

# **Dr. ARISTIDES PROSPATHOPOULOS**

## **Brief Curriculum Vitae**

### **General**

Birthplace: Athens  
Birthday: April 1, 1969  
Citizenship: Greek  
Marital status: Married, three children

#### Contact data

Mail address: Hellenic Centre for Marine Research (HCMR), Institute of Oceanography, 190 13 Anavyssos, P.O. Box 712, Greece  
Tel. & Fax.: +30-2910-76399 / +30-2910-76347  
E-mail address: aprosp@ath.hcmr.gr  
Languages: Greek (mother)  
English ((Level: Proficiency of PEG English School)

### **Academic Degrees**

1993: Diploma in Mechanical Engineering, National Technical University of Athens (NTUA).  
2000: PhD Diploma from School of Naval Architecture and Marine Engineering, NTUA, in Underwater Acoustics. Thesis entitled “Three-dimensional acoustic scattering from axisymmetric obstacles in ocean waveguides”, Supervisor: G.A. Athanassoulis, Prof. NTUA.

### **Scholarships**

1987-1988: Hellenic State Scholarships Foundation (as a graduate student)  
1989-1990: Hellenic State Scholarships Foundation (as a graduate student)  
1991-1993: Institute of Applied and Computational Mathematics (IACM) – Foundation of Research and Technology, Hellas (FORTH)  
1994-1998: Hellenic State Scholarships Foundation (as a PhD candidate in Underwater Acoustics)

### **Subjects of Scientific Interest**

- Mathematical modeling and software development for the solution of problems for acoustic propagation and scattering in ocean waveguides, which belongs to the more general scientific areas of Underwater Acoustics and Mathematical Physics.
- Study of the mathematical modeling and implementation of numerical wave models for open sea and coastal areas, which belongs to the more general scientific areas of Ocean and Coastal Mechanics.
- Study of the mathematical modeling and implementation of numerical models for sediment transport in coastal zone, which belongs to the more general scientific areas of Littoral Proc-

esses and Coastal Mechanics.

- Statistical analysis of wave data, which belongs to the more general scientific areas of Statistical Analysis and methods for Technical Measurement Analysis.

## Professional experience / activity

06/04/2001 – current:	Research Assistant in Hellenic Centre for Marine Research (HCMR), Institute of Oceanography. HCMR is a state research centre supervised by the General Secretariat of Research and Technology (GSRT).
01/05/1999 – 05/04/2001:	Research associate of Hellenic Centre for Marine Research, Institute of Oceanography.
01/04/1990 – 28/02/1998:	Research associate of National Technical University of Athens, Dept. Naval Architecture and Marine Eng.

