

CURRICULUM VITAE (SHORT)

Name: José Simão Antunes do Carmo

Place and date of birth: Coimbra, the 30th of January 1956

Nationality: Portuguese

Institutional address: University of Coimbra, Faculty of Sciences and Technology, Department of Civil Engineering, Street Luis Reis Santos – Polo II of the University, 3030-788 Coimbra, Portugal
Tel.: + 351 239 797 153/100 - Fax: + 351 239 797 152/123 - E-mail: jsacarmo@dec.uc.pt

Academic degrees:

- Aggregation in Engineering Sciences, Civil Engineering, University of Coimbra, Portugal (2003).
- PhD in Engineering Sciences, Civil Engineering - Hydraulics, University of Coimbra, Portugal (1995).
- MSc in Hydraulics and Water Resources, Technical University of Lisbon (IST), Portugal (1990).
- Graduation in Civil Engineering, University of Coimbra, Portugal (1980).

Present position:

Associate Professor (Aggregated), Faculty of Sciences and Technology, University of Coimbra, Portugal: 2005 -.

Previous positions:

- Assistant Professor, Faculty of Sciences and Technology, University of Coimbra - Portugal: 1995-2005.
- Assistant, Faculty of Sciences and Technology, University of Coimbra - Portugal: 1990-1995.
- Invited Assistant, University of Beira Interior, Covilhã - Portugal: 1984-1987.
- Assistant, Department of Mathematics, University of Aveiro - Portugal: 1981-1984.

Main scientific technical areas of research:

Hydrodynamics; Numerical Methods; Generation and Propagation of Waves; River and Coastal Morphodynamics; Coastal Protection; Coastal Management; Oil Spills in Coastal Zones; River Flows; Water Quality Modelling; Turbulence Modelling.

Significant positions:

- Director of the Portuguese *Journal of Water Resources*, since July 1998.
- Co-Editor of the International *Journal of Integrated Coastal Zone Management*, since October 2006.
- Reviewer of papers submitted to the following ISI journals (since 1995):
 - *International Journal for Numerical Methods in Fluids*
 - *Journal of Advances in Engineering Software*
 - *Journal of Environmental Management*
 - *Ocean & Coastal Management*
 - *Journal of Coastal Research*
 - *Journal of Marine Systems*
 - *Journal of Hydrology*
 - *Ecological Modelling*

Publications (50 most relevant):

