MINISTERIO DE CIENCIA E INNOVACIÓN

Cofinanciado por la Unión Europea

AGENCIA ESTATAL DE INVESTIGACIÓN

CURRICULUM VITAE (CVA)

IMPORTANT – The Curriculum Vitae cannot exceed 4 pages. Instructions to fill this document are available in the website.

Part A. PERSONAL INFORMATION

CV date	12/11/2025

First name	Maria		
Family name	Castro Malpica		
Gender (*)		Birth date (dd/mm/yyyy)	
Social Security, Passport, ID number			
e-mail		URL Web	
Open Researcher and Contributor ID (ORCID) (*)			

(*) Mandatory

A.1. Current position

Position			
Initial date			
Institution			
Department/Center			
Country		Teleph. number	
Key words			

A.2. Previous positions (research activity interruptions, see call)

Period	Position/Institution/Country/Interruption cause

A.3. Education

PhD, Licensed, Graduate	University/Country	Year

Part B. CV SUMMARY *(max. 5000 characters, including spaces)*

María Castro Malpica holds a PhD by Universidad Politécnica de Madrid. She is a Full Professor in the Transportation Engineering, Territory and Urban Planning at this University. Her research activity is in the field of Transportation Engineering and Infrastructure. She has made several researches about pavements and road geometric design. In her pavements research line, she has contributed on bridge pavement design and fatigue of bituminous mixtures. In her road geometric design research line, her researches on vehicle speed models, design consistency and sight distance stand out.

María Castro Malpica es Doctora Ingeniera de Caminos, Canales y Puertos por la Universidad Politécnica de Madrid. Actualmente es Catedrática de Universidad en el Departamento de Ingeniería del Transporte, Territorio y Urbanismo de la universidad Politécnica de Madrid. Su actividad investigadora se centra en el campo de la Ingeniería de Transporte e Infraestructuras. Ha realizado varias investigaciones sobre pavimentos y diseño geométrico

de carreteras. En su línea de investigación de pavimentos, ha contribuido en el diseño de pavimentos de puentes y fatiga de mezclas bituminosas. En su línea de investigación de diseño geométrico de carreteras, destacan sus investigaciones sobre modelos de velocidad de vehículos, consistencia de diseño y distancia de visibilidad.

Part C. RELEVANT MERITS *(sorted by typology)*

C.1. Publications *(see instructions)*

1. Martin-Castresana, S., Martinez-Garcia, M., Enriquez, R., & Castro, M. (AC). (4/4). 2025. Analysis of Vehicle Lateral Position in Curves Using a Driving Simulator: Road Markings, Human Factors and Road Features. Applied Sciences, 15(17), 9851. https://doi.org/10.3390/app15179851. **Second Quartile (Q2); First Third (T1)**
2. Martin-Castresana, S., Alvarez, D., Andrade-Cataño, F., & Castro, M. (AC). (4/4). 2025. Effect of Road Markings on Speed Through Curves on Rural Roads: A Driving Simulator Study in Spain. Infrastructures, 10(4), 94. https://doi.org/10.3390/infrastructures10040094. **Second Quartile (Q2).**
3. Lioi, A., Hazoor, A., Castro, M., Bassani, M. (3/4). 2022. Impact on driver behaviour of guardrails of different height in horizontal-vertical coordinated road scenarios with a limited available sight distance. Transportation Research Part F - Traffic Psychology and Behaviour, 84, 287–300. https://doi.org/10.1016/j.trf.2021.12.008. **Second Quartile (Q2); First Third (T1).**
4. González-Gómez, K. López-Cuervo Medina, S., Castro, M. (AC). (3/3). 2021. Assessment of intersection conflicts between riders and pedestrians using a GIS-based framework and portable LiDAR. GIScience & Remote Sensing, 58(4), 587-602. DOI: 10.1080/15481603.2021.1920199. **First Quartile (Q1).**
5. Iglesias, L., De Santos-Berbel, C., Pascual, V., Castro, M. (AC). (4/4).2019. Using Small Unmanned Aerial Vehicle in 3D Modeling of Highways with Tree-Covered Roadsides to Estimate Sight Distance. Remote Sensing, 11(22), Paper number 2625. DOI: 10.3390/RS11222625. **Second Quartile (Q2); First Third (T1).**
6. Gonzalez-Gomez, K., Iglesias, L., Rodriguez-Solano, R., Castro, M. (AC). (3/3). 2019. Framework for 3D Point Cloud Modelling Aimed at Road Sight Distance Estimations. Remote Sensing, 11(23); Paper number 2730. DOI: 10.3390/rs11232730. **Second Quartile (Q2); First Third (T1).**
7. Higuera de Frutos, S., Castro, M. (AC). (2/2). 2017. A Method to Identify and Classify the Vertical Alignment of Existing Roads. Computer-Aided Civil and Infrastructure Engineering, 32(11), 952-963. DOI: 10.1111/mice.12302. **First Quartile (Q1).**
8. Ramos García, J. A., Castro, M. (2/2). 2017. Linear visco-elastic behavior of asphalt pavements: 3D-FE response models. Construction and Building Materials, 136, 414-425. DOI: 10.1016/j.conbuildmat.2017.01.015. **First Quartile (Q1).**
9. Castro, M., De Santos-Berbel, C. (AC) (1/2). 2015. Spatial analysis of geometric design consistency and road sight distance. International Journal of Geographical Information Science, 29(12), 2061-2074. DOI: 10.1080/13658816.2015.1037304. **First Quartile (Q1).**
10. Higuera de Frutos, S. Castro, M. (2/2). 2014. Using smartphones as a very low-cost tool for road inventories. Transportation Research Part C: Emerging Technologies, 38(1), 136-145. DOI: 10.1016/j.trc.2013.11.012. **First Quartile (Q1).**

