Curriculum Vitae

ATHANASSIOS A. DIMAS

1. GENERAL

Department of Civil Engineering
University of Patras
26500 Patras, Greece
Phone: +30 2610 996518 / 6599
Fax: +30 2610 996572
Email: adimas@upatras.gr
Web: http://www.civil.upatras.gr/en/Proswpiko/MelhDEP/entry/DimasAthanassios/

2. EDUCATION

Feb. 1988 – Jun. 1991	**Massachusetts Institute of Technology (MIT).** Ph.D. in Ocean Engineering. Thesis: Nonlinear Interaction of Shear Flows with a Free Surface.
Sep. 1985 – Feb. 1988	**Massachusetts Institute of Technology (MIT).** M.Sc. in Ocean Engineering: Coastal and Offshore Structures Design, Marine Hydrodynamics. Thesis: Interaction Between a Two-Dimensional Wake and the Free Surface at Low Froude Numbers.
Sep. 1985 – Feb. 1988	**Massachusetts Institute of Technology (MIT).** M.Sc. in Mechanical Engineering: Computational Fluid Dynamics, Numerical Analysis Methods, Multivariable Control Systems. Thesis: Interaction Between a Two-Dimensional Wake and the Free Surface at Low Froude Numbers.
Sep. 1980 – Jun. 1985	**National Technical University of Athens (NTUA).** Diploma in Naval Architecture and Marine Engineering. Diploma Grade: 8.98/10. Thesis: Numerical Study of Turbulent Flow Field Around a Hydrofoil.

3. EXPERIENCE

Jun. 2008 – present	Professor. Department of Civil Engineering, University of Patras.
Sep. 2008 – Jun. 2013	Associate Professor. Department of Civil Engineering, University of Patras.
May 2002 – Sep. 2008	Assistant Professor. Department of Civil Engineering, University of Patras.
Sep. 2006 – present	Tutor, Hellenic Open University Postgraduate Course: Environmental Infrastructure Design.
Mar. 1994 – May 2002	Assistant Professor (adjunct and tenure-track). Department of Mechanical Engineering, University of Maryland.
Sep. 1997 – May 2002	Senior Scientist. Krispin Technologies, Inc. and VorCat, Inc.: Computational Fluid Dynamics software development.
Jul. 1991 – Feb. 1994	Postdoctoral Research Associate. Benjamin Levich Institute, The City College of The City University of New York.

Sep. 1985 – Jun. 1991	Research and Teaching Assistant. Department of Ocean Engineering, Massachusetts Institute of Technology.

4. AWARDS

1990 – 1991	Award and Scholarship by the Offshore Mechanics and Polar Engineering Council.
1989	First Prize for Concrete Canoe Design by the American Society of Civil Engineers, New England Section.
1985 – 1991	Graduate Studies Scholarship by the Department of Ocean Engineering, MIT.
1982, 1983, 1984, 1985	Scholarship by the Hellenic State Scholarship Foundation during the 2nd, 3rd, 4th, and 5th academic years at NTUA.
1983, 1984, 1985	Scholarship by the Technical Chamber of Greece during the 3rd, 4th, and 5th academic years at NTUA.

