

Jessica Castillo Rodríguez holds a degree as **Civil Engineer, MSc in Hydraulic Engineering and Environment and PhD in Civil Engineering** from the Polytechnic University of Valencia (UPV, Spain). She has 7 years of experience in the fields of flood risk analysis and **dam safety management**, working on the application of risk analysis for dam safety management and emergency action planning **at national and international levels**. In addition, she is responsible for RDI projects at iPresas, and works at the Polytechnic University of Valencia in national and European funded projects. She is author or co-author of more than **20 publications**, including journal papers, book chapters, conference proceedings and conference papers.

PROJECTS

- Technical assistance for numerical modelling of Chira and Soria dams
 Entity: Insular Water Council of Gran Canaria (Spain)
- Risk-informed dam safety management of Pretura del Molino, Carrascalejo and las Majadillas dams
 Entity: Regional Government of Extremadura (Spain)
- Project DAMSAFE: Enhancing Dam Safety and Water Management in Karnataka (India)
 Funding entity: Netherlands Enterprise Agency (project led by Deltares)
- Support to dam safety and risk management in Brasil
 Entity: Gas Natural Fenosa (under a contract for the World Bank)
- Technical assistance to introduce risk analysis techniques as a tool to support dam safety management in Argentina
 Entity: Dam Safety Regulatory Agency of Argentina (ORSEP)
- 2017**

 Risk analysis of San Marcos dam
 Entity: 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)
 Entity: 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
 Entity: Gas Natural Fenosa (Spain)
- Risk analysis of Jaime Ozores dam
 Entity: Regional Government of Extremadura (Spain)
- 2016**





 Local action plan against Flood Risk for the city of Oliva (Valencia)
 Entity: Oliva City Council (Spain)
- Risk analysis study for supporting safety management in "El Vado" dam
 Entity: Canal de Isabel II (Spain)
- INICIA project (2014-2016): Methodology for evaluating investments in water cycle infrastructures based on risk and energy efficiency indicators
 Entity: Spanish Ministry of Economy and Competitiveness (MINECO)
- 2014**

 Local action plan against Flood Risk for the city of Benaguasil (Valencia)
 Entity: Benaguasil City Council (Spain)
- IPRESARA project (2011-2013): Incorporating manmade threats into dam safety risk management
 Entity: Spanish Ministry of Science and Innovation (MICINN)
- 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
 Entity: Ofiteco (a contract for the Duero River Authority in Spain)
- Risk analysis and evaluation for Castrovido dam (owned by the Duero River Authority)
 Entity: FCC
- 2011**

 Comprehensive and quantitative risk analysis model for St. Ponç dam, including evaluation and prioritization of safety measures
 Entity: Agencia Catalana del Agua (Catalan Water Agency, Spain)
- Comprehensive and quantitative risk analysis model for a dam owned by Iberdrola, including evaluation and prioritization of safety measures
 Entity: Iberdrola
- SUFRI project (2010-2011): Sustainable strategies for Urban Flood Risk management to cope with the residual risk
 Entity: CRUE ERA-Net
- 2010**



PROFESSIONAL SKILLS

-  Risk analysis ● ● ● ● ● ●
-  Dam safety ● ● ● ● ● ●
-  Urban flood risk analysis ● ● ● ● ● ●
-  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.
- Escuder-Bueno, I., Mazzà, G., Morales-Torres, A., and Castillo-Rodríguez, J. T.: Computational Aspects of Dam Risk Analysis: Findings and Challenges, *Engineering 2 (3)*, 319–324. 2016.
- Castillo-Rodríguez, J.T., Escuder-Bueno, I., Perales-Momparler, S., and Porta-Sancho, J. R.: Enhancing local action planning through quantitative flood risk analysis: a case study in Spain, *Nat. Hazards Earth Syst. Sci.*, 16, 1699-1718, doi:10.5194/nhess-16-1699-2016, 2016.
- Castillo-Rodríguez, J.T., Escuder-Bueno, I., Altarejos-García, L., and Serrano-Lombillo, A.: The value of integrating information from multiple hazards for flood risk analysis and management, *Nat. Hazards Earth Syst. Sci.*, 14, 379-400, doi:10.5194/nhess-14-379-2014, 2014.
- Escuder-Bueno, I., Castillo-Rodríguez, J.T., Zechner, S., Jöbstl, C., Perales-Momparler, S., and Petaccia, G.: A quantitative flood risk analysis methodology for urban areas with integration of social research data, *Nat. Hazards Earth Syst. Sci.*, 12, 2843-2863, doi:10.5194/nhess-12-2843-2012, 2012.
- Escuder-Bueno, Ignacio; Matheu, Enrique; Altarejos-García, Luis; Castillo-Rodríguez, Jesica T. (editors): *Risk Analysis, Dam Safety, Dam Security and Critical Infrastructure Management*, CRC Press/Balkema, Leiden, The Netherlands (Taylor & Francis Group), ISBN 10: 0415620783, 2012.
- 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. Chapter 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

- 1st edition of the Course on Risk Analysis applied to Dam Safety Mangement - Advanced Level, organized by the Spanish National Committee on Large Dams (SPANCOLD). 2016.
- 2 editions of the Course on Risk Analysis applied to Dam Safety Mangement - Basic Level, conducted in English and Spanish, organized by the Spanish National Committee on Large Dams (SPANCOLD). 2015-2016.
- Training and capacity building programme on dam safety management, Sessions E-G, organized by Deltares, DRIP project (funded by the World Bank), 2016.

OTHER MERITS AND ACTIVITIES

- PhD grant funded by the Spanish Ministry of Science and Innovation (2011-2015).
- PhD short stay, Deltares, the Netherlands (2013).
- Student Award at the 22nd SRA-Europe Annual Meeting (Zurich, Switzerland), organized by the Society for Risk Analysis.
- Main Organizing Committee of the 3rd International Week on Risk Analysis, Dam Safety, Dam Security, and Critical Infrastructure Management, Valencia (Spain), October 2011.
- Final project (Erasmus program), TUDelft, the Netherlands (2007-2008).