## PARTICIPATION IN RESEARCH PROJECTS

- 1989-1991 “Wave propagation and scattering problems in continuous media with free surface. Direct and inverse problem”, Implementation: School of Naval Architecture and Marine Engineering (SNAME), NTUA, Funding: General Secretariat of Research and Technology (GSRT).
- 1990 “Wave and Wind Atlas of Greek Seas”, Implementation: SNAME, NTUA, Funding: Hellenic Navy.
- 1992-1994 “Development of solution methods for wave problems in ocean environment. Direct and inverse problem”, Implementation: SNAME, NTUA, Research consortium funded by GSRT.
- 1993-1994 “Study of ocean wave phenomena”, Implementation: SNAME, NTUA
- 1994-1997 “Systematic study of hydroacoustic characteristics of Aegean Sea (AMFITRITI)”, Implementation: SNAME, NTUA, Funding: Hellenic Navy.
- 1996-1997 “Atlas of wave energy resource in Europe (WERATLAS)”, Implementation: SNAME, NTUA, Funding: XII DG, E.U.
- 1997 “A European offshore/nearshore statistical toolbox for timely wave climate assessment (EUROWAVES)”, Implementation: SNAME, NTUA, Funding: XII DG, E.U.
- 1997-2002 “POSEIDON: A Monitoring, Forecasting and Information System for the Greek Seas”, Implementation: National Centre for Marine Research, Institute of Oceanography, Funding: EFTA (85%) and Hellenic Ministry of Finance and Economics (15%).
- 2002-2004 “Oceanographic measurements and development of numerical wave and current models in Saronikos Gulf for the Olympic Games 2004”, Implementation: Hellenic Centre for Marine Research, Institute of Oceanography. Funding: Athens 2004 S.A.
- 2003-2004 “Estimation of wave run-up in two areas near Chania, Crete”, Implementation: Hellenic Centre for Marine Research, Institute of Oceanography. Funding: private company. (**Coordinator**)
- 2003-2004 “Study of the erosion and accretion in the west and north coasts of Municipality of Lefkada and treatment of the corresponding problems”, Implementation: Hellenic Centre for Marine Research, Institute of Oceanography. Funding: Municipality of Lefkada, Greece.
- 2003-2006 “An Enhanced Operational System for Monitoring and Prediction of Waves with Applications in Hellenic Shipping”, Implementation: Hellenic Centre for Marine Research, Institute of Oceanography. Funding: GSRT (50%), private companies (50%)
- 2004-2006 “Mathematical approximational solutions of technological problems”, Implementation: Technological Educational Institute of Athens, Dept. of Mathematics (Research associ-

- ate). Funding: Ministry of National Education and Religious Affairs.
- 2006-2008 Greece-Poland bilateral cooperation: “Development of a monitoring and mapping system for marine pollution via a Web-based Geographical Information System”. Implementation: Hellenic Centre for Marine Research. Funding: GSRT. (*Greek Coordinator*)

#### **PARTICIPATION AS INVITED SPEAKER**

- Lecture entitled “Human-made interventions on coasts and relative impacts: Examples from Greek areas” (authors: Dr. A. Prospathopoulos, Dr. Ch. Anagnostou) in meeting “Rationalistic Management and Protection Measures for the Coastal zone and the Sea Environment of Elounda Bay». Organization: Cretan branch of Greek Geotechnical Chamber, Elounda, Crete, 4 October 2005.

#### **PARTICIPATION IN CONFERENCE ORGANIZATION**

- Member of the NCMR Executive Organization Committee in the 3<sup>rd</sup> EuroGoos International Conference “Building the European Capacity in Operational Oceanography”, 3-6 December 2002, Athens, Greece.
- Member of the HCMR Organization Committee in the 1st ESF MedCLIVAR Summer School on “Climate Variability over the Mediterranean area: Atmospheric and Oceanic Components”, 17-27 September 2008, Rhodes, Greece.
- Member of the HCMR Organization Committee in the 3rd ESF MedCLIVAR Workshop on “Understanding the mechanisms responsible for the changes in the Mediterranean Sea circulation and sea level trends”, 29 September – 1 October 2008, Rhodes, Greece.

#### **PARTICIPATION IN PROFESSIONAL GROUPS-ORGANIZATIONS**

- Member of Technical Chamber of Greece since 07/12/1993.
- Member of Hellenic Institute of Acoustics since 02/04/2004.

#### **SPECIAL TRAINING**

2003: SWAN (Simulating Waves Nearshore – Wave model for coastal zones), WL|Delft Hydraulics, Delft, The Netherlands, 23-26 March 2003.

