pp, Paper #OMAE2009-80087, Honolulu, USA, May 31-June 5, 2009.
- Dhanak, M., Yeung, R. W., and Kinnas, S., "Impact of the NNRNE Program on Ocean Engineering Education", , *Proceedings*, Annual Meeting of American Society of Engineering Education, Paper AC2009-2427, Atlanta, GA, 14 pp, June 2009.
- Yeung, R. W., Wan, H., Banumurthy, S., Ham, W. L., and Lew, J-M., "Effects of Configuration on Wave Resistance of Multiple Pressure Distributions" *Journal of Marine Systems & Ocean Technology*, vol. 4, no.2, 53-62, December 2008/June 2009.
- Young, Y. L., Motley, M. R., and Yeung, R. W., "Three-Dimensional Numerical Modeling of the Transient Fluid-Structural Interaction Response of Tidal Turbines," *ASME Journal of Offshore Mechanics & Arctic Engineering*, Vol. 132, Iss.1, December 2009, (URL: <http://link.aip.org/link/?JOM/132/011101>)
- Yeung, R. W., Peiffer, A., Tom, N., and Matlak, T., "Design, Analysis, and Evaluation of the UC-Berkeley Ocean-Wave Energy Extractor", *Proceedings*, 28th Int'l Conf. on Offshore Mechanics and Arctic Engineering, 11pp, Jun 6-11, 2010, Shanghai, China, See also *J. Offshore Mech. Arctic Eng.* 134(2), 021902, Dec 06, 2011, [DOI:10.1115/1.4004518]
- Bachynski, E. E., Young, Y. L., and Yeung, R. W., "Performance of a Tethered Point Wave-Energy Absorber in Regular and Irregular Waves", *Proceedings*, ASME 3rd Joint US-European Fluid Engineering Summer Meeting and 8th International Conference on Nanochannels, Microchannels, and Minichannels, Paper # FEDSM-ICNMM2010-30545, 10 pp, 2010.
- Chau, F. P. and Yeung, R. W., "Inertia and Damping of Heaving Compound Cylinders", *Proceedings*, 25-th Int'l Workshop on Water Waves and Floating Bodies, Harbin, China, May 9-12, 2010.

- Bachynski, E. E., Young, Y. L., and Yeung, R. W., "Analysis and Dynamic Scaling of Tethered Wave-Energy Converters in Irregular Waves," *Proceedings, ASME 30th International Conference on Offshore Mechanics and Arctic Engineering (OMAE2011)*, Paper # OMAE2011-49684, Rotterdam, The Netherlands, June 19-24, 2011.
- Hamilton, J. A. and Yeung, R. W., "Viscous and Inviscid Matching of Three-dimensional Free-surface Flows Utilizing Shell Functions", *Journal of Engineering Mathematics*, July 2011, **70** (1-3): pp 43–66, [doi:10.1007/s10665-010-9438-0].
- Nguyen, T. C. and Yeung, R. W., "Unsteady Three-Dimensional Sources for a Two-Layer Fluid of Finite Depths and Their Applications", *Journal of Engineering Mathematics – Special Memorial Volume of E. O. Tuck*, July 2011. **70** (1-3): 67-91. [doi:10.1007/s10665-010-9439-z]
- Yeung, R. W., Makasyeyev, M., and Matte, C., "Wave Elevation under a Moving Pressure Distribution at Minimum-Resistance Conditions" *Proceedings, 26-th Int'l Workshop on Water Waves & Floating Bodies*, Athens, Greece, April 16-20, 2011.
- Yeung, R. W. and Jiang, Y., "Shape Effects on Viscous Damping and Motion of Heaving Cylinders," *Proceedings, ASME 30th International Conference on Offshore Mechanics and Arctic Engineering (OMAE2011)*, Paper No. OMAE2011-52043. Rotterdam, The Netherlands, June 19-24, 2011.
- Yeung, R. W., Toh, W. Y. and Jiang, Y. C., "Geometrical and Viscosity Effects on the Hydrodynamic Properties of Heaving Cylinders", *Special Volume in Celebration of the 15th Anniversary of the Centre for Marine Technology and Engineering (CENTEC) at the Technical University of Lisbon, Portugal*, Taylor & Francis Publisher, 2012 pp. 779-788, 2011 [ISBN-13: 978-0415698085 ISBN-10: 0415698081]
- Bachynski, E. E., Young, Y. L., and Yeung, R. W., "Analysis and optimization of a tethered wave energy converter in irregular waves", *Journal of Renewable Energy*, **8**:133-145, 2012.
- Wan, H. and Yeung, R. W., "Interaction of bodies in free surface with consideration of cross-flow", *Journal of Computers and Fluids*, 2012, vol. 54, p.127-142. [doi:10.1016/j.compfluid.2011.10.005]
- Aubault, A. and Yeung, R. W., "Interference resistance of multi-hull vessels in finite-depth waters" *J. Marine Systems and Ocean Technology (MS&OT)*, 2012, vol. 7, no. 2, pp 107-116. See also: *Proceedings, The 31st ASME International Conference on Ocean, Offshore and Arctic Engineering (OMAE-2012)*, Paper OMAE2012-83777, Rio de Janeiro, Brazil, July 1–6, 2012.
- Cochet, C. and Yeung, R. W., "Two-Component Wave-Energy Absorber – Dynamics Analysis and Configuration Evaluation", *Proceedings, 27-th Int'l Workshop on Water Waves and Floating Bodies*, Copenhagen, Denmark, April 22-25, 2012.
- Tom, N. and Yeung, R. W., "Performance Enhancements and Validations of a Generic Ocean-Wave Energy Extractor," *ASME Journal of Offshore Mech. & Arctic Engineering*, vol. 135, issue 4, 10 pages September, 2013 [DOI:10.1115/1.4024150]; See also: *Proceedings, ASME 31st International Conference on Offshore Mechanics and Arctic Engineering (OMAE2012)*, Paper OMAE2012-83736. Rio de Janeiro, Brazil, July 1-6, 2012.
- Jiang, Y. and Yeung, R. W., "Computational Modeling of Rolling Cams for Wave-Energy Capture in a Viscous Fluid," *Proceedings, ASME 31st International Conference on Offshore Mechanics and Arctic Engineering (OMAE2012)*, Paper OMAE2012-84150, Rio de Janeiro, Brazil, July 1-6, 2012.
- Chau, F. P. and Yeung, R. W., "Inertia, Damping, and Wave Excitation of Heaving Coaxial Cylinders", *Proceedings, ASME 31st International Conference on Ocean, Offshore, and Arctic Engineering (OMAE2012)*, Paper OMAE2012-83987, Rio de Janeiro, Brazil, July 1-6, 2012.
- Cochet, C. and Yeung, R.W., "Dynamic Analysis and Configuration Design of a Two-Component Wave-Energy Absorber", *Proceedings, ASME 31st International Conference on Ocean, Offshore, and Arctic Engineering (OMAE2012)*, Paper OMAE2012-83613, Rio de Janeiro, Brazil, July 1-6, 2012.
- Yeung, R. W., Seah, R. K.M., and Imamura, J., "Lateral Force and Yaw Moment on a Slender Body in Forward Motion at a Yaw Angle", *ASME J. Offshore Mech. & Arctic Eng.*, March 2013, Vol. 135/031101-1, [DOI: 10.1115/1.4006153], See also: *Proceedings of OMAE2008*, Estoril, Portugal, Paper No. OMAE2008-57480.
- Yeung, R. W. and Hariri Nokob, M., "Hypersingular integral-equation solution for a finite-draft surface-piercing cylindrical shell at high- and low-frequency," *Proceedings, 28th Int'l Workshop on Water Waves and Floating Bodies*, L'Isle sur la Sorgue, France, April 7-10, 2013.
- Kanner, S. and Yeung, R. W., "Consideration of a Rotary Power Take-Off Mechanism as a Wave-Energy Converter on the WindFloat Platform," *Proceedings, ASME 32nd International Conference on*