- **ANTUNES DO CARMO J.S.** & CARVALHO M.R.F., 2011. “Large dam-reservoir systems: Guidelines and tools to estimate loads resulting from natural hazards.” *Natural Hazards*, Springer Netherlands (doi:10.1007/s11069-011-9740-9) (Posted online on February 22, 2011).
- **ANTUNES DO CARMO J.S.**, VOORDE M.T. & NEVES M.G., 2011. “Enhancing submerged coastal constructions by incorporating multifunctional purposes.” *Journal of Coastal Conservation*, Springer Netherlands (doi:10.1007/s11852-010-0141-0) (Posted online on January 14, 2011).
- **ANTUNES DO CARMO J.S.**, NEVES M.G. & VOORDE M.T., 2011. “Designing a multifunctional artificial reef: Studies on the influence of parameters with most influence in the vertical plane.” *Journal of Coastal Conservation*, Springer Netherlands, Vol. 15, No. 1, 99-112 (doi:10.1007/s11852-010-0124-1).
- **ANTUNES DO CARMO J.S.**, SCHRECK REIS C. & FREITAS M.H., 2010. “Working with nature by protecting sand dunes: Lessons learned.” *Journal of Coastal Research*, CERF, Vol. 26, No. 6, 1068-1078 (doi:10.2112/JCOASTRES-D-10-00022.1).
- **ANTUNES DO CARMO J.S.**, 2010. “Wave-current interactions over bottom with appreciable variations both in space and time.” *Journal of Advances in Engineering Software*, Vol. 41, No. 2, 295-305 (doi:10.1016/j.advengsoft.2009.07.007).
- VOORDE M.T., **ANTUNES DO CARMO J.S.**, NEVES M.G. & MENDONÇA A., 2009. “Physical and numerical study of ‘breaker types’ over an artificial reef.” *Journal of Coastal Research SI* 56, 569-573.
- **ANTUNES DO CARMO J.S.**, SCHRECK REIS C. & FREITAS M.H., 2009. “Rehabilitation of a geotextile-reinforced sand dune.” *Journal of Coastal Research SI* 56, 282-286.
- VOORDE M.T., **ANTUNES DO CARMO J.S.** & NEVES M.G., 2009. “Designing a preliminary multi-functional artificial reef to protect the Portuguese coast.” *Journal of Coastal Research*, Vol. 25, No. 1, 69-79.
- SCHRECK REIS C., **ANTUNES DO CARMO J.S.** & FREITAS M.H., 2008. “Learning with nature. A sand dune system case-study (Portugal).” *Journal of Coastal Research*, Vol. 24, N° 6, 1505-1515.
- CARVALHO M.R.F. & **ANTUNES DO CARMO J.S.**, 2007. “Landslides into reservoirs and their impacts on banks.” *Journal of Environmental Fluid Mechanics*, Springer Netherlands, Vol. 7, N° 6, 481- 493. ISSN 1567-7419.
- Ten VOORDE M., **ANTUNES DO CARMO J.S.** & NEVES M.G., 2007. “Numerical simulations for the design of a multi-functional artificial reef for Leirosa coast, Portugal.” *International Journal of Ecodynamics*, Eds. Tiezzi, Jørgensen, Brebbia, Chon & Patten, Vol. 2, No. 2, 124-132.
- **ANTUNES DO CARMO J.S.** & CARVALHO R.F., 2007. “Guidelines and tools to design and manage properly dam-reservoir systems.” RIVER BASIN MANAGEMENT 2007 Conference, Kos - Greece, 23-25 May. Published in *River Basin Management IV*, 97-107, Eds. C.A. Brebbia & K.L. Katsifarakis, WITPRESS. ISBN 978-1-84564-075-0.
- **ANTUNES DO CARMO J.S.**, REIS C.S. & FREITAS H., 2006. “Successful rehabilitation of a sand dune system.” Proc. COASTAL ENVIRONMENT 2006 Conference, Rhodes - Greece, 05-07 de

June. Published in *Environmental Problems in Coastal Regions VI, Including Oil and Chemical Spill Studies*, 195-204, Ed. WITPRESS. ISBN 1-84564-167-1.