5. PUBLICATIONS

A. Articles in Refereed Journals

1. Grigoriadis, D.G.E., Balaras, E. and Dimas, A.A., 2013. Coherent Structures in Oscillating Turbulent Boundary Layers Over a Fixed Rippled Bed. *Flow, Turbulence and Combustion*, accepted.
2. Dimas A.A. and Vouros, A., 2012. Effect of Cross-Flow Velocity at Forebay on Swirl in Pump Suction Pipe: Hydraulic Model of Seawater Intake at Aliveri Power Plant in Greece. *Journal of Hydraulic Engineering (ASCE)* 138, 812-816.
3. Grigoriadis, D.G.E., Dimas, A.A. and Balaras, E., 2012. Large-Eddy Simulation of Wave Turbulent Boundary Layer over Rippled Bed. *Coastal Engineering* 60, 174-189.
4. Dimakopoulos, A.S. and Dimas, A.A., 2011. Large-wave Simulation of Three-Dimensional, Cross-Shore and Oblique, Spilling Breaking on Constant Slope Beach. *Coastal Engineering* 58, 790-801.
5. Dimas, A.A. and Kolokythas, G.A., 2011. Flow Dynamics and Forces on Ripples Induced by Viscous Wave Propagation Over Rippled Bed. *Journal of Waterway, Port, Coastal, and Ocean Engineering (ASCE)* 137, 64-74.
6. Dimas, A.A. and Dimakopoulos, A.S., 2009. A Surface-Roller Model for the Numerical Simulation of Spilling Wave Breaking Over Constant Slope Beach. *Journal of Waterway, Port, Coastal, and Ocean Engineering (ASCE)* 135, 235-244.
7. Grigoriadis, D.G.E., Balaras, E. and Dimas, A.A., 2009. Large-Eddy Simulations of Unidirectional Water Flow Over Dunes. *Journal of Geophysical Research – Earth Surface* 114, F02022.
8. Dimas, A.A., Fourniotis, N.T., Vouros, A. and Demetracopoulos, A.C., 2008. Effect of Bed Dunes on Spatial Development of Open-Channel Flow. *Journal of Hydraulic Research (IAHR)* 46, 802-813.
9. Dimas, A.A., 2008. Discussion on the Numerical Simulation of Wave-Induced Laminar Boundary Layers. *Coastal Engineering* 55, 1243-1244.
10. Drosos, G.C., Dimas, A.A. and Karabalis, D.L., 2008. Discrete Models for Seismic Analysis of Liquid Storage Tanks of Arbitrary Shape and Fill Height. *Journal of Pressure Vessel Technology* **130**(041801), 1-12.
11. Dimas, A.A., 2007. Large-Wave Simulation of Microscale Breaking Waves Induced by a Free-Surface Drift Layer. *Wave Motion* **44**, 355-370.
12. Dimas, A.A., Mowili, B.M., and Piomelli, U., 2003. Large-Eddy Simulation of Subcritical Transition in an Attachment-Line Boundary Layer. *Computers and Mathematics with Applications* **46**, 571-589.
13. Dimas, A.A. and Fialkowski, L.T., 2000. Large-Wave Simulation (LWS) of Free-Surface

Flows Developing Weak Spilling Breaking Waves. *Journal of Computational Physics* **159**, 172-196.

14. Miller, M.P., Nennstiel, T., Duncan, J.H., Dimas, A.A. and Prostler, S., 1999. Incipient Breaking of Steady Waves in the Presence of Surface Wakes. *Journal of Fluid Mechanics* **383**, 285-305.

15. Dimas, A.A. and Kiger, K.T., 1998. Linear Instability of a Particle-Laden Mixing Layer with a Dynamic Dispersed Phase. *Physics of Fluids* **10**, 2539-2557.

16. Dimas, A.A., 1998. Free-Surface Waves Generation by a Fully-Submerged Wake. *Wave Motion* **27**, 43-54.

17. Duncan, J.H. and Dimas, A.A., 1996. Surface Ripples due to Steady Breaking Waves. *Journal of Fluid Mechanics* **329**, 309-339.

18. Dimas, A.A. and Triantafyllou, G.S., 1995. Baroclinic-Barotropic Instabilities of the Gulf Stream Extension. *Journal of Physical Oceanography* **25**, 825-834.

19. Dimas, A.A. and Triantafyllou, G.S., 1994. Nonlinear Interaction of Shear Flow with a Free Surface. *Journal of Fluid Mechanics* **260**, 211-246.

20. Triantafyllou, G.S. and Dimas, A.A., 1989. Interaction of Two-Dimensional Separated Flows with a Free Surface at Low Froude Numbers. *Physics of Fluids A* **1**, 1813-1821.

21. Tzabiras, G., Dimas, A.A. and Loukakis, T., 1986. A Numerical Method for the Calculation of Incompressible, Steady, Separated Flows around Aerofoils. *International Journal for Numerical Methods in Fluids* **6**, 789-809.

B.   Articles in Referred Books

1. Dimas, A.A. and Kolokythas, G.A., 2010. Reynolds Number Effect on Spatial Development of Viscous Flow Induced by Wave Propagation Over Bed Ripples. In *Advances in Environmental Fluid Mechanics*. Editors: Dragutin T. Mihailovic and Carlo Gualtieri. World Scientific, Singapore.

2. Bernard, P. S., Dimas, A. A. and Lottati, I., 2000. Vortex method analysis of turbulent flows. In *Vortex Methods*, 79-91. World Scientific. Editors: Kamemoto, K. and Tsutahara, M.

