CURRICULUM VITAE

PERSONAL DATA

Name	André Bustorff Fortunato
Place and date of birth	Lisbon, January 21, 1966
Nationality	Portuguese
Job Title	Principal Research Officer with Habilitation
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ACADEMIC AND PROFESSIONAL DEGREES

2006 Habilitation for Scientific Coordination in Maritime Hydraulics. Laboratório Nacional de Engenharia Civil, Portugal.

1996 Ph.D. in Environmental Science and Engineering. Oregon Graduate Institute of Science & Technology, USA.

1989 Diploma in Civil Engineering (hydraulics and water resources). Technical University of Lisbon, Portugal.

CURRENT AND PREVIOUS POSTS

Since 2006. Senior Research Officer with Habilitation, LNEC, Portugal.

Since 2003. Head of the Estuaries and Coastal Zones Division, LNEC, Portugal.

2003-2006. Senior Research Officer, LNEC, Portugal.

1998-2003. Research Officer, LNEC, Portugal.

1997. Research Trainee, LNEC, Portugal.

1995-1996. Fellow Research Officer, LNEC, Portugal.

1990-1995: Postgraduate Research Assistant. Oregon Graduate Institute of Science & Technology, USA.

1989-1990: Fellow Research Trainee, LNEC, Portugal.

DOMAINS OF EXPERTISE

- Estuarine and coastal dynamics.
- Sediment dynamics and morphodynamics.
- Numerical modeling of physical processes in coasts and estuaries.

ONGOING PROJECTS

Research projects

- *MADyCOS – Multidisciplinary integrated analysis of the sediment dynamics and fecal contamination in intermittent coastal systems*, funded by Fundação para a Ciência e a Tecnologia, 2007-2010.

- *G-Cast – Application of GRID-computing in a coastal morphodynamics nowcast-forecast system*, funded by Fundação para a Ciência e a Tecnologia, 2007-2010.

- *NOWCAST – Towards a nowcast-forecast system for estuarine and coastal water quality*, funded by the Luso-American Foundation for Development and the National Science Foundation, 2007-2008.

- *IMMATIE – Improvement of a Morphodynamic Model Applied to Tidal Inlet Environments*, funded by the Marie Curie Program of the European Commission, 2006-2008.

- *EMERA – Evolution of the Aveiro Tidal Inlet*, funded by Fundação para a Ciência e a Tecnologia, 2005-2008.

- *Morphodynamics of tidal inlets,* PhD thesis funded by Fundação para a Ciência e a Tecnologia, 2003-2008.

- *BGem - Towards operational forecasting of ecosystem dynamics: Benchmarking and Grid-enabling of an ecological model*, funded by the Luso-American Foundation for Development and the National Science Foundation, 2008-2009.

- *MURANO – Muros das Marinhas de Sal da Ria de Aveiro,* funded by Fundação para a Ciência e a Tecnologia, 2008-2010.

- *SANDEX* - SAnD EXtraction in the portuguese continental shelf: impacts and morphodynamic evolution, funded by Fundação para a Ciência e a Tecnologia, 2008-2010.

Consultancy projects

- Sines Production Center – water intake basin. Analysis of the inflow of algae to the water intake, funded by Electricidade de Portugal (PI).

- Outflow of the thermal plumes from five power plants in Morocco (Cap Rhir, Bir el Har, Tarfaya, Dhar Doum and Tan Tan), funded by Hidroprojecto S.A. and Office National de l'Électricité (PI and co-PI)

SUPERVISING EXPERIENCE

- Pos-doctoral research fellows: Dr. Xavier Bertin (2006-2008)
- PhD research fellow: Lígia Pinto (University of Coimbra, s. 2003)
- M.Sc. research fellows: Lígia Pinto (University of Lisbon, 2000-2003), Ana Picado (University of Aveiro, s. 2008)
- Advisor and co-advisor of several B.Sc. theses.

SERVICE AND HONORS

Sc. Comm. Journal "Revista Gestão Costeira Integrada" (Integrated Coastal Zone Management Journal), since 2007; Open Ocean Engineering Journal, since 2007.

6º Encontro Nacional de Mecânica Computacional, 2000; 7º Congresso de Mecânica Aplicada e Computacional, 2003; Congresso de Métodos Computacionais em Engenharia, 2004; III Congresso sobre Planeamento e Gestão das Zonas Costeiras dos Países de Expressão Portuguesa, 2005; IV Congresso sobre Planeamento e Gestão das Zonas Costeiras dos Países de Expressão Portuguesa, 2007.

Reviewer: Environmental Fluid Mechanics; Industría del Agua; International Journal for Computational Fluid Dynamics; International Journal for Numerical Methods in Fluids; Journal of Coastal Research; Journal of Hydraulic Engineering; Ocean Dynamics; Recursos Hídricos; Revista Gestão Costeira Integrada.

Awards: 2006: honorable mention in the Young Investigator Award in Applied and Computational Mechanics 2005, Portuguese Association of Theoretical, Applied and Computational Mechanics; 2005: award for the best ISI indexed papers published in 2004, awarded by LNEC.

Citations: 100 citations in the ISI Web of Science.

JOURNAL PAPERS

2008 Bertin, X., A.B. Fortunato and A. Oliveira. A modeling-based analysis of processes driving wave-dominated inlets, *Continental Shelf Research*, submitted.

2008 Fortunato, A.B., X. Bertin and A. Oliveira. Space and time variability of uncertainty in morphodynamic simulations, *Coastal Engineering*, submitted.

2008 Bertin, X., A. Oliveira and A.B. Fortunato. Simulating morphodynamics with unstructured grids: description and validation of an operational model for coastal applications, *Ocean Modelling*, submitted.