- Ten VOORDE M., **ANTUNES DO CARMO J.S.** & NEVES M.G., 2006. “Artificial surfing reefs: The preparation of physical tests and the theory behind.” Proc. COASTLAB’06, Porto - Portugal, 08-10 May.
- CARVALHO R.F. & **ANTUNES DO CARMO J.S.**, 2006. “Numerical and experimental modelling of the generation and propagation of waves caused by landslides into reservoirs and their effects on dams.” Proc. RIVER FLOW 2006 IAHR Conference, Lisbon (LNEC) - Portugal, 06-08 September. Ed. Taylor & Francis / BALKEMA, Vol. 1, 483-492. ISBN 0-415-40810-5.
- **ANTUNES DO CARMO J.S.**, PINHO J.L.S. & VIEIRA J.M.P., 2006. “Contribution to the preservation of healthy coastal ecosystems.” Proc. WATER POLLUTION 2006 Conference, Bologna - Italy, 04-06 September. Published in *Water Pollution VIII. Modelling, Monitoring and Management*, 15-24. Eds. C.A. Brebbia & J.S. Antunes do Carmo, WITPRESS. ISBN 1-84564-042-X.
- **ANTUNES DO CARMO J.S.**, PINHO, J.S. & VIEIRA, J.P., 2005. “Oil spills in coastal zones: Environmental impacts and practical mitigating solutions.” Proc. IMAM - Maritime Transportation and Exploitation of Ocean and Coastal Resources, Lisbon - Portugal, 26-30 September, 1689-1696. Ed. Taylor & Francis / BALKEMA. ISBN volume 2: 0 415 39374 4, cd-rom: 0 415 39433 3.
- REIS, C.S., **ANTUNES DO CARMO J.S.** & FREITAS, H., 2005. “Leirosa sand dunes: A case study on coastal protection.” Proc. IMAM - Maritime Transportation and Exploitation of Ocean and Coastal Resources, Lisbon, 26-30 September, 1469-1474. Ed. Taylor & Francis / BALKEMA. ISBN Vol. 2: 0 415 39374 4, cd-rom: 0 415 39433 3.
- **ANTUNES DO CARMO J.S.**, 2005. “Experimental study on local scour around bridge piers in rivers.” Proc. RIVER BASIN MANAGEMENT 2005 Conference, Bologna - Italy, 06-08 September. Published in *River Basin Management III*, 03-13. Ed. WITPRESS. ISBN 1-84564-023-3.
- BRAVO N.L. & **ANTUNES DO CARMO J.S.**, 2005. “Study of fluvial processes applying geographic information systems.” Proc. RIVER BASIN MANAGEMENT III Conference, Bologna - Italy, 06-08 September. Published in *River Basin Management III*, 525-533. Eds. C.A. Brebbia & J. S. Antunes do Carmo, WITPRESS. ISBN 1-84564-023-3.
- LOPES L.F.G., **ANTUNES DO CARMO J.S.** & CORTES R.M., 2004. “Hydrodynamics and water quality modeling in a river Lima segment: Application on the instream flow definition.” *International Journal on Ecological Modelling*, Elsevier Science, Vol. 173, No. 2-3, 197-218.
- PINHO J.L.S., VIEIRA J.M.P & **ANTUNES DO CARMO J.S.**, 2004. “Hydroinformatic environment for coastal waters hydrodynamics and water quality modelling.” *Journal of Advances in Engineering Software*, Elsevier Science, Vol. 35, 205-222.
- PINHO J.L.S., **ANTUNES DO CARMO J.S.** & VIEIRA J.M.P., 2004. “Mathematical modelling of oil spills in the Atlantic Iberian coastal waters.” Proc. 4th International Conference on Hydrocarbon Spills, Modelling, Analysis & Control, Alicante – Spain, 28-30 April. Published in *Coastal Environment V incorporating Oil Spill Studies*, Part 2, 337-347. Eds. C.A. Brebbia, J.M. Saval Perez, L. Garcia Andion & Y. Villacampa, WITPRESS. ISBN 1-85312-710-8.
- **ANTUNES DO CARMO, J.S.**, TEMPERVILLE, A. & SEABRA SANTOS, F.J., 2003. “Bottom friction and time-dependent shear stress for wave-current interaction.” *Journal of Hydraulic Research*,

IAHR, Vol. 41, No. 1, 27-37.