3. Miller, M. P., Nennstiel, T., Fialkowski, L. T., Prostler, S., Duncan, J. H. and Dimas, A. A., 2000. Incipient Breaking of Steady Waves. In *Naval Ship Hydrodynamics*, 818-834. The National Academy of Sciences.

4. Bernard, P. S., Dimas, A. A. and Collins, J. P., 1999. Turbulent Flow Modeling Using a Fast Parallel, Vortex Tube and Sheet Method. In *Third International Workshop on Vortex Flows and Related Numerical Methods*, European Series in Applied and Industrial Mathematics (ESAIM), Vol. 7, 46-55. Editors: Giovannini, A., Cottet, G. H., Gagnon, Y., Ghoniem, A. and Meiburg, E.

C.   Articles in Refereed Conference Proceedings

1. Galani, K.A., Dimou, G.D., Karageorgopoulos, E.G. and Dimas, A.A., 2013. PIV Measurements of Turbulent Flow Induced by Waves Above a Rock-Armored Slope. *Proc. Coastal Dynamics 2013*, Arcachon, France.

2. Kolokythas, G.A. and Dimas, A.A., 2013. Three-Dimensional Modelling of Wave-Induced Currents in the Surf Zone. *Proc. Coastal Dynamics 2013*, Arcachon, France.

3. *Dimas, A.A., 2012. Linear Instability of Suspended Sediment Two-Phase Flow During Upwelling/Downwelling. *Proc. 9th International Symposium on Ecohydraulics (ISE 2012)*, to appear, Vienna, Austria.

4. Kolokythas, G.A., Dimakopoulos, A.S. and Dimas, A.A., 2012. Large-Wave Simulation of Turbulent Flow Induced by Wave Propagation and Breaking Over Constant Slope Bed. *Proc. 33rd International Conference on Coastal Engineering (ICCE 2012)*, No. 352, Santander, Spain.

5. Grigoriadis, D.G.E., Dimas, A.A. and Balaras, E., 2012. LES of Oscillating Turbulent Boundary Layer Over Rippled Bed. *Proc. 9th International ERCOFTAC Symposium on*

Engineering Turbulence Modelling and Measurements (ETMM9), No. 132, Thessaloniki, Greece.

6. *Kolokythas, G.A. and Dimas, A.A., 2012. Numerical Simulation of Viscous Flow Under Breaking Waves Over Constant Slope. *Proc. 22nd International Offshore and Polar Engineering Conference (ISOPE 2012)*, Vol. 3, 1213-1217, Rhodes, Greece.

7. Kolokythas, G.A. and Dimas, A.A., 2011. Rippled Bed Morphology Equilibrium Under the Action of Waves. *Proc. Coastal Sediments 11*, 1109-1120, Miami, Florida.

8. Dimakopoulos, A.S. and Dimas, A.A., 2010. Large-Wave Simulation of Three-Dimensional Wave Breaking Over Constant Slope Beach. *Proc. 6th International Symposium on Environmental Hydraulics*, 427-432, Athens, Greece.

9. Kolokythas, G.A. and Dimas, A.A., 2010. Bed Equilibrium During Water Wave Propagation Over Ripples. *Proc. 6th International Symposium on Environmental Hydraulics*, 433-438, Athens, Greece.

10. Galani, K.A., Fourniotis, N.Th., Demetracopoulos, A.C. and Dimas, A.A., 2010. Three-Dimensional Turbulent Flow Over Bed Dunes in Open Channel of Finite Width. *Proc. 6th International Symposium on Environmental Hydraulics*, 985-990, Athens, Greece.

11. Kolokythas, G.A. and Dimas, A.A., 2009. Numerical Simulation of Viscous Free-Surface Flow Induced by Wave Propagation Over Rippled Bed. *Poster Proc. International Conference on Coastal Engineering (ICCE) 2008*, 425-436, Hamburg, Germany.

12. Dimakopoulos, A.S. and Dimas, A.A., 2008. Large-Wave Simulation of Spilling Breakers Over Immersed Longshore Bar. *Proc. 16th Congress of Asia and Pacific Division of International Association of Hydraulic Engineering and Research and 3rd IAHR International Symposium on Hydraulic Structures* A4a124, 1-6, Nanjing, China.

13. Fourniotis, N.T., Toleris, N.E., Dimas, A.A. and Demetracopoulos, A.C., 2008. Numerical Computation of Turbulence in Flow Over Sand Dunes. *Proc. 16th Congress of Asia and Pacific Division of International Association of Hydraulic Engineering and Research and 3rd IAHR International Symposium on Hydraulic Structures* A3a125, 1-6, Nanjing, China.