- Offshore Mechanics and Arctic Engineering (OMAE2013)*, Paper No. OMAE2013-11248, Nantes, France, June 9-14, 2013.
- Tom, N. and Yeung, R. W., "Non-Linear Model Predictive Control Applied to a Generic Ocean-Wave Energy Extractor," *Proceedings of the ASME 32nd International Conference on Offshore Mechanics and Arctic Engineering (OMAE2013)*, Paper No. OMAE2013-11247, Nantes, France, June 9-14, 2013.
- Lin, Y.H., Fang, M.-C., and Yeung, R. W., "The optimization of ship weather-routing algorithm based on the composite influence of multi-dynamic elements", *Applied Ocean Research*, **43**, 184–194, October 2013. [doi:10.1016/j.apor.2013.07.010]
- Madhi, F., Sinclair, M. E., and Yeung, R. W., "The "Berkeley Wedge": an asymmetrical energy-capturing floating breakwater of high performance", *Journal of Marine Systems and Ocean Technology (MS&OT)*, 2014, vol. 9, no. 1, pp 5-16. *US Provisional Patent No. 61/883,274 (UC No. BK-2014-037-1)*. "The Berkeley Wedge, A High-performance Energy-Capturing Floating Breakwater or Wave Shield" (<http://techtransfer.universityofcalifornia.edu/NCD/23530.html>)
- Hariri Nokob, M. and Yeung, R. W., "Hypersingular Integral-Equation Method for Wave Diffraction about Arbitrary, Shell-Like Vertical Cylinders in Finite-Depth Waters", *Proceedings, 29th Int'l Workshop on Water Waves and Floating Bodies*, Osaka, Japan, March 30 – April 2, 2014.
- Yeung, R. W. and Jiang, Y., "Bilge-Keel Influence on The Free Decay of Roll Motion of a Three-Dimensional Hull", *Proceedings, ASME 33rd International Conference on Offshore Mechanics and Arctic Engineering (OMAE2014)*, Paper OMAE2014-24542, San Francisco, CA, June 8-13, 2014.
- Son, D. and Yeung, R. W., "Performance Prediction and Validation of a Two-Coaxial Cylinder System as a Wave-Energy Extractor," *Proceedings, ASME 33rd International Conference on Offshore Mechanics and Arctic Engineering (OMAE2014)*, Paper OMAE2014-24582, San Francisco, CA, June 8-13, 2014.
- Hariri Nokob, M. and Yeung, R. W., "Computations of Arbitrary Thin-Shell Vertical Cylinders in a Wave Field by a Hypersingular Integral-Equation Method." OMAE2014-24544, *Proceedings, ASME 33rd International Conference on Offshore Mechanics and Arctic Engineering (OMAE2014)*, Paper OMAE2014-24582, San Francisco, CA, June 8-13, 2014.
- Yeung, R. W. and Jiang, Y., "Bilge-Keel Influence on The Free Decay of Roll Motion of a Three-Dimensional Hull", *Proceedings, ASME 33rd International Conference on Offshore Mechanics and Arctic Engineering (OMAE2014)*, Paper OMAE2014-24542, San Francisco, CA, June 8-13, 2014.
- Fernandez, D., Moreu, J., Guzman, S., Yeung, R. W., and Moreu, M., "Numerical Simulations in the Design of a New Tension-Tethered Marine Current Turbine," *Proceedings, ASME 33rd International Conference on Offshore Mechanics and Arctic Engineering (OMAE2014)*, Paper OMAE2014-24382, San Francisco, CA, June 8-13, 2014.
- Kanner, S. and Yeung, R. W., "Innovation for a Reduction of the Yaw Moment on a Floating Platform with a Vertical-Axis Wind Turbine", *Proceedings, ASME 33rd International Conference on Offshore Mechanics and Arctic Engineering (OMAE2014)*, Paper OMAE2014-23819, San Francisco, CA, June 8-13, 2014.
- Li, J., Tang, YG, and Yeung, R. W., "Effects of Second-order Difference-Frequency Wave Forces on a New Floating Platform for Offshore Wind Turbines," *Journal of Renewable & Sustainable Energy*, Vol. 6, 033102-1, 2014. [DOI: 10.1063/1.4872360]
- Jiang, Y. and Yeung, R. W., "Effects of Bilge Keels and Forward Speed on Roll Decay of Three-Dimensional Hull", *Proceedings, 30th Symposium on Naval Hydrodynamics*, Hobart, Tasmania, Australia, 2-7 November 2014, 20pp.
- Yeung, R. W. and Jiang, Y., "Shape Effects on Viscous Damping and Motion of Heaving Cylinders", *Journal Offshore Mechanics and Arctic Engineering*, Vol. 136, 04180-1, November 2014, [DOI: 10.1115/1.4027650]
- Tom, N. and Yeung, R. W., "Non-Linear Model Predictive Control Applied to a Generic Ocean-Wave Energy Extractor," *Journal Offshore Mechanics and Arctic Engineering*, Vol. 136, 04190-1, November 2014. [DOI: 10.1115/1.4027651]
- Yeung, R. W. and Jiang, Y., "Shape Effects on Viscous Damping and Motion of Heaving Cylinders", *Journal Offshore Mechanics and Arctic Engineering*, Vol. 136, 04180-1, November 2014, [DOI: 10.1115/1.4027650]