## **Research activity**

#### **JOURNAL PUBLICATIONS**

- Athanassoulis, G.A., **Prospathopoulos, A.M.**, 1996, “Three-dimensional acoustic scattering of a source-generated field from a cylindrical island”, *J. Acoust. Soc. Am.*, vol. 100, pp. 206-218.
- Athanassoulis, G.A., **Prospathopoulos, A.M.**, 2000, “Three-dimensional acoustic scattering from a penetrable layered cylindrical obstacle in a horizontally stratified ocean waveguide”, *J. Acoust. Soc. Am.*, vol. 107, pp. 2406-2417.
- Soukissian, T.H., **Prospathopoulos, A.M.**, Diamanti, Ch., 2002, “Wind and wave data analysis for the Aegean Sea – Preliminary results”, *The Global Atmosphere and Ocean System*, vol. 8, No. 2-3, pp. 163-189.
- Soukissian, T.H. and **Prospathopoulos A.M.**, 2003, “Implementation of the 3<sup>rd</sup> generation wave model WAM-cycle 4 in Aegean Sea”, *Tech. Chron. Sci. J. TCG*, Series IV, Vol. 23, No. 1-2, pp. 7-19.

- **Prospathopoulos, A.**, Sotiropoulos, A., Chatziopoulos, E., Anagnostou, Ch., 2004, “Cross-shore profile and coastline changes of a sandy beach in Pieria, Greece, based on measurements and numerical simulation”, *Mediterranean Marine Science*, Vol. 5 (1), pp. 91-107.
- Bratsos, A.G., Famelis, I.Th., **Prospathopoulos, A.M.**, 2006, “A parametric finite-difference method for shallow sea waves”, *International Journal for Numerical Methods in Fluids*, Vol. 53, pp. 129-147.
- Soukissian, T.H., **Prospathopoulos, A.M.**, 2006, “The Errors-in-Variables approach for the validation of the WAM wave model in the Aegean Sea”, *Mediterranean Marine Science*, Vol. 7 (1), pp. 47-62.
- **Prospathopoulos, A.M.**, Athanassoulis, G.A., Belibassakis, K.A., 2008, “Underwater acoustic scattering from a radially layered cylindrical obstacle in a 3D ocean waveguide”, *Journal of Sound and Vibration*, Vol. 319 (3-5), pp. 1285-1300.
- Soukissian, T., **Prospathopoulos, A.**, Hatzinaki M., Kabouridou M., 2008, “Assesment of the wind and wave climate of the Hellenic Seas using 10-year hindcast results”, *The Open Ocean Engineering Journal*, 1, pp. 1-12.
- Kulawiak M., **Prospathopoulos A.**, Perivoliotis L., Luba M., Kioroglou S., Stepnowski A., 2010, “Interactive visualization of marine pollution monitoring and forecasting data via a Web-based GIS”, *Computers & Geosciences* (Accepted for publication).

#### PAPERS IN CONFERENCE PROCEEDINGS (FULL REVIEW)

- Athanassoulis, G.A. and **Prospathopoulos, A.M.** 1994, “3D acoustic scattering of source-generated field by an axisymmetric island”, in Proceedings of the XIth Symposium in Hydroacoustics, Z. Jagodzinski and R. Salamon, eds., The Academy of Polish Navy, pp. 75-82 (Gdynia-Jurata, Poland, 24-27 May 1994).
- Athanassoulis, G.A., **Prospathopoulos, A.M.**, and Belibassakis, K.A. 1996, “A normal-mode solution for 3D acoustic scattering from a cylindrical island”, in Proceedings of the 3rd European Conference on Underwater Acoustics, J.A. Papadakis, ed., Crete University Press, Vol. I, pp. 273-278 (Heraklion, Hellas, 24-28 June 1996).
- Soukissian, T., Perivoliotis, L., **Prospathopoulos, A.**, Papadopoulos, A., 2001, “Performance of three numerical wave models on the Aegean Sea. First results”, in The Proceedings of the 11th International Offshore and Polar Engineering Conference, Vol. III, J.S. Chung, M. Prevosto and N. Mizutani, eds., pp. 40-45 (Stavanger, Norway, 17-22 June 2001).
- **Prospathopoulos, A.M.**, Photiadou, Ch., and Soukissian, T.H., “Wave transformation on two Greek coastal profiles by using a one-dimensional Boussinesq-type model”, in the CD-ROM Proceedings of the 1st International Conference “From Scientific Computing to Computational Engineering” (IC-SCCE), Athens, Greece, 8-10 September 2004.
- Bratsos, A.G., **Prospathopoulos A.M.**, Natsis, D., and Sarantopoulos S., “A numerical scheme for a shallow water equation in constant-depth environment”, in the CD-ROM Proceedings the 1st International Conference “From Scientific Computing to Computational Engineering” (IC-SCCE), Athens, Greece, 8-10 September 2004.
- Soukissian, T., **Prospathopoulos A.**, Korres, G., Papadopoulos, A., Hatzinaki, M., Kabouridou, M., 2008, “A new Wind and Wave Atlas of the Hellenic Seas”, in The Proceedings of the ASME 27th International Conference on Offshore Mechanics and Arctic Engineering (OMAE2008), OMAE2008-57082, Estoril, Portugal, 15-20 June 2008.
- Tsabaris, C., **Prospathopoulos, A.**, 2008, “An information system for radioactivity level in aquatic environments”, in The Proceedings of the 1st International Conference on Information Technology (IT 2008), A. Stepnowski, M. Moszynski, T. Kochanski, J. Dabrowski, eds., pp. 373-376 (Gdansk, Poland, 19-21 May 2008).