14. *Dimas, A.A., 2008. Numerical Simulation of Nonlinear Water Wave Propagation Over Rippled Bed. *Proc. iEMSs 2008 International Congress on Environmental Modelling and Software*, Vol. 1, 162-169, Barcelona, Spain.

15. Dimakopoulos, A.S. and Dimas, A.A., 2008. Large-Wave Simulation of Spilling Breakers Over Constant-Slope Bottom. *Proc. 27th International Conference on Offshore Mechanics and Arctic Engineering* OMAE2008-57164, 1-8, Estoril, Portugal.

16. Kolokythas, G.A. and Dimas, A.A., 2007. Numerical Simulation of Nonlinear Water Wave Propagation Over Rippled Bed. *Proc. 5th Joint ASME/JSME Fluids Engineering Conference* **FEDSM2007-37480**, 1-6, San Diego, California.

17. Dimakopoulos, A.S. and Dimas, A.A., 2007. Numerical Simulation of Two-Dimensional Free-Surface Flow and Wave Transformation Over Constant-Slope Bottom Topography. *Proc. 5th Joint ASME/JSME Fluids Engineering Conference* **FEDSM2007-37520**, 1-6, San Diego, California.

18. *Dimas, A.A., Balaras, E. and Grigoriadis, D.G.E., 2007. Turbulence Statistics and Structures by Large-Eddy Simulation of Open-Channel Sub-Critical Flow Over Bed Dune. *Proc. 2007 IAHR Congress*, No. 622, 1-10, Venice, Italy.

19. Grigoriadis, D.G.E., Dimas, A.A. and Balaras, E., 2007. Large-Eddy Simulation of Turbulent Boundary Layer by Steady or Oscillatory Current Flow Over Flat, Wavy, or Rippled Bottom. *Proc. 2007 IAHR Congress*, No. 625, 1-10, Venice, Italy.

20. Fourniotis, N.T., Dimas, A.A. and Demetracopoulos, A.C., 2006. Spatial Development of Turbulent Open Channel Flow Over Bottom with Multiple Dunes. *Proc. River Flow 2006* **1**, Ferreira, Alves, Leal & Cardoso (Eds), ISBN 0-415-40815-6, 1023-1031, Lisbon, Portugal.

21. Dimakopoulos, A.S. and Dimas, A.A., 2006. Numerical Simulation of Nonlinear Wave Propagation and Breaking Over Constant-Slope Bottom. *Proc. 25th International Conference on Offshore Mechanics and Arctic Engineering* **OMAE2006-92163**, 1-10, Hamburg, Germany.

22. Dimakopoulos, A.S. and Dimas, A.A., 2005. Numerical Simulation of Two-Dimensional Free-

Surface Flow and Wave Transformation Over Constant-Slope Bottom Topography. *Proc. XXXI IAHR Congress*, 3798-3807, Seoul, South Korea.

23. *Dimas, A.A., 2005. Large-Wave Simulation of Surface Tension Effect on Weak Spilling Breakers. *Proc. 24th International Conference on Offshore Mechanics and Arctic Engineering* **OMAE2005-67278**, 1-8, Halkidiki, Greece.

24. *Dimas, A.A., Bernard, P.S., Collins, J.P. and Potts, M., 2003. Vortex Method Simulation of Turbulent Boundary Layers. *Proc. XXX IAHR Congress* **D**, 647-654, Thessaloniki, Greece.

25. Bernard, P.S. and Dimas, A.A., 2001. Vortex Method Modeling of Complex, Turbulent, Engineering Flows. *Proc. The Second International Conference on Vortex Methods*. 41-54, Istanbul, Turkey.

26. Bernard, P.S., Dimas, A.A., Collins, J.P. and Lottati, I., 2000. Large Scale Vortex Method Simulation of Turbulent Flow. *Proc. High Performance Computing Symposium*, Editor: A. Tentner, SCS, 25 – 30, Washington, DC.

27. *Dimas, A.A., Lottati, I., Miller, R.H., Strumolo, G.S. and Bernard, P.S., 2000. Turbulent Flow Forces on Hydraulic Valves: A Parallel Vortex Simulation Method. *Proc. ASME Fluids Engineering Division* **FED-253**, 553-558, Orlando, Florida.