- Lin, Q., Lu, D.Q., and Yeung, R. W., "Hydroelastic Response of a Circular Elastic Plate in Waves on a Two-Layer Fluid of Finite Depths," *China Ocean Engineering*, vol. 28, #5, pp 671-686, 2014, [DOI: 10.1007/s13344-014-0053-0]
- Jbaily, A. and Yeung, R. W. "Piezoelectric devices for ocean energy: a brief survey", *J. Ocean Eng. & Mar. Energy*, January, 2015, 1:101-118. [DOI 10.1007/s40722-014-0008-9]
- Lu, D. Q. and Yeung, R. W., "Hydroelastic Waves Generated by Point Loads in a Current", *International Journal of Offshore and Polar Engineering (IJOPE)*, Vol. 25, No. 1, March 2015, pp. 8–12.
- Koukina, E., Kanner, S., and Yeung, R. W., "Actuation of Wind-Loading Torque on Vertical Axis Turbines at Model Scale", *Proceedings, Oceans'15, Marine Technology Society/IEEE*, Paper 141206-002, May18-21, 2015, Genova, Italy.
- Wang, L. and Yeung, R. W., "Nonlinear waves generated by a traveling pressure distribution and the associated waveless shapes," *Journal of Engineering Mathematics*, Volume 91:1-16, 2015. [DOI 10.1007/s10665-014-9738-x]
- Hariri Nokob, M. and Yeung, R. W., "Diffraction and radiation loads on open cylinders of thin and arbitrary shapes," *Journal of Fluid Mechanics*, Volume 772: pp. 649-677, 2015. [DOI:10.1017/jfm.2015.165]
- Tom, N. and Yeung, R. W., "Experimental Confirmation of Nonlinear-Model- Predictive Control Applied Offline to a Permanent Magnet Linear Generator for Ocean-Wave Energy Conversion", *IEEE Journal of Oceanic Engineering*, Issue 99, pp. 1-15, 2015. DOI: 10.1109/JOE.2015.2439871.
- Tom, N., Son, D., Belissen, V., and Yeung, R. W., "Modeling of a Permanent Magnet Linear Generator For Wave-Energy Conversion", *Proceedings, ASME 34th International Conference on Offshore Mechanics and Arctic Engineering*, Paper OMAE2015-42370, St John's, NL., May 31-June 5, 2015.
- Son, D., Belissen, V., and Yeung, R. W., "Optimizing the Performance of a Dual Coaxial-Cylinder Wave-Energy Extractor", *Proceedings, ASME 34th International Conference on Offshore Mechanics and Arctic Engineering*, Paper OMAE2015-42379, St John's, NL. May 31-June 5, 2015.
- Jiang, Y. and Yeung, R. W., "Performance of "Salter's Cam" in 3-DOF Motion and in a Viscous Fluid", *Proceedings, 30th Int'l Workshop on Water Waves and Floating Bodies*, Bristol, U.K., April 12-15 2015.
- Fagan, E., Yeung, R. W., Lean, S., B., and Goggins, J., "Structural and Hydrodynamic Modelling of Composite Tidal Turbine Blades", *Proceedings, 11th European Wave and Tidal Energy Conference (EWTEC'15)*, September 6-11, Nantes, France.
- Jiang, Y. and Yeung, R. W., "Computational Modeling of Rolling Wave-Energy Converters in a Viscous Fluid", *Journal of Offshore Mechanics and Arctic Engineering*, 061901, (Oct 12, 2015) [DOI: 10.1115/1.4031277]
- Yu, D and Lecointre, P., "Numerical and experimental analysis of wave-resistance reduction of asymmetric di-hull systems by exploiting interference effects", Paper presented at NorCal-SNAME Meeting, Berkeley, CA, March 16, 2016, SNAME-Graduate Paper Honor Prize, 2016.
- Zhang, X. and Yeung, R. W. "On Hydrodynamic Behavior of a Cylindrical Moonpool with an Entrapped Two-Layer Fluid, *Proceedings, 31st Int'l Workshop on Water Waves and Floating Bodies*, Plymouth, MI, April 3-6. 2016,
- Jiang, Y. and Yeung, R. W., "Efficient Modeling of the Free Roll Motion of Ship Hulls with Bilge Keels", *Proceedings, 31st Int'l Workshop on Water Waves and Floating Bodies*, Plymouth, MI, April 3-6. 2016,
- Tom, N., Madhi, F., and Yeung, R. W., "Balancing Power Absorption and Structural Loading for an Axisymmetric Heave Wave-Energy Converter in Regular Waves", *Proceedings, ASME 35th International Conference on Ocean, Offshore and Arctic Engineering*, Busan, South Korea, June 19-24, 2016. Paper #OMAE2016-55050. [<https://doi.org/10.1115/OMAE2016-55050>]
- Zhong, Q. and Yeung, R. W., "Wave-Body Interactions Among an Array of Truncated Vertical Cylinders", *Proceedings, ASME 35th International Conference on Ocean, Offshore and Arctic Engineering*, Busan, South Korea, June 19-24, 2016. Paper #OMAE2016-55055. [<https://doi.org/10.1115/OMAE2016-55055>]
- Wang, L., Son, D., and Yeung, R. W., "On the performance of a dual-cylinder wave-energy converter: single versus two degrees of freedom", *Proceedings, ASME 35th International Conference on Ocean, Offshore and Arctic Engineering*, Busan, South Korea, June 19-24, 2016. Paper #OMAE2016-54422. [<https://doi.org/10.1115/OMAE2016-54422>].