#### **ABSTRACTS IN CONFERENCE PROCEEDINGS (SELECTED)**

- Diamanti, C., Soukissian, T.H. & **Prospathopoulos, A.M.**, 2001, “Comparison of the SWAN shallow water wave model with wave measurements”, *Geophysical Research Abstracts*, Vol. 3, 26<sup>th</sup> General Assembly of the EGS (Nice, France, 25-30 March 2001).
- Soukissian, T.H. & **Prospathopoulos, A.M.**, 2001, “Application of the Poseidon System to the Aegean Sea: One-year wave climate of the North Aegean”, Proceedings of INTERREG Meeting (Kavala, Greece, 28-30 May 2001).
- Georgopoulos D., Chronis G., Nittis K., Soukissian T., Perivoliotis L., Papadopoulos A., Zervakis V., Papageorgiou E., Ballas D., Mallios A., **Prospathopoulos A.**, Diamanti Ch., and Barbetseas S., 2002, “The POSEIDON System: An operational monitoring and forecasting system in the Eastern Mediterranean Sea”, in Abstracts of the 2nd International Conference “Oceanography of the Eastern Mediterranean and Black Sea”, pp. 73 (Ankara, Turkey, 14-18 October 2002).
- **Prospathopoulos A.**, Kulawiak M., Kioroglou S., Perivoliotis L., Mariusz L., Grammatikaki M., and Stepnowski A., 2008, “Integrating a Web-based GIS to a marine pollution monitoring and forecasting system”, in Book of Abstracts of the International Conference “Marine Data and Information Systems (IMDIS-2008)”, pp. 156 (Athens, Greece, 31 March – 2 April 2008).

#### **REVIEWER IN JOURNALS / CONFERENCES**

- Reviewer in ASME International Conference “27th International Conference on Offshore Mechanics and Arctic Engineering (OMAE2008)”, Estoril, Portugal, 15-20 June 2008.

#### **Educator / trainer experience**

- Invited lecturer in the post-graduate programm of the Dept. of Marine Science in the Aegean University with subject: “Introduction to littoral processes”, 25 January 2002, Mytilini, Greece.
- Co-lecturer in the class “Wave phenomena in ocean environment” during 1994-1995, School of Naval Architecture and Marine Engineering, NTUA.
- 2002–2003: Training of the three post-graduate students in HCMR on the use of numerical modeling system LITPACK (sediment transport models for littoral processes), and co-supervision of their Master Thesis.
- 2004: Training of a graduate student in HCMR on the use of numerical model MIKE 21 BW (solution of Boussinesq equation for shallow water).