- **CARREIRAS, J., ANTUNES DO CARMO, J.S. & SEABRA-SANTOS, F.J.**, 2003. "Settlement of vertical piles exposed to waves." *Journal of Coastal Engineering*, Elsevier Science, Vol. 47, 355-365.
- **RAMOS M., ALMEIDA M., SILVA P., DUBERT J. & ANTUNES DO CARMO J.S.**, 2003. "Modelling study of the dispersion of pollutants at São Jacinto submarine outfall (Aveiro, Portugal)." Proc. COASTAL ENGINEERING 2003 Conference, Cadiz - Spain, 23-25 June. Published in *Coastal Engineering VI*, 133 -141, Eds. C.A. Brebbia, D. Almorza & F. López-Aguayo, WITPRESS. ISBN 1-85312-977-1.
- **LOPES L.F.G., ANTUNES DO CARMO J.S. & CORTES R.M.V.**, 2003. "Influence of dam-reservoirs exploitation on the water quality." Proc. RIVER BASIN MANAGEMENT 2003 Conference, Las Palmas (Gran Canaria) - Spain, 28-30 April. Published in *River Basin Management II*. 221-230, Ed. C.A Brebbia, WITPRESS. ISBN 1-85312-966-6.
- **ANTUNES DO CARMO, J.S., SEABRA SANTOS, F.J. & AMADO-MENDES, P.**, 2002. "Sudden bed changes and wave-current interactions in coastal regions." *Journal of Advances in Engineering Software*, Elsevier Science, Vol. 33, No. 2, 97-107.
- **ANTUNES DO CARMO, J.S. & SEABRA SANTOS, F.J.**, 2002. "Near-shore sediment dynamics computation under the combined effects of waves and currents." *Journal of Advances in Engineering Software*, Elsevier Science, Vol. 33, No. 1, 37-48.
- **PINHO J.L.S., ANTUNES DO CARMO J.S. & VIEIRA J.M.P.**, 2002. "Numerical modelling of oil spills in coastal zones. A case study." Proc. OIL SPILL'2002 Conference, Rhodes – Greece, 18-20 September. Published in *Oil & Hydrocarbon Spills III. Modelling, Analysis and Control*, 35-45, Ed. C.A Brebbia, WITPRESS. ISBN 1-85312-922-4.
- **ANTUNES DO CARMO J.S. & CARREIRAS J.**, 2002. "Hydrodynamics around coastal structures." Proc. HYDROSOFT IX Conference, Montreal - Canada, 29-31 May. Published in *Hydraulic Information Management*, 3-12, Eds. C.A. Brebbia & W.R. Blain, WITPRESS. ISBN 1-85312-912-7.
- **SANCHO, F., MENDES, P.A., ANTUNES DO CARMO, J.S., NEVES, M.G., TOMASICCHIO, G.R., ARCHETTI, R., DAMIANI, L., MOSSA, M., RINALDI, A., GIRONDELLA, X. & S-ARCILLA, A.S.**, 2001. "Wave hydrodynamics over a barred beach." Proc. 4th Int. Symp. on Ocean Wave Measurement and Analysis – Waves 2001, S. Francisco - USA, September. Published in *Ocean Wave Measurement and Analysis*, ASCE, Vol. 2, 1170-1179.
- **ANTUNES DO CARMO, J.S. & MARQUES, J.C.**, 2001 "River dynamics and restoration. A comprehensive management strategy." Proc. River Basin Management 2001 Conference, Cardiff - UK, 11–13 September. Published in *River Basin Management*, 63 - 72, Ed. WITPRESS. ISBN 1-85312-876-7.
- **PINHO J.L.S., VIEIRA J.M.P. & ANTUNES DO CARMO J.S.**, 2001. "Hydrodynamics and water quality studies in Ria de Arosa applying mathematical modelling." Proc. Oceans III Millennium, 1st International Congress on Marine Science and Technology, Pontevedra (Galicia) - Spain, 24-27 April.
- **ANTUNES DO CARMO, J.S. & COSTA, M.M.**, 2000. "Oil spill evolution in estuaries and coastal regions." Proc. OIL SPILL'2000 Conference, Las Palmas - Spain, 20-22 September. Published in *Oil & Hydrocarbon Spills II, Modelling, Analysis and Control*, 63-72, Ed. WITPRESS. ISBN 1-85312-

828-7.