- Son, D., Belissen, V., and Yeung, R. W., "Optimizing the Performance Validation and Optimization of a of a Dual Coaxial-Cylinder Wave-Energy Extractor", *Renewable Energy*, Vol. 92, pp.192-201, July 2016. [<http://dx.doi.org/10.1016/j.renene.2016.01.032>].
- Wang, L., Son, D., and Yeung, R. W., "Effect of mooring-line stiffness on the performance of a dual coaxial-cylinder wave-energy converter," *Applied Ocean Research*, 2016, vol. 59, pp. 577-588. [DOI:10.1016/j.apor.2016.07.014]
- Wang, L. and Yeung, R. W., "Investigation of full and partial ground effects on a flapping foil hovering about above a finite-sized platform", *Physics of Fluids*, 2016, Vol. 28, 071902, [<http://dx.doi.org/10.1063/1.4954656>]
- Yeung, R. W., Jiang, Y., and Wang, L., "Validations of a discrete-vortex method (SS-FSRVM) for modeling nonlinear coupled vertical-plane and lateral-plane motions in head waves," in *Proceedings of the 31st Symposium on Naval Hydrodynamics*, Monterey, CA, Sept. 2016., 20 p.
- Wang, L. and Yeung, R. W., "On the performance of a micro-scale Bach-type turbine as predicted by discrete vortex simulations," *Applied Energy*, 183 (2016) 823-836. [<http://dx.doi.org/10.1016/j.apenergy.2016.08.185>]
- Tom, N., Madhi, F., and Yeung, R. W., "Power-to-Load Balancing for Heaving Axisymmetric Wave-Energy Converter with Non-Ideal Power Take-Off", *Renewable Energy*, vol. 131 (2017) 1208-1225, [<https://doi.org/10.1016/j.renene.2017.11.065>]
- Son, D. and Yeung, R. W., "Optimizing ocean-wave energy extraction of a dual coaxial-cylinder WEC using nonlinear model predictive control", *Applied Energy*, vol. 187 (2017) 746-757; [<http://dx.doi.org/10.1016/j.apenergy.2016.11.068>]
- Chen, X., Zhou, B., Zhang, L., and Yeung, R. W. "Evaluating the performance of a variable resonance-frequency wave-energy converter in irregular waves", *Proceedings*, 32nd Int'l Workshop on Water Waves and Floating Bodies, Dalian, China, April 23-26. 2017,
- Yu, D and Lecointre, P., "Numerical and experimental analysis of wave-resistance reduction of asymmetric di-hull systems by exploiting interference effects", Paper presented at NorCal-SNAME Meeting, Berkeley, CA, March 16, 2016, SNAME-Graduate Paper Honor Prize, 2016.
- Yu, D. Lecointre, P., and Yeung, R. W., "Experimentally-based investigation of effects of wave interference on the wave resistance of asymmetric di-hulls" *Applied Ocean Research*, Vol. 65, pp. 142-153, April 2017. [<https://doi.org/10.1016/j.apor.2017.03.018>]
- Yu, D., Wang, L., and Yeung, R. W., "Experimental and numerical studies on di-hull interference" *Proceedings*, 32nd International Workshop on Water Waves and Floating Bodies, Dalian, China, April 23-26, 2017. [http://www.iwwwfb.org/Abstracts/iwwwfb32/iwwwfb32_55.pdf]
- Yu, D. and Yeung, R. W., "Hybridization of theory and experiment in optimizing di-hull configuration with respect to wave resistance", *Proceedings*, ASME 36th International Conference on Ocean, Offshore and Arctic Engineering, Trondheim, Norway, June 25-30, 2017. Paper #OMAE2017-62151 [<https://doi.org/10.1115/OMAE2017-62151>]
- Zhong, Q. and Yeung, R. W., "An Efficient Convex Formulation for Model-Predictive Control on Wave-Energy Converters," *Journal of Offshore Mechanics & Arctic Engineering*, Vol 140(3), pp. 031901, December 2017. [<https://doi.org/10.1115/1.4038503>]
- Zhong, Q. and Yeung, R. W., "An Efficient Convex Formulation for Model Predictive Control on Wave-Energy Converters," *Proceedings*, ASME 36th International Conference on Ocean, Offshore and Arctic Engineering, Trondheim, Norway, June 25-30, 2017. Paper #OMAE2017-62575. [<https://doi.org/10.1115/OMAE2017-62575>]
- Kanner, S. A., Koukina, E., and Yeung, R. W., "Real-Time Hybrid Model Testing of Floating Wind Turbines Using Autonomous Actuation and Control", *Proceedings*, ASME 36th International Conference on Offshore Mechanics and Arctic Engineering, Paper OMAE2017-62575, Trondheim, Norway, June 25- 30, 2017. [<https://doi.org/10.1115/OMAE2017-62175>]
- Zhong, Q. and Yeung, R.W. "Model-Predictive Control Strategy for an Array of Wave-Energy Converters", *Proceedings*, 3rd International Conference for Innovation and Cooperation of Naval Architecture and Marine Engineering, Marine Renewable Energy sub Forum (ICNAME 2017-MRE) Qingdao, China, Sept 6-7, 2017.
- Son, D. and Yeung, R. W., "Real-time implementation and validation of optimal damping control for a permanent-magnet linear generator in wave energy extraction", *Applied Energy*, 2017. 208, pp.571-579. <http://dx.doi.org/10.1016/j.apenergy.2017.09.097>

