

CURRICULUM VITAE

PERSONAL DATA

Name: Angel Nicolás Menéndez
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EDUCATION

- Ph.D., Hydraulic Engineering, The University of Iowa (IIHR – Hydrosience & Engineering), USA, 1983.
- Licentiate in Physical Sciences (a six-year program; equivalent to a MSc. degree), Faculty of Sciences, University of Buenos Aires (UBA), Argentina, 1975.

LANGUAGE KNOWLEDGE

- Spanish: native language.
- English: second language.

EXPERTISE

- Numerical modelling of water-related problems, including river/estuarine/coastal flows, Computational Fluid Dynamics, water quality and hydrology.
- Development of computational codes.
- Application of self-developed, open source and commercial computational codes.

ACADEMIC ACTIVITIES

- Full Professor (part-time), Faculty of Engineering, University of Buenos Aires.
- Professor of graduate courses: Master of Environmental Engineering, National Technological University (UTN); Master of Water Resources Management, University of Buenos Aires (UBA).
- Director, Principal or Co-Principal Investigator in more than 30 research and development projects funded with national or international grants, as Head of Computational Hydraulics Program, INA (National Institute for Water), Argentina.

- Associate Editor of the international journal “Revista Iberoamericana del Agua” (RIBAGUA), IAHR.
- Member of the Editorial Board of the “Journal of Applied Water Engineering and Research” (JAWER), IAHR.
- Direction of more than 30 undergraduate and graduate theses.

AWARDS

- “Ing. Luis A. Huergo”, from the National Academy of Engineering of Argentina, 1997.
- “AMCA 2002” to the teaching, professional and research trajectory, from the Argentine Association for Computational Mechanics, 2002.
- “Hilario Fernandez Long” in Computational Mechanics, from the National Academy of Exact, Physical and Natural Sciences of Argentina, 2004.
- “RIBAGUA 2016” to the best technical paper published in RIBAGUA (Revista Iberoamericana del Agua).

REFERENCE ENGINEERING PROJECTS

Computational Fluid Dynamics

- Design optimization of hydraulic system for the Third Set of Locks of Panama Canal. For MWH Global and ACP (Panama Canal Authority) through GUPC (Group United for the Canal), Panama, 2009-2011.
- Hydraulic design of Guaigüi spillway. For the National Institute of Water Resources (INRH), Dominican Republic, 2011.
- Verification of present Gatun spillway and design of new Gatun spillway. For MWH Global and ACP (Panama Canal Authority), Panama, 2011-2012.
- Verification of hydraulic design of settling chamber in pumping station for the treatment plant of Bernal. Metropolitan Region of Buenos Aires. For Panedile (construction company) and AySA (water supply company), Argentina, 2015.
- Three-dimensional simulation of flow through the valves of the new Aalst Lock in Belgium. For International Marine & Dredging Consultants (IMDC) and the Department of Mobility and Public Works, Flemish Government, 2017.
- CFD modelling of fish passage in Denderleeuw. For International Marine & Dredging Consultants (IMDC) and the Department of Mobility and Public Works, Flemish Government, 2019.

- Three-dimensional simulation of flow through the fish passage of the Sint-Baafs-Vijve weir. For International Marine & Dredging Consultants (IMDC) and the Department of Mobility and Public Works, Flemish Government, 2020.

Fluvial/ estuarine/ coastal flows

- Emergency Action Plan for Yacyretá dam (Paraná River – 62 hm³ reservoir). For the Yacyreta Binational Agency (EBY), Argentina/Paraguay, 2014-2018.
- Sedimentation along the waterway Santa Fe to the Ocean (Paraná River and Plata River, 700 km). For the Consortium of Chambers (CPPC – BCR – CAPYM – CAA – UIA), Argentina, 2019-2020.
- Impact of turbidity plumes due to dredging in the Access Channel to Montevideo harbor. For the National Harbors Administration, Uruguay, 2007.
- Design of protection works for Camisea River (Amazonic jungle). For Pluspetrol (oil company), Perú, 2015.
- Reservoir sedimentation assessment for the Garabí and Panambí dams projects. For EBISA/Eletrabras (hydroelectric companies), Argentina/Brasil, 2014-2015.

Water quality

- Diagnosis and evaluation of remediation strategies for water quality of the Matanza-Riachuelo Basin (2000 km²). For the Matanza-Riachuelo Basin Authority, Argentina, 2007-2012 and 2018.
- Assessment of the impact of the coastal discharges of the city of Buenos Aires on the Plata River. For the Matanza-Riachuelo Basin Authority, Argentina, 2007-2009.
- Assessment of the impact of the coastal discharges of the city of Asunción on the Paraguay River. For ESSAP (Water supply company), Paraguay, 2010-2011.
- Water quality assessment for the Garabí and Panambí reservoirs. For EBISA/Eletrabras (hydroelectric companies), Argentina/Brasil, 2014-2015.
- Water quality assessment for the Yacyretá reservoir. For Yacyreta Binational Agency (EBY), Argentina/Paraguay, 2002-2005.
- Water quality assessment for the filling of Changuinola reservoir. For AES Changuinola, Panamá, 2011.

Hydrology

- Masterplan for flood control in the Salado Basin (170,000 km²). For the Provincial Hydraulic Direction, Province of Buenos Aires, Argentina, 2006-2007.
- Flood assessment in the southern suburban region of Buenos Aires (24,000 ha). For the Water Resources Secretary, National Government, Argentina, 2014.
- Flood hazard maps for coastal cities of Argentina and Uruguay on the Plata River under Climate Change scenarios. For IIED-AL (International Institute for the Environment and Development of Latin America), 2012.
- Masterplan for the stormwater system of the city of Baradero. For the Provincial Hydraulic Direction, Province of Buenos Aires, Argentina, 2018.
- Water balance of Miriñay Basin under rice cropping and forestry expansions. For Corrientes Institute for Water and Environment (ICAA), Argentina, 2014.

PUBLICATIONS

- 40 papers in international journals.
- 148 communications in international conferences.
- 76 communications in national conferences.
- 1 chapter in an International Fluid Mechanics Encyclopedia.
- 1 textbook; editor of 1 textbook.