

Adrián Morales Torres holds a degree as **Civil Engineer**, a **MSc in Hydraulic Engineering and Environment** and a **PhD in Civil Engineering** from the Polytechnic University of Valencia (UPV, Spain). He has 8 years of experience in the field of **dam safety management**, working on the application of a risk analysis methodology for dam safety management for more than **50 dams at national and international levels**, owned by public and private entities. In addition, he is responsible for software development at iPresas, and he has worked on developing other Decision Support Tools for water infrastructures. He is author or co-author of more than **60 publications**, including indexed journal papers, books, chapters, conference papers and guidelines for dam safety and sustainable water management.

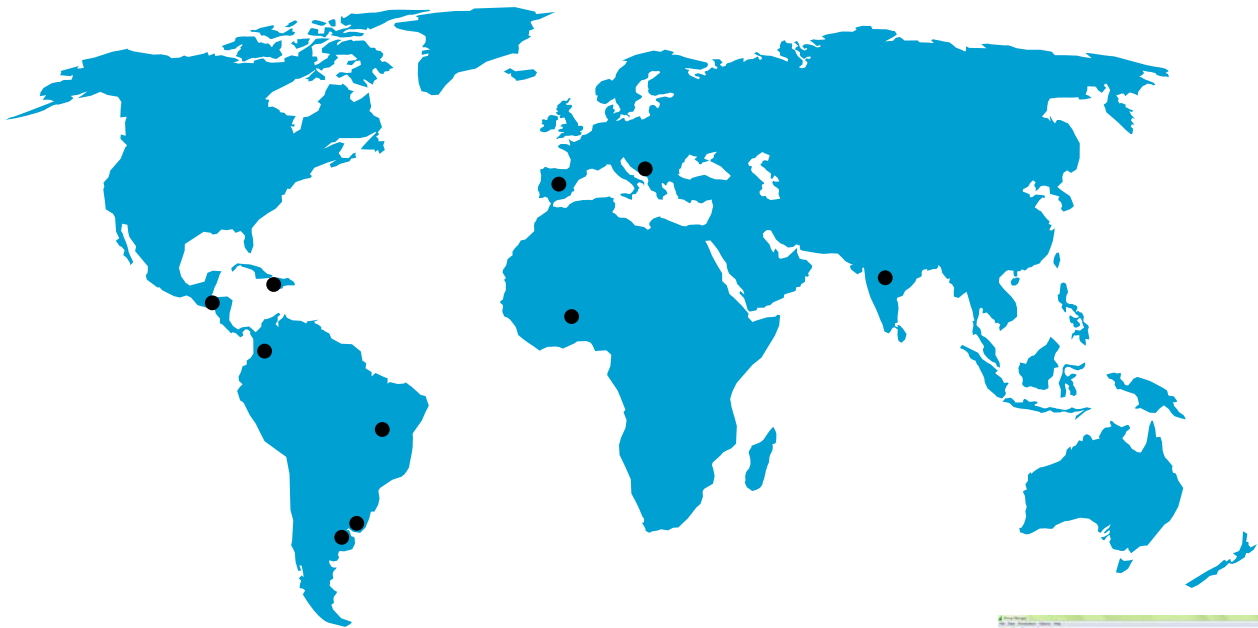


MAIN PROJECTS







- 2018
 - Comprehensive safety review of hydropower dams of ISAGEN (Colombia)
ISAGEN
 - Risk-informed quality control of flood protection measures under the programme "Argentina: resilient to natural risks"
Inter-American Development Bank (IDB)
 - Failure modes identification and risk analysis of road RN5 (Haiti) considering climate change
Entity: Inter-American Development Bank (IDB)
 - Development on Guidelines for Assessing and Managing Risks Associated with Dams
EGIS EAU (under a contract for CWC, Ministry of Water Resources of India and World Bank)
 - Consultancy for the review and strengthening of the methodology of disaster risk analysis and climate change in IDB projects
Inter-American Development Bank (IDB)
 - Technical assistance for numerical modelling of Chira and Soria dams
Insular Water Council of Gran Canaria (Spain)
 - Risk-informed dam safety management of Pretura del Molino, Carrascalejo and las Majadillas dams
Regional Government of Extremadura (Spain)
 - Project DAMSAFE: Enhancing Dam Safety and Water Management in Karnataka (India)
Funded by Netherlands Enterprise Agency (project led by Deltares)
 - Support to dam safety and risk management in Brasil. Development of a tool to prioritize risk reduction actions in 163 dams. Dam technical inspection of 31 dams
Gas Natural Fenosa (under a contract for the World Bank)
- 2017
 - Technical assistance to introduce risk analysis techniques as a tool to support dam safety management in Argentina. Risk Analysis of Cerros Colorados dams system
Dam Safety Regulatory Agency of Argentina (ORSEP)
 - Risk analysis of San Marcos dam
Regional Government of Extremadura (Spain)