28. *Collins, J.P., Dimas, A.A. and Bernard, P.S., 1999. A Parallel Adaptive Fast Multipole Method for High Performance Vortex Method Based Simulations. *Proc. ASME Fluids Engineering Division* **FED-250**, 307-314, Nashville, Tennessee.

29. Bernard, P.S., Dimas, A.A. and Lottati, I.., 1999. Vortex Method Analysis of Turbulent Flows. *Proc. The First International Conference on Vortex Methods*, 137-155, Kobe, Japan.

30. *Dimas, A.A., Bernard, P.S. and Krispin, J., 1999. An Adaptive, Fast, Parallel Vortex Method for Numerical Simulations of Turbulent Separated Flows. *Proc. 37th AIAA Aerospace Sciences Meeting* **AIAA-99-0155**, 1-9, Reno, Nevada.

31. *Dimas, A.A., Collins, J.P. and Bernard, P.S., 1998. A Fast, Parallel Vortex Method For Turbulent Flow Simulation. *Proc. ASME Fluids Engineering Division Summer Meeting* **FEDSM-98-5000**, 1-8, Washington, DC.

32. Shah, A.D., Dimas, A.A. and Humphrey, J.D., 1997. Elastodynamics of Intracranial Saccular Aneurysms. *Proc. ASME Advances in Bioengineering* **BED-36**, 97-98, Dallas, Texas.

33. *Dimas, A.A., 1997. Large Wave Simulations (LWS) of Free-Surface Flows. *Proc. ASME Fluids Engineering Division Summer Meeting* **FEDSM-97-3408**, 1-6, Vancouver, Canada.

34. *Dimas, A.A. and Triantafyllou, G.S., 1995. Numerical Study of Langmuir Circulations in Turbulent Shear Flows with a Free Surface. *Proc. 10th Symposium on Turbulent Shear Flows* **3**, 27:1-6, University Park, Pennsylvania.

35. Triantafyllou, G.S. and Dimas, A.A., 1994. Barotropic/Baroclinic Dynamics of Large-Scale Geophysical Flows. *Proc. BOSS 6th International Symposium on the Behaviour of Offshore Structures* **2**, 359-367, Cambridge, Massachusetts.

36. Dimas, A.A. and Triantafyllou, G.S., 1993. Shear-Flow/Free-Surface Interaction in a Density-Stratified Fluid. *Proc. ISOPE Third International Offshore and Polar Engineering Conference* **3**, 479-486, Singapore.

37. Triantafyllou, G.S. and Dimas, A.A., 1992. Large Scale Vortices in the Ocean and Upwelling. *Proc. BOSS 5th International Symposium on the Behaviour of Offshore Structures* **1**, 121-133, London, UK.

38. *Dimas, A.A. and Triantafyllou, G.S., 1992. Free-Surface Signature of Submerged Shear Flow. *Proc. ISOPE Second International Offshore and Polar Engineering Conference* **3**, 253-261, San Francisco, California.

39. *Dimas, A.A. and Triantafyllou, G.S., 1991. Numerical Study of Shear Flow/Free Surface Interactions. In *Dynamics of Bubbles and Vortices near a Free Surface* (Edited by Sahin, I. and Tryggvason, G.) **AMD-119**, 17-29, ASME, New York.