- Hariri Nokob, M. and Yeung, R. W., "Added mass of thin flat plates of arbitrary shapes with possible openings", *Applied Ocean Research*, Vol. 79, pp. 149-159, October 2018. [<https://doi.org/10.1016/j.apor.2018.06.003>]
- Madhi, F. and Yeung, R. W., "On survivability of asymmetric wave-energy converters in extreme waves", *Renewable Energy*, vol. 102, pp. 1-19, 2018, [<https://dx.doi.org/10.1016/j.renene.2017.07.123>].
- Yuan, Z.-M. and Yeung, R. W. "Unsteady waves generated by two ships with different speeds", *Proceedings*, 33rd International Workshop on Water Waves and Floating Bodies, Guidel-Plages, France, April 4-7, 2018. [http://www.iwwwf.org/Abstracts/iwwwf33/iwwwf33_59.pdf]
- Zhong, Q. and Yeung, R. W., "An Efficient Convex Formulation for Model-Predictive Control on Wave-Energy Converters," *Journal of Offshore Mechanics and Arctic Engineering*, June 2018, Vol. 140 /031901-1; <http://DOI:10.1115/1.4038503>,
- Yuan, Z-M, and Yeung, R. W., "Unsteady Interactions among Multiple Ships with Free-Surface Effects", *Proceedings*, 32nd Symposium on Naval Hydrodynamics, Hamburg, Germany, August 5-10, 2018, 15pp.
- Chen, Z., Zhang, L., and Yeung, R. W., "Analysis and Optimization of a Dual Mass-Spring-Damper (DMSD) Wave-Energy Converter with Variable Resonance Capability", *Renewable Energy*, 131 (2019) 1060-1072; <https://doi.org/10.1016/j.renene.2018.07.006>
- Zhong, Q. and Yeung, R. W., "Performance of a Wave-Energy-Converter Array Operating Under Model-Predictive Control Based on a Convex Formulation," *Proceedings*, ASME 37th International Conference on Ocean, Offshore and Arctic Engineering, Madrid, Spain, June 17-22, 2018. Paper #OMAE2018-78739. [<https://doi.org/10.1115/OMAE2018-78739>]
- Giraldo, D. G. and Yeung, R. W., "The 2010 Oil Spill in the Gulf of Mexico: Flow-Rate Estimation Based on Satellite-Images Analysis," *Proceedings*, ASME 37th International Conference on Ocean, Offshore and Arctic Engineering, Madrid, Spain, June 17-22, 2018. Paper #OMAE2018-78717. [<https://doi.org/10.1115/OMAE2018-78717>]
- Yeung, R. W. and Wang, L., "Radiation and exciting forces of axisymmetric structures with a moonpool in waves", *Journal of Marine Science and Application*, Vol. 17(3), pp. 297-311, September 2018. [<https://doi.org/10.1007/s11804-018-0043-3>]
- Giraldo, D. G. and Yeung, R. W., "The 2010 Oil Spill in the Gulf of Mexico: Flow-Rate Estimation Based on Satellite-Images Analysis," *Journal of Offshore Mechanics & Arctic Engineering*, Vol. 141(5), pp. 051101, February 2019. [<https://doi.org/10.1115/1.4041770>]
- Zhong, Q. and Yeung, R., "Wave-body Interactions among Energy Absorbers in a Wave Farm", *Applied Energy*, January 2019, pp. 1051-1064; <https://doi.org/10.1016/j.apenergy.2018.09.131>
- Yuan, Z.-M., Li, L. and Yeung, R. W. "Free-surface effects on interaction of multiple ships moving at different speeds" *Journal of Ship Research*, April, 2019. [<https://doi.org/10.5957/JOSR.10180089>]
- Zhong, Q. and Yeung, R. W. "Model-Predictive Control Strategy for an Array of Wave-Energy Converters", *Journal of Marine Science & Application*, Vol. 18(1), pp. 26-37, March 2019. [<https://doi.org/10.1007/s11804-019-00081-x>]
- Wang, L., and Yeung, R. W., "An efficient hybrid integral-equation method for point-absorber wave energy converters with a vertical axis of symmetry", *Applied Ocean Research*, Vol. 86, pp. 195-206, May 2019. [<https://doi.org/10.1016/j.apor.2019.02.010>]
- Yu, D., Wang, L., and Yeung, R. W., "Experimental and numerical study of ship-to-ship interactions in overtaking manoeuvres", *Proceedings of the Royal Society A*, Vol. 475(2225), pp. 2018.0748, May 2019. [<https://doi.org/10.1098/rspa.2018.0748>]; <https://dx.doi.org/10.6084/m9.figshare.c.4503983>
- Kanner, S., Koukina, E., and Yeung, R. W. "Power Optimization of Model-Scale Floating Wind Turbines Using Real-Time Hybrid Testing With Autonomous Actuation and Control", *Journal of Offshore Mechanics & Arctic Engineering*, Vol. 141(3): pp. 031902, June 2019. [<https://doi.org/10.1115/1.4041995>]
- Hariri Nokob, M. and Yeung, R. W. "A fast multipole boundary element method for the three dimensional linear water wave-structure interaction problem with arbitrary bottom topography" *Engineering Analysis, with Boundary Elements*, vol. 117 (2020) pp. 232-241, [<https://doi.org/10.1016/j.enganabound.2020.04.004>].