 - Quality control from a risk analysis perspective of the flood risk control measures at the Choluteca river in Tegucigalpa (Honduras)
Inter-American Development Bank (IDB)
 - Pilot project to define procedures for quantitative estimation of spillway gate functionality and evaluate its impact on dam safety risk management.
Gas Natural Fenosa (Spain)
- 2016
 - Analysis of potential failure of Paso Severino dam (owned by OSE). "Water for Uruguay" Programme. Pillar 3: Regulatory framework for Dam Safety in Uruguay
World Bank
 - Risk analysis of Jaime Ozores dam
Regional Government of Extremadura (Spain)
 - Risk analysis consultancy services for the portfolio of dams owned by Grupo Gas Natural Fenosa
Gas Natural Fenosa (Spain)
- 2015
 - Risk analysis study for supporting safety management in "El Vado" dam
Canal de Isabel II (Spain)

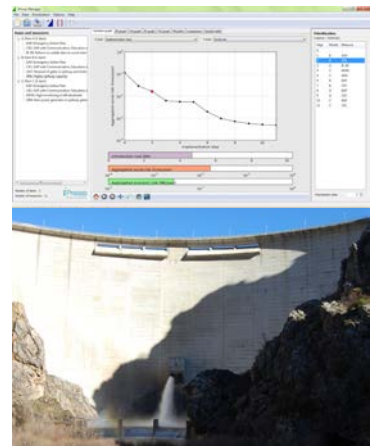


- 2015 Risk analysis of Membrio dam
Regional Government of Extremadura (Spain)
- Risk analysis for Fierze, Komani and Vau I Dejes dams (owned by KESH, Albania), including quantitative risk modelling and prioritization of risk reduction actions
Gas Natural Fenosa (under a contract for the World Bank)
- 2014 Risk analysis of "El Horcajo" dam
Regional Government of Extremadura (Spain)
- E²STORMED project: Improvement of energy efficiency in the water cycle by the use of innovative storm water management in smart Mediterranean cities (www.e2stormed.eu)
MED Programme European Union
- 2013 IPRESARA project: Incorporating manmade threats into dam safety risk management
Spanish Ministry of Science and Innovation (MICINN)
- 2012 Risk analysis of a portfolio of 27 dams owned by the Duero River Authority in Spain, including evaluation and prioritization of investments for risk reduction
Ofiteco (a contract for the Duero River Authority in Spain)
- 2011 Comprehensive and quantitative risk analysis model for St. Ponç dam, including evaluation and prioritization of safety measures
Agencia Catalana del Agua (Catalan Water Agency, Spain)
- SUFRI project: Sustainable strategies for Urban Flood Risk management to cope with the residual risk
CRUE ERA-Net
- 2010 Comprehensive and quantitative risk analysis model for a dam owned by Iberdrola, including evaluation and prioritization of safety measures
Iberdrola
- 2009 Water resources survey for irrigation development in Ouissiga (Burkina Faso)
ASFES



PROFESSIONAL SKILLS

-  Risk analysis ● ● ● ● ● ●
-  Dam safety ● ● ● ● ● ●
-  Software development ● ● ● ● ● ○
-  Urban flood risk analysis ● ● ● ● ● ○
-  Sustainable drainage systems ● ● ● ● ● ○
-  Hydraulic modelling ● ● ● ○ ○ ○