- SILVA, P.A., **ANTUNES DO CARMO, J.S.**, TEMPERVILLE, A. & SEABRA-SANTOS, F., 2000. "Cross-shore beach profile predicted by two sand transport models." Proc. HYDROSOFT'2000 Conference, Lisbon - Portugal, 12-14 June. Published in *Hydraulic Engineering Software VIII*, 207-215, Ed. WITPRESS. ISBN 1-85312-814-7.
- **ANTUNES DO CARMO, J.S.** & ISIDORO, J.M., 2000. "Integrated morphological processes in estuaries and fluvial regions." Proc. HYDROSOFT'2000 Conference, Lisbon - Portugal, 12-14 June. Published in *Hydraulic Engineering Software VIII*, 189-197, Ed. WITPRESS. ISBN 1-85312-814-7.
- **ANTUNES DO CARMO, J.S.** & SEABRA SANTOS, F.J., 1999. "Morphodynamic evolution processes in coastal and estuarine regions: A case study." Proc. *EPMESC VII*, Macau, 02-05 August 2, 1459 - 1468.
- PINHO J.L.S., DUARTE A.A.L.S., VIEIRA J.M.P. & **ANTUNES DO CARMO J.S.**, 1999. "Mesh generation and refinement in 2D hydrodynamic modelling. A case study." Proc. *EPMESC VII*, Macau, 02-05 August. Eds. João Bento, Arantes e Oliveira & Eduardo Pereira, Vol. 2, 1167-1176. ISBN 0080419127.
- **ANTUNES DO CARMO, J.S.** & SEABRA SANTOS, F.J., 1998. "A numerical hybrid model for the solution of Boussinesq-type equations." *Hydraulic Engineering Software VII*, Ed. W.R. Blain, Wessex Institute of Technology, Southampton, UK, 577 - 586. Proc. HYDROSOFT'98 Conference, Como (Milan) - Italy, 16-18 September.
- **ANTUNES DO CARMO J.S.**, SEABRA SANTOS F.J. & TEMPERVILLE A., 1998. "Bottom friction and time-dependent shear stress for wave-current interaction." Proc. First Symposium of European Marine Societies: Epicontinental and Regional Seas, Boulogne-sur-Mer, Wimereux, 20-23 April.
- AVILEZ-VALENTE, P., **ANTUNES DO CARMO, J.S.**, SEABRA SANTOS, F.J. & VELOSO-GOMES, F. 1997. "General wave model for large coastal areas." *Multiple Scale Analyses and Coupled Physical Systems*, 179 - 186. SAINT-VENANT Symposium, Paris - France, 28-29 August.
- **ANTUNES DO CARMO, J.S.** & SEABRA SANTOS, F.J., 1996. "On breaking waves and wave-current interaction in shallow water: A 2DH finite element model." *International Journal for Numerical Methods in Fluids*, 22, 429 - 444.
- **ANTUNES DO CARMO J.S.**, SILVA P.A. & SEABRA SANTOS F.J., 1996. "The K-L turbulence model vs parametric formulations." Proc. HYDROSOFT'96 Conference, Penang - Malasia, 10-12 September. Published in *Hydraulic Engineering Software VI*, 323-334, Ed. W.R. Blain, WITPRESS/CMP. ISBN 1-85312-405-2.
- **ANTUNES DO CARMO, J.S.** & SEABRA SANTOS, F.J., 1995. "Numerical Simulation of Nearshore Processes." Proc. *EPMESC V*, Macau, 01-04 August 2, 1311 - 1317.
- SEABRA SANTOS F.J., **ANTUNES DO CARMO J.S.** & AMADO MENDES P., 1995. "Numerical visualization of gravity surface waves generation and propagation." Proc. *EPMESC V*, Macau, 01-04 August. Eds. Arantes e Oliveira & João Bento, Vol. 2, 1319-1324. ISBN 89-85670-08-5.
- **ANTUNES DO CARMO J.S.** & SEABRA SANTOS F.J., 1994. "On a non-cohesive sediment dynamics under the combined effects of waves and currents: a 2D (in plane) finite element shallow

water model." Proc. Second International Conference on Air-Sea Interaction and on Meteorology and Oceanography of the Coastal Zone. American Meteorological Society, 298-299.

- **ANTUNES DO CARMO, J.S.** & SEABRA SANTOS, F.J., 1994. "Integrated 2D (in plane) mobile boundary flow model in shallow water." IAHR International Symposium on Waves - Physical and Numerical Modelling, Vancouver - Canada, 21-24 August.

- **ANTUNES DO CARMO, J.S.** & SEABRA SANTOS, F.J., 1994. "On the non-cohesive sediment dynamics in wave-current co-existing systems." Published in *Modelling of Coastal and Estuarine Processes*. ISSN 0870-5011, Edited by F. J. Seabra Santos and A. Temperville, 283 - 293.

- **ANTUNES DO CARMO, J.S.** & SEABRA SANTOS, F.J., 1994. "On modelling breaking waves and wave-current interaction in shallow water." Published in *Modelling of Coastal and Estuarine Processes*. ISSN 0870-5011, Edited by F. J. Seabra Santos and A. Temperville, 15 - 22.

- **ANTUNES DO CARMO, J.S.**, SEABRA SANTOS, F.J. & ALMEIDA, A.B., 1993. "Numerical solution of the generalized Serre equations with the MacCormack finite-difference scheme." *International Journal for Numerical Methods in Fluids*, 16, 725 - 738.

- **ANTUNES DO CARMO, J.S.**, SEABRA SANTOS, F.J. & BARTHÉLEMY, E., 1993. "Surface waves propagation in shallow-water: A finite element model." *International Journal for Numerical Methods in Fluids*, 16, 447 - 459.

- SEABRA SANTOS F.J., LOPES DE ALMEIDA J.P. & **ANTUNES DO CARMO J.S.**, 1990. "Numerical modelling of water waves propagation." Proc. *EPMESC III*, Macau, 01-03 August. Eds. Arantes e Oliveira & João Bento, Vol. 3, 741 - 750.