- Yu, D., Wang, L., Zhong, L., and Yeung, R. W. "Evaluation and Optimization of Trimaran Configurations Using Deep Neural Network ", *Proceedings, ASME 38th International Conference on Ocean, Offshore and Arctic Engineering*, Glasgow, Scotland, June 9-13, 2019. Paper #OMAE2019-96832 [<https://doi.org/10.1115/OMAE2019-96832>]
- Zhi, P., Zhang, X., Chen, K., and Yeung, R. W., "Numerical Investigation of Heaving Hydrodynamic Behavior of a Single Cylinder and a Dual Co-axial Cylinder System." *Proceedings, ASME 39th International Conference on Ocean, Offshore and Arctic Engineering*, Fort Lauderdale, USA, August 3-7, 2020. Paper #OMAE2020-18693.
- Li, M., Yuan, Z-M, and Yeung, R. W., "Unsteady Wave-making Resistance of An Accelerating Ship." *Proceedings, ASME 39th International Conference on Ocean, Offshore and Arctic Engineering*, Fort Lauderdale, USA, August 3-7, 2020. Paper #OMAE2020-19350/
- Li, M., Yuan, Z.-M. and Yeung, R. W. "Unsteady waves generated by a ship travelling over a step bottom", *Proceedings, 35th International Workshop on Water Waves and Floating Bodies*, Seoul, Korea, August 23-27, 2020.

Doctoral Dissertation Supervision & Titles

- Romeo H. Bruce, "Dynamics, Simulation and Control of Surface-Effect Ship in Heave, Surge, and Pitch", Ph.D. 1977. Dr. Bruce is a staff member of the Research & Development Department of the Navy of the Philippines, Manila.
- Ki-Han Kim, "Optimal Ship Forms for Minimum Bow Waves, Ph.D. 1977. Dr. Kim is a Program Manager of the Office of Naval Research, Arlington, VA.
- Paul D. Sclavounos, "On the Diffraction of Free-Surface Waves by a Slender Ship", Ph.D. 1981. Dr. Sclavounos is a Professor of ocean engineering at the Massachusetts Institute of Technology, Cambridge, Massachusetts.
- Sea-Heon Kim, "Slender Ships with Forward Speed - a New Approach and a New Theory", Ph.D. 1982. Dr. Kim is a consultant in San Jose, California.
- Ming-Yao, Lee, "Unsteady Fluid-Structure Interaction in Water of Finite Depth", Ph.D. 1985. Dr. Lee is a Program Leader at Chevron Energy Technology Co., Houston, Texas.
- Mark Grosenbaugh, "Nonlinear Flow at the Bow of a Ship - an Experimental and Theoretical Investigation", Ph.D. 1987. Dr. Grosenbaugh was a senior scientist at the Woods Hole Oceanographic Institution (Deep Submergence Group), Woods Hole, Massachusetts, before his passing in August 2012.
- Petri Valanto, "Experimental and Theoretical Investigation of the Ice-breaking Cycle, in Two Dimensions", Ph.D. 1989. Dr. Valanto is a Director at the Hamburg Schiffbau Versuch Anstadt (HSVA), Hamburg, Germany.
- Chun-fa Wu, "Wave-Viscosity Interaction for Bodies in a Free Surface", Ph.D. 1990. Dr. Wu is a principal of Sea Engineering and Vice-President of Interesea WorleyParsons Inc., Houston, Texas.
- P. Ananthakrishnan, "Nonlinear Flows about a Translating Surface-Piercing Body - Effects of Viscosity", Ph.D. 1991. Dr. Ananthakrishnan is an adjunct professor at Florida Atlantic University, Department of Ocean Engineering, Boca Raton, Florida, and a professor at the Indian Institute of Technology, Madras, India.
- M. Vaidhyanathan, "Separated Flows Near a Free Surface", Ph.D. 1993. Dr. Vaidhyanathan is a consultant at Energy & Environmental Economics in San Francisco, California.
- Scott Coakley, "A Uniform Bi-Cubic Surface Spline Method for Free-Surface Flows", Ph.D. 1995. Dr. Coakley is a staff scientist at Exponent Failure Analysis Associates, Mountain View, California.
- Christian Cermelli, "Vortical Flows Generated by a Rolling Plate in a Free Surface", Ph.D. 1995. Dr. Cermelli was an owner and founder of Marine Innovation and Technology, San Francisco, California and Marseilles, France, and is founder of the energy company Ocergy, Inc., CA
- Xing Yu, "Free-Surface Flow Around a Vertical Strut in a Real Fluid", Ph.D. 1996. Dr. Yu is the owner of the Computer & Power Automation, Shanghai, China.
- Thai Nguyen, "Three-Dimensional Green's Functions for in a Two-Layer Fluid of Finite Depth", Ph.D. 1998. Dr. Nguyen was a senior staff researcher at the Coastal Systems of Naval Surface Weapon Center of the U.S. Navy, Panama City, Florida, and now a Visiting Scholar at UC-Berkeley.
- Dominique Roddier, "Hydrodynamics of Rolling Cylinder With and Without Bilge Keels", Ph.D. 2000. Dr. Roddier was CTO of Principle Power Inc., Emeryville, California, known for his "WindFloat"