SELECTED PUBLICATIONS

- Castillo-Rodríguez, J.T., Needham, J.T., Morales-Torres, A., and Escuder-Bueno, I.: A combined risk analysis approach for complex dam–levee systems, *Structure and Infrastructure Engineering*, 2017. DOI: 10.1080/15732479.2017.1314514.
- Computational Aspects of Dam Risk Analysis: Findings and Challenges. Escuder-Bueno, I., Mazzà, G., Morales-Torres, A., & Castillo-Rodríguez, J. T. *Engineering* 2 (3), 319–324. 2016..
- A new risk reduction indicator for dam safety management combining efficiency and equity principles. Serrano-Lombillo, A., Morales-Torres, A., Escuder-Bueno, I., & Altarejos-García, L. *Structure and Infrastructure Engineering*. 2016.
- Decision Support Tool for energy-efficient, sustainable and integrated urban stormwater management. Morales-Torres, A., Escuder-Bueno, I., Andrés-Doménech, I., & Perales-Momparler, S. *Environmental Modelling & Software*, 84: 518-528. 2016.
- The suitability of risk reduction indicators to inform dam safety management. Morales-Torres, A., Serrano-Lombillo, A., Escuder-Bueno, I., & Altarejos-García, L. *Structure and Infrastructure Engineering*, 12(11), 1465–1476. 2016.
- Building fragility curves of sliding failure of concrete gravity dams integrating natural and epistemic uncertainties. Morales-Torres, A., Escuder-Bueno, I., Altarejos-García, L., & Serrano-Lombillo, A. *Engineering Structures*, 125(2016), 227-235. 2016.
- Advances on the Failure Analysis of the Dam—Foundation Interface of Concrete Dams. Altarejos-García, L., Escuder-Bueno, I., & Morales-Torres, A. *Materials*, 8(12), 8255–8278. 2015.
- Practical risk assessment for embankments, dams, and slopes. Altarejos-García, L., Silva-Tulla, F., Escuder-Bueno, I., & Morales-Torres, A. Chapter of *Risk and Reliability in Geotechnical Engineering*, 437–469. CRC Press. 2015.
- Metodología para la evaluación del riesgo hidrológico de presas y priorización de medidas correctoras. L. Altarejos-García, J.T. Castillo-Rodríguez, M. Chacón-Cano, P. Durán-Barroso, I. Escuder-Bueno, J. Fluxá-Sanmartín, J. González-Pérez, A. Morales-Torres, A. Serrano-Lombillo. Autor de Capítulos 2, 3 y 4. Colegio de Ingenieros de Caminos, Canales y Puertos. 2014. [In Spanish]
- Metodología completa y cuantitativa de análisis de riesgo de inundación en zonas urbanas. I. Escuder-Bueno, J. Castillo-Rodríguez, A. Morales-Torres, L. Altarejos-García. Editorial Universidad Politécnica de Valencia. Octubre 2013. [In Spanish]

COURSES

- Course on Risk Analysis applied to Dam Safety Management for EPM (Empresa Pública de Medellín) in Colombia. 2018.
- 5 editions of the Course on Risk Analysis applied to Dam Safety Management - Basic and Advance Level, conducted in English and Spanish, organized by the Spanish National Committee on Large Dams (SPANCOLD). 2013-2016.
- 3 editions of the Course on Urban stormwater management using Sustainable Drainage Systems, organized by the Polytechnic University of Valencia. 2015-2016.

OTHER MERITS AND ACTIVITIES

- Spanish member of ICOLD Committee T: Prospective and new challenges for dams and reservoirs in the 21st Century since 2018.
- Member of the Spanish National Committee on Large Dams (SPANCOLD) in the dam safety committee since 2017. Coordinator of the working group about risk analysis applied to dam safety.
- 2017 Prize to the most outstanding Professional Civil Engineer under 35 years old, awarded by the Professional Association of Civil Engineers (Valencian Region).
- Participant of the Pioneers into Practice 2015 Programme, funded by the European Union through the Climate KIC platform.
- Problem formulator of Theme B: "Probability of failure of an embankment dam due to slope instability and overtopping" during the 13th ICOLD International Benchmark Workshop on Numerical Analysis of Dams. Lausanne. 2015.
- 2nd award "Valencia IDEA 2014" organized by the Valencia City Council, under the Energy and Environment category (in collaboration with Prof. Ignacio Escuder Bueno in the framework of the E²STORMED project).
- 2010 Prize to the most outstanding graduate in Civil Engineering, awarded by the Professional Association of Civil Engineers (Valencian Region).