Organization of scientific technical meetings (last 12 years):

- Member of the Scientific Committee for the XIV IMAM – International Maritime Association of the Mediterranean Conference (<http://www.imam2011.it/>) – Genova (Italy), 13-16 September 2011.

- Member of the Scientific Committee for the 6th Engineering Luso-Mozambican Congress <http://paginas.fe.up.pt/clme/2011/> - Maputo, Mozambique, August 29 –September 02 2011.

- Member of the Scientific Committee for the 6th Congress on Planning and Management of the Coastal Zones of the Countries of Portuguese Expression (<http://www.aprh.pt/ZonasCosteiras2011/>)- Boa Vista Island, Cabo Verde, April 2011.

- Member of the Scientific Committee for the 10th Water Congress, Algarve, Portugal, March 2010.

- Chairman of the International Organizing Committee of the 5th Congress on Planning and Management of the Coastal Zones of the Countries of Portuguese Expression, Itajaí, Santa Catarina, Brazil, September 30 - October 02 2009.

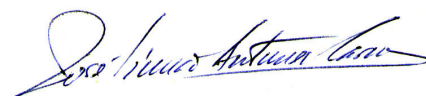
- Member of the International Scientific Advisory Committee for the 6th COASTAL PROCESSES'2009 Conference, La Valetta, Malta, September 2009.

- Chairman of the Scientific Advisory Committee for the 4th Congress on Planning and Management of the Coastal Zones of the Countries of Portuguese Expression, Funchal, Madeira, Portugal, October 2007.

- Member of the International Scientific Advisory Committee for the ECOSUD 2007 Conference, Coimbra, Portugal, September 2007.

- Member of the International Scientific Advisory Committee for the IAHR River Flow 2006 Conference, Lisbon, Portugal, September 2006.
- Co-Chairman of the Organizing Committee for the Water Pollution 2006 Conference, Bologna, Italy, September 2006.
- Member of the International Scientific Advisory Committee for the Coastal Environment 2006 Conference, Rhodes, Greece, June 2006.
- Member of the Scientific Advisory Committee for the 8th Water Congress, Portuguese Association of Water Resources, Figueira da Foz, Portugal, March 2006.
- Chairman of the Organizing Committee for the 3rd Congress on Planning and Management of the Coastal Zones of the Countries of Portuguese Expression. Maputo, Mozambique, October 2005.
- Member of the Scientific Advisory Committee for the IMAM 2005 – Maritime Transportation and Exploitation of Ocean and Coastal Resources. Lisbon, Portugal, September 2005.
- Co-Chairman of the Organizing Committee for the River Basin Management 2005 Conference, Bologna, Italy, September 2005.
- Member of the International Scientific Advisory Committee for the 5th International Conference on Coastal Regions incorporating oil spills studies. Alicante, Spain, April 2004.
- Member of the International Scientific Advisory Committee for the VI SILUSBA (Symposium on Hydraulics and Water Resources of the Countries which use Portuguese as the Official Language). Conference. Praia, Cape Verde, November 2003.
- Member of the Organizing Committee of the 2nd Congress on Planning and Management of the Coastal Zones of the Countries of Portuguese Expression. Recife, Brazil, October 2003.
- Member of the International Scientific Advisory Committee for the River Basin Management 2003 Conference. Las Palmas, Gran Canaria, Spain, April 2003.
- Member of the International Scientific Advisory Committee for the Oil Spill 2002 Conference. Rhodes, Greece, September 2002.
- Member of the International Scientific Advisory Committee for the Hydrossoft 2002 Conference. Montreal, Canada, May 2002.
- Member of the International Scientific Advisory Committee for the River Basin Management 2001 Conference. Cardiff, UK, September 2001.
- Member of the International Organizing Committee for the V SILUSBA SILUSBA (Symposium on Hydraulics and Water Resources of the Countries which use Portuguese as the Official Language). Aracaju, Brazil, November 2001.
- Member of the International Scientific Advisory Committee for the Oil, Spill 2000 Conference. September, Las Palmas, Gran Canaria, Spain, September 2000.
- Member of the International Scientific Advisory Committee for the Hydrossoft 2000 Conference. Lisbon, Portugal, June 2000.

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