- floating offshore wind-turbine development and is founder & owner of the energy company Ocergy, Inc., CA
- Shihwei Liao, "Development & Applications of the Free-Surface Random Vortex Method (FSRVM)", Ph.D. 2000. Dr. Liao was senior naval architect at Conoco-Phillips, Houston, Texas, before his passing in December 2009.
- J. Andrew Hamilton, "Viscous and Inviscid Matching for Wave-Body Interaction Problems", Ph.D. 2002. Dr. Hamilton is a staff research scientist at the Monterey Bay Aquarium Research Institute, Monterey, California.
- Robert K. M. Seah, "The SS-FSRVM Computational Model for Three-Dimensional Ship Flows with Viscosity", Ph.D. 2007. Dr. Seah is a Team Leader at Chevron Energy Technology Corporation, Houston, Texas.
- Hui Wan, "Interactions of Multiple Bodies in a Free Surface with Consideration of Cross Flow", Ph.D. 2008. Dr. Wan was engaged as a CFD staff specialist in fluid-dynamics simulation at the Air Force Research Laboratory (AFRL) of the Wright-Patterson Air Force Base, Dayton, Ohio, and an assistant professor in Mechanical & Aerospace Engineering at the University of Colorado, Fort Collins, Colorado.
- Nathan Tom, "Design and Control of a Floating Wave-Energy Converter Utilizing a Permanent Magnet Linear Generator", Ph.D. 2013. Dr. Tom is a staff research scientist at the Marine & Hydrokinetic Energy Division of the National Renewable Energy Laboratory (NREL) at Golden, Colorado.
- Yichen Jiang, "Three-Dimensional Computational Modeling of Multi-DOF Ship Motion in a Viscous Fluid", Ph.D. 2014. Dr. Jiang is an associate professor at Dalian University of Technology, China, after 2 years of post-doc at the Marine Mechanics Laboratory of Univ. Calif. at Berkeley.
- Samuel A. Kanner, "Design, Analysis, Hybrid Testing and Power Optimization of a Semi-Submersible Platform with Counter-Rotating Vertical-Axis Wind Turbines," Ph.D. 2015. Dr. Kanner is a Senior Naval Architect at Principle Power Inc., Emeryville, CA.
- Lu Wang, "High-Performance Discrete-Vortex Algorithms for Unsteady Viscous-Fluid Flows near Moving Boundaries," Ph.D. December 2016. Dr. Wang is a Post-doctoral Fellow of the Wind-Energy Division at the National Renewable Energy Laboratory (NREL), Golden, Colorado,
- Farshad Madhi, "Operational Control and Survivability Enhancement of Asymmetric Wave-Energy Converters", Ph.D. December 2016. Dr. Madhi is a Computational Lithography Scientist at Intel Corporation, Hillsboro, Oregon.
- Daewoong Son, "Performance Evaluation and Optimization of a Dual Coaxial-Cylinder System as an Ocean-Wave Energy Converter", Ph.D. December 2016. Dr. Son is a staff engineer at *Principle Power Inc.*, Emeryville, CA.
- Mohamed Hariri Nokob, "Advances in Computational Methods for Water-Wave Problems," Ph.D. 2017. Dr. Hariri Nokob is a staff data an Applied ML/AI Data Scientist at Voicera Inc., Mountain View, CA.
- Zhong-fei (Ryan) Chen, "Analysis and Optimization of a Dual Mass-Spring-Damper (DMSD) Wave-Energy Converter with Variable Resonance Capability", Ph.D. 2018 (Harbin Engineering University), Dr. Chen is an Assistant Professor at Huanghuai University, Henan, China.
- Qian Zhong, "Hydrodynamic Modeling, Optimal Control, and Performance Evaluation of an Array of Ocean-Wave Energy Converters ", Ph.D. December 2018, Dr. Zhong is a control engineer at Western Digital, Fremont, CA.
- Dongchi Yu, " Experimental and Numerical Study of Steady and Unsteady Multi-hull Systems in Calm Water ", Ph.D. December 2018, Dr. Yu is a design engineer at ASML-Hermes, MicroVision Inc., San Jose, California 95131, USA.

Ronald W. Yeung has also supervised more than 80 Master of Science and Master of Engineering theses and mentored another 2 dozens visiting students and scholars. Further details are available upon request.

Entities with Research & Educational Collaboration: University of Michigan, Tianjin University (China), Technical University of Denmark (Denmark), National Cheng Kung University (Taiwan), University Austral of Chile, Valdivia, (Chile), Harbin Engineering University (China), Dalian Maritime University (Dalian, China), Dalian University of Technology (China), University of Ireland, Galway (Ireland), Shanghai Jiao Tong University (China), University of Strathclyde (Scotland).