2008 Dias, J.M., M.C. Sousa, X. Bertin, A.B. Fortunato and A. Oliveira. Numerical modeling of the impact of the Ancão Inlet relocation (Ria Formosa, Portugal), *Environmental Modeling and Software*, submitted.

2008 Fortunato, A.B., M. Clímaco, F.S.B.F. Oliveira, A. Oliveira, F. Sancho and P. Freire. Dinâmica fisiográfica da oral costeira: Estudos de reabilitação e protecção, *Revista Gestão Costeira Integrada*, 8/1: 45-63.

2007 Fortunato, A.B. and A. Oliveira. Improving the stability of a morphodynamic modeling system, *Journal of Coastal Research*, SI50: 486-490.

2007 Oliveira, A., A.B. Fortunato, M. Rodrigues and A. Azevedo. Integration of physical and water quality models, *Houille Blanche,* 4: 40-46.

2007 Fortunato, A.B. and A. Oliveira. Case study: promoting the stability of the Óbidos lagoon inlet, *Journal of Hydraulic Engineering,* 133/7: 816-824.

2007 Fortunato, A.B. Accuracy of sediment flux computations in tidally-driven simulations, *Journal of Waterways, Ports, Coastal and Ocean Engineering*, 133/5: 377-380.

2006 Pinto, L., A.B. Fortunato and P. Freire. Sensitivity analysis of non-cohesive sediment transport formulae, *Continental Shelf Research*, 26/15, 1826-1839

2006 Oliveira, A., A.B. Fortunato and J. Rego. Effect of morphological changes on the hydrodynamics and flushing properties of the Óbidos lagoon, *Continental Shelf Research*, 26, 917-942.

2006 Oliveira, A., A.B. Fortunato and L. Pinto. Modeling the hydrodynamics and the fate of passive and active tracers in the Guadiana estuary, *Estuarine, Coastal and Shelf Science*, 70, 76-84.

2006 Rocha, J.S., A. Oliveira, M.C. Silva, A.E. Barbosa and A.B. Fortunato. O rigor e a garantia de qualidade na modelação em recursos hídricos, *Revista Engenharia e Vida*, 22: 46-51.

2005 Fortunato, A.B. and A. Oliveira. Influence of intertidal flats on tidal asymmetry, *Journal of Coastal Research*, 21/5: 1062-1067.

2004 Fortunato, A.B. and A. Oliveira, 2004. A modeling system for tidally driven long-term morphodynamics, *Journal of Hydraulic Research*, 42/4: 426-434.

2004 Pinto, L., A.B. Fortunato, A. Oliveira, A. Jorge da Silva and A.I. Santos. Haline stratification in the Guadiana estuary. Part I: data analysis. *Recursos Hídricos*, 25 (2), 85-97 (in Portuguese).

2004 Pinto, L., A.B. Fortunato, A. Oliveira and A.M. Baptista. Haline stratification in the Guadiana estuary. Part II: numerical modeling. *Recursos Hídricos*, 25 (2), 99-110 (in Portuguese).

2004 Fortunato, A.B. and A. Oliveira. A morphodynamic model for estuaries based on unstructured grids, *Applied Computing Engineering Journal*, 3/2: 87-93 (in Portuguese).

2004 Oliveira, A., A.B. Fortunato and A.M. Baptista. A Two-dimensional transport model through a combination of finite elements, finite volumes and Eulerian-Lagrangian methods, *Applied Computing Engineering Journal*, 3/2: 94-101 (in Portuguese).

2002 Oliveira, A. and A.B. Fortunato. Towards an oscillation-free, mass conservative, Eulerian-Lagrangian transport model, *Journal of Computational Physics,* 183/1: 142-164.

2002 Fortunato, A.B., L. Pinto, A. Oliveira and J.S. Ferreira. Tidally-generated shelf waves off the western Iberian coast, *Continental Shelf Research*, 22/14: 1935-1950.

2002 Fortunato, A.B., Oliveira, A. and E. Alves. Circulation and Salinity Intrusion in the Guadiana Estuary, *Thalassas*, 18/2: 43-65,

2001 Fortunato, A.B., P. Freire, M.C. Silva, A. Oliveira and C. Vicente. Hydrodynamics, sediment dynamics and water quality in the Ave estuary, *Recursos Hídricos*, 22(2): 7-22 (in Portuguese).

2000 Oliveira, A., A.B. Fortunato and A.M. Baptista. Mass balance in Eulerian-Lagrangian transport simulations in estuaries, *Journal of Hydraulic Engineering*, 126/8: 605-614.

2000 Fortunato, A.B., J.S. Ferreira and A. Oliveira. A Tidal Model of the Iberian Atlantic Shelf: First Results, *Thalassas*, 16,41-47.

1999 Fortunato, A.B. and A. Oliveira. An adaptive grid technique for the vertical structure of hydrodynamic models, *Applied Mathematical Modelling*, 23/8: 639-650.

1999 Fortunato, A.B., A. Oliveira and A.M. Baptista. On the effect of tidal flats on the hydrodynamics of the Tagus estuary, *Oceanologica Acta*, 22/1: 31-44.

1997 Fortunato, A.B., A.M. Baptista and R.A. Luettich, Jr. A three-dimensional model of tidal currents in the mouth of the Tagus estuary, *Continental Shelf Research*, 17/14: 1689-1714.

1996 Fortunato, A.B. and A.M. Baptista. Evaluation of horizontal gradients in sigma-coordinates shallow water models, *Atmosphere-Ocean*, 34/3: 489-514.

1996 Fortunato, A.B. and A.M. Baptista. Vertical discretization in tidal flow simulations, *International Journal for Numerical Methods in Fluids*, 22/9: 815-834.

Lisbon, July 2008

André Fortunato