D.   Abstracts in Conferences

1. Dimas, A.A., Kolokythas, G.A., and Dimakopoulos, A.S. 2011. Large-wave simulation of spilling breaking and undertow current over constant slope beach. *Proc. 64th Annual Meeting of the APS Division of Fluid Dynamics*, Baltimore, Maryland.
2. Dimas, A.A., 2011. Linear Instability of Suspended Sediment Two-Phase Flow. *Proc. International Conference on the Status and Future of the World's Large Rivers*, Vienna, Austria.
3. Dimakopoulos, A.S. and Dimas, A.A., 2010. Large-Wave Simulation of Three-Dimensional Flow Induced by Oblique Wave Propagation Over Constant Slope Beach. *Proc. 8th Euromech Fluid Mechanics Conference*, S14-3, Bad Reichenhall, Germany.
4. Grigoriadis, D.G.E., Dimas, A.A. and Balaras, E., 2010. Oscillating Turbulent Flow Over a Rippled Bottom. *Proc. 8th Euromech Fluid Mechanics Conference*, S6-18, Bad Reichenhall, Germany.
5. Dimas, A.A. and Fialkowski, L.T., 2000. Large-Wave Simulation (LWS) of Free-Surface Flows. *6th U.S. National Congress on Computational Mechanics*, Dearborn, Michigan.
6. Dimas, A.A., Lottati, I. and Bernard, P.S., 2000. Parallel Vortex Method Simulation of Turbulent Flow in a Hydraulic Spool Valve. *53rd Annual Meeting of the APS Division of Fluid Dynamics*, Washington DC.
7. Bernard, P.S., Dimas, A.A. and Lottati, I., 2000. A Vortex Method for Turbulent Flow Simulation, With Applications. *53rd Annual Meeting of the APS Division of Fluid Dynamics*, Washington DC.
8. Bernard, P. S. and Dimas, A. A., 1998. Vortex Method Simulation of High Reynolds Number Prolate Spheroid Flow. *Proc. 51st Annual Meeting of the APS Division of Fluid Dynamics*, Philadelphia, Pennsylvania.
9. Duncan, J. H., Miller, M. P., Dimas, A. A., Nennstiel, T. A. and Prostler, S., 1998. Incipient Breaking of Steady Waves in the Presence of Surface Wakes. *ONR Workshop on Free-Surface and Wall-Bounded Turbulence and Bubbly Flows*, Pasadena, California.
10. Dimas, A. A., 1997. Shear Flows Free-Surface Signature and Effect on Free-Surface Waves: Theory and Numerical Simulations. *5th Panhellenic Conference on Complexity and Chaotic Dynamics of Nonlinear Systems*, Thessaloniki, Greece.
11. Dimas, A. A., 1995. Large Wave Simulation of Breaking Waves. *Proc. 48th Annual Meeting of the APS Division of Fluid Dynamics*, Irvine, California.
12. Dimas, A. A., 1994. Turbulent Wake Shear Flow at Low Froude Numbers. *Proc. 47th Annual Meeting of the APS Division of Fluid Dynamics*, Atlanta, Georgia.
13. Dimas, A. A. and Triantafyllou, G. S., 1994. Free-Surface Wave Breaking Caused by a Subsurface Vorticity Field. *Proc. 12th U.S. National Congress of Applied Mechanics*, Seattle, Washington.
14. Dimas, A. A. and Triantafyllou, G. S., 1993. Turbulent Shear-Flow/Free-Surface Interaction. *Proc. 46th Annual Meeting of the APS Division of Fluid Dynamics*, Albuquerque, New Mexico.
15. Dimas, A. A. and Triantafyllou, G. S., 1993. Nonlinear Interaction of Shear Flow with a Free Surface. *Proc. Annual Meeting of the Society for Industrial and Applied Mathematics*, Philadelphia, Pennsylvania.
16. Dimas, A. A. and Triantafyllou, G. S., 1992. Three-Dimensional, Shear-Flow/Free-Surface Interaction. *Proc. 45th Annual Meeting of the APS Division of Fluid Dynamics*, Tallahassee, Florida.
17. Triantafyllou, G. S. and Dimas, A. A., 1992. Nonlinear Interaction of Shear Flows with a Free Surface. *Proc. XXV ICTAM Symposium*, Haifa, Israel.

6. INVITED LECTURES

- Coastal Exploitation and Protection Works: Proper and Wrong Design Practices.
  Technical Chamber of Greece – Western Greece Regional Meeting on "Coastal Erosion", Patras, 9 April 2011.

- A Proposal for Environmental Management of Patras Port.
  2nd PAN-European FORUM "Environmental Status of Southeast Europe Ports: strengths, weaknesses, opportunities and threats", Patras, 21 June 2010.
- Vortex Computational Algorithm for Turbulence.
  IBM, Watson Research Center, Yorktown Heights, New York, 17 December 1999.
- A Fast, Grid-Free, Vortex Methodology for Turbulent Flow Modelling.
  NASA Langley Research Center - Computational Fluid Dynamics Group, Langley, Virginia, 23 Nov. 1999.
- Fast, Parallel, Grid-Free, CFD Software for Automotive and Energy Engineering Applications.
  The Chrysler Corporation Technology Center, Auburn Hills, Michigan, 8 Dec. 1997.
- Large Wave Simulation of Spilling Breaking Waves.
  Workshop by ONR (Office of Naval Research) on "Free-Surface and Wall-Bounded Turbulence and Turbulent Flows", Pasadena, California, 26 Feb. 1996.
- Free Surface Signature of Turbulent Shear Flows.
  Department of Mechanical Engineering, University of Maryland in Baltimore County, Baltimore, Maryland, 6 Oct. 1995.
- Spectral Methods in Free Surface Flows.
  Department of Material and Nuclear Engineering, University of Maryland in College Park, College Park, Maryland, 28 Mar. 1995.
- Nonlinear Interaction of Shear Flow with a Free Surface.
  Department of Mechanical Engineering, University of Maryland in College Park), College Park, Maryland, Sep. 1993, and Department of Mechanical Engineering, New Jersey Institute of Technology, Newark, New Jersey, Apr. 1993.
- Shear-Flow/Free-Surface Interaction.
  The Benjamin Levich Institute for Physico-Chemical Hydrodynamics, The City College of CUNY (City University of New York), New York, New York, 5 Nov. 1991.
- Interaction of Wakes of Floating Bodies with the Free Surface.
  MIT Sea Grant Marine Industry Collegium on "Interaction of Flow-Fields with Cables, Flexible Risers and Tethers", Cambridge, Massachusetts, Apr. 1991.