Research Highlights and Original Contributions

- *Sinkage and trim of realistic ship hulls* - the first theoretical prediction in literature (1972);
- *Simple-Source (Rankine) Integral-Equation Formulation* for free-surface flows - original developer of method (1973);
- *Maneuvering surface-effects ships (SES) or ACV* - Cushion-chamber evolution modeling, developed for pilot-training simulator (1975);
- *Ship-to-ship interaction, Ship-to-coastline interaction* - Asymptotic hydrodynamics theory developed for such interaction in shallow water (1978-1980);
- *Transient free-surface Green function* -computations for freely floating bodies (1981);
- *Frequency-dependent behavior of hydrodynamic properties* of vertical cylinders in finite-depth water - Graphic data for offshore use (1981);
- *Free-surface flow computational methodologies review* (1982);
- *High-speed slender hulls* - developed new quasi-3D theory by using time-domain cross-plane solution to evaluate forward-speed hydrodynamic coefficients of ships (1981-84);
- *Tank-wall interference* -provided analytical explanation of cross-mode resonance and their effects on testing bodies in a tow tank (1982);
- *Shell-function method for time-dependent flows* - published an original theory on "compute-once and used for all" methodology for wave-structure interaction (1985);
- *Bow-wave oscillations* - experimental discovery of phenomena of unsteady, oscillatory bow waves in steady ship motion (1988);
- *2-D bow and stern flows* - boundary-fitted coordinates Navier-Stokes solutions to examine viscous effects (1990);
- *Frequency-domain viscous free-surface Green function* - derived and applied new Green function to examine diffusion effects of viscosity (1990);
- *Separated flow about bluff bodies* - vortex methods development (1992) with effects of surface waves modeled (1994);
- *Three-dimensional wave-structure interaction* - developed new free-surface spectral method to understand 3-D separate flows (1994-96);
- *Nonlinear floating- body motion* - developed the free-surface random vortex method (FSRVM) for modeling viscous flow with waves (1996-99);
- *Vortex-induced vibration (VIV) and viscous roll damping* - new prediction tool developed based on FSRVM (1998-2000);
- *Stratified flow hydrodynamics* - 3-D Green function for a two-layer fluid in steady motion (1998) and time-harmonic wavy motion (1999);
- *Hydroelastic interaction of floating plates with water* - Aircrafts take-off from floating runways: developed and computed hydro-elastic deformation and wave drag of moving wheels over thin plate (2000);
- *Roll hydrodynamics of cylinders with bilge keels* (1999-2002) - Examined inertia and damping properties of submerged and floating cylinders in a viscous fluid and developed modeling method for study nonlinear 3 degree-of-freedom motion;
- *Fluid dynamics of finned bodies* - plenary review of subject from VIV to FPSO (Floating-Production Storage System) (2002);
- *Shell function methodology for viscous and inviscid flows* - developed a new formulation to treat the coupling of viscous and inviscid flow in free-surface flow computations (2000-2002);
- *Multi-hull Configuration Design Optimization* - extended a classical wave-resistance theory to model multi-hull interference effects and studied complementary parametric optimization algorithms, established internet access for design code (2004-present);
- *Slender-Ship Theory with Vortical-Flow Effects* - developed an analytical framework to allow two-dimensional viscous-fluid modeling be applied to a three-dimensional hull in forward motion, enabling damping effects due to separated flows be predicted (2006-present);
- *Ocean-Wave Energy Extraction* - developed a global analysis of a point-absorber device utilizing a rectilinear electro-magnetic generator, modeling critical parameters of the system (2007-present);

- *Body-shape control for viscous damping* – conducted design and theoretical study of floating-body shapes to control viscous damping of devices so as to improve hydrodynamic and electro-mechanical performance (2009-present);
- *Permanent Magnetic Linear Generator Optimal Control* – theoretical and experimental study of energy-extraction system using nonlinear model predictive control on motion and electrical output in irregular waves for wave-energy device (2011-present);
- *Hypersingular Integral-Equation Methods* – theoretical study of hydrodynamics of thin-sheet body in waves, primarily interested in ocean-structures resonance modes (2013-present).
- *Vertical-Axis Offshore Wind Turbines* – Hybrid modeling of wind-wave loads in a slowly-yaw motion environment (2014-present).
- *Fast Multi-body Wave-Body Interaction Computations* – Analytical and rapid procedure of modeling order of ten or more cylindrical structures in a wave-farm environment, using semi-analytical method for solution (2014-present).
- *“The Berkeley Wedge: A high-Performance Energy-Capturing Floating Breakwater”* – Development of theory and verification of a new concept of an almost 100% wave-energy capture, with no leeway disturbance downstream of incident waves. Filed and approved as USPTO Patent #9,416,766: <https://pdfpiw.uspto.gov/.piw?Docid=09416766>
- *Moon-pool Resonance with a Two-layer Fluid* – Investigate the possibility of transferring resonance motion energy to extreme moon-pool behavior (2015-2017)
- *Prediction of Roll Motion Decay for Ship Hulls* – Slender-Ship formulation for computing 3-D Hulls in beam and head seas to acquire damping behavior in the presence of bilge keels (2015-present).
- *Nonlinear Model-Predictive Control for Ocean Wave Energy Extraction* – Development of hardware and software methodology for point-absorber devices in theoretical modeling and laboratory scales (2015-Present)
- *Double-mass-spring-damper system for variable resonance frequency wave-energy absorber.* Development of theoretical and computational model in frequency and time domain as proof of concept of broadening of bandwidth of energy absorption & controlling resonance point (2015-Present)
- *High-Performance Discrete-Vortex Computational Method Micro-Scale Flows at Lower Reynolds number.* – High performance method on desk-top scale computations to investigate micro-scale behavior of flapping wings at the edge of platform and micro-scale Bach-type Savonius Turbines (2015-Present)
- Investigation of *proximity effects of free-surface flows about Di-hulls and Trimarans*, seeking understanding of origin of favorable and detrimental resistance interference (2016-Present)
- Investigation of a convex formulation for *Model-Predictive Control for an Array of Ocean-Wave Energy Extraction Devices* – Control software methodology for point-absorber devices in theoretical modeling and laboratory scales (2016-Present)
- Development of fast computational methods of hydrodynamic interactions among an array or a farm of wave-energy using hybrid formulation (2016-Present)
- Development of fast *real-time controller and algorithm for coordinating members of wave-energy extractor array* in a collective environment (2017-Present)
- Development of unsteady interaction of marine vehicles with abrupt bathymetry geometry (2019-present)



Prof. Ronald W. Yeung
(October 2016)