

CURRICULUM VITAE

PERSONAL DATA

Name: Nicolás Diego Badano
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EDUCATION

- Ph.D. Graduate Student at the Faculty of Engineering, University of Buenos Aires (UBA), Argentina.
- Civil Engineer, specialized in Hydraulics (a six-year program; equivalent to a MSc. degree), Faculty of Engineering, University of Buenos Aires (UBA), Argentina, 2010.

LANGUAGE KNOWLEDGE

- Spanish: native language.
- English: full professional proficiency. Cambridge Academy of English (CAE) Advance Certificate, Cambridge, England (2000).

EXPERTISE

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

ACADEMIC ACTIVITIES

- Assistant Professor (part-time), Faculty of Engineering, University of Buenos Aires.
- Associated Researcher at the National Institute for Water of Argentina. Since August 2018.
- Researcher at the Mathematical Modelling Laboratory, Faculty of Engineering, University of Buenos Aires. Since May 2007.

AWARDS

- “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.
- Verification of hydraulic design of settling chamber in pumping station for the purification plant General Belgrano. Metropolitan Region of Buenos Aires. For AySA (water supply company), Argentina, 2016.
- 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 Yacyretá 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.

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.

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 Water Resources Secretary, National Government, Argentina, 2014.
- Masterplan for the stormwater system of the city of Baradero. For the Provincial Hydraulic Direction, Province of Buenos Aires, Argentina, 2018.

PUBLICATIONS

- 6 papers on international peer-reviewed journals.
- 20+ communications to international conferences.
- 20+ communications to national conferences.
- 2 textbook chapters.