7. RESEARCH

A. Interest
- Coastal Hydraulics, Waves and Sediment Transport (Numerical Simulation and Physical Modeling).
- Coastal and Hydraulic Engineering.
- Computational and Theoretical Fluid Mechanics.

B. Projects
29 projects while in Greece (20 as project coordinator or principal investigator) and 5 while in the USA (4 as principal investigator) of basic and applied nature.

C. Recent Basic Research Projects
- SEDITRANS: Sediment transport in fluvial, estuarine and coastal environment.
  Funding: Program FP7-PEOPLE-2013-ITN, European Union
  Budget: €3.7million. Duration: 2013-2017. Participation: Project Coordinator.
- SIMUCOAST: High performance computing for three-dimensional simulation of coastal processes.
  Funding: Program ARISTEIA, GSRT and European Union
  Budget: €175000. Duration: 2012-15. Participation: Principal Investigator.
- Numerical simulation of seabed morphology evolution due to sediment transport induced by wave breaking in the surf zone.
  Funding: Program "Karatheodori" of University of Patras.
  Budget: €33000. Duration: 2011-14. Participation: Principal Investigator.

- Numerical study of steady and unsteady flow in submerged seawater intake pipe.
    - Funding: METKA A.E.
    - Budget: €16500. Duration: 2011. Participation: Principal Investigator.
- Numerical prediction of waves, currents and environmental transport parameters in the coastal and sea zone of the Old and New Port of Patras.
    - Funding: Program PENED of GSRT.
    - Budget: €90000. Duration: 2005-2009. Participation: Principal Investigator.
- Numerical study of advection/diffusion of hot water discharge in the Aliveri harbour.
    - Funding: Public Power Corporation of Greece.
    - Budget: €15000. Duration: 2008. Participation: Principal Investigator.

D. Recent Applied Research Projects
- Flow measurements and visualization in a sea-water intake physical model (Samsun, Turkey).
    - Funding: METKA A.E.
    - Duration: 2010-2011. Participation: Principal Investigator.
- Study of the effect of the proposed port at Rovies (Euboia, Greece) on wave propagation and sediment transport by numerical simulation.
    - Funding: Municipality of Elimnion.
    - Duration: 2010-2011. Participation: Principal Investigator.
- Flow measurements and visualization in a sea-water intake physical model (Aliveri, Greece).
    - Funding: METKA A.E.
    - Duration: 2009-2010. Participation: Principal Investigator.
- Study of the effect of the proposed port at Kiveri (Argolida, Greece) on wave propagation and sediment transport by numerical simulation.
    - Funding: Municipality of Lernas.
    - Duration: 2009-2010. Participation: Principal Investigator.
- Study of the effect of the proposed port at Pentati (Corfu, Greece) on wave propagation and sediment transport by numerical simulation.
    - Funding: TOMH A.E.M.E.Y.
    - Duration: 2009. Participation: Principal Investigator.
- Study of detached breakwater effectiveness on shore protection at Legraina (Attiki, Greece) by numerical simulation of waves, currents and sediment transport.
    - Funding: ECC A.E.
    - Duration: 2009. Participation: Principal Investigator.
- Numerical simulation of wave propagation, current evolution and sediment transport at the west coastal region of Grand Resort Lagonissi.
    - Funding: Attikos Ilios A.E.
    - Duration: 2008. Participation: Principal Investigator.