C.2. Congress

1. Higuera de Frutos, S., Sáez Torner, M., Castro Malpica, M. (2023). Validation of a driving simulator for speed research on two-lanerural roads. Congreso de Ingeniería del Transporte, La Laguna (Spain), 14-16 July 2023. Oral presentation.
2. Higuera de Frutos, S., Castro Malpica, M. (2021). Assessing sim racing software for low-cost driving simulator to road geometric research. Congreso de Ingeniería del Transporte, Burgos (Spain), 6-8 July 2021. Oral presentation.

3. González-Gómez, K., Castro, M. (2019). ”Analysis of sight distances at urban intersections. Vulnerable users’ approach”. International Congress on Transport Infrastructure and Systems, Rome (Italy), 23-24 September 2019. Oral presentation.
4. Gonzalez-Gomez, K., Iglesias-Martínez, L., Rodríguez-Solano, R., Castro, M. (2018). Evaluating 3-D sight distance at urban intersections using a LiDAR-based model and considering multiple users. International Conference on Traffic and Transport Engineering, Belgrade (Serbia), 27-28 September, 2018. Oral presentation.
5. De Santos-Berbel, C., González-Gómez, K., Castro, M., Anta, J. A. (2018). Addressing sight-distance-related safety effects of installing median barriers at horizontal curves of undivided highways under a 3D approach. 5th International Conference on Road and Rail Infrastructure, Zadar (Croacia), 17- 19 May. Oral presentation.
6. Castro, M., De Santos-Berbel, C., & Iglesias, L (2017). A comprehensive methodology for the analysis of highway sight distance. International Congress on Transport Infrastructure and Systems, Rome (Italy), 10-12 April, 2017. Oral presentation.
7. De Santos-Berbel, C., Castro, M., Iglesias Martínez, L. (2016). Influence of headlamp lighting parameters on nighttime sight distance. International Conference on Traffic and Transport Engineering, Belgrade (Serbia), 24-25 November, 2016. Oral presentation.
8. Iglesias Martínez, L., Castro, M., Pascual Gallego, V., De Santos-Berbel, C. (2016). Estimation of sight distance on highways with overhanging elements. International Conference on Traffic and Transport Engineering, Belgrade (Serbia), 24-25 November, 2016. Oral presentation.
9. De Santos-Berbel, C., Castro Malpica, M., López-Cuervo Medina, S., Paréns-González, M. (2014). Distancia de visibilidad en carreteras: influencia de Modelos Digitales de Elevaciones y elementos de las márgenes. Congreso de Ingeniería del Transporte, Santander (Spain), 9-11June, 2014. Oral presentation.
10. Higuera de Frutos, S., Castro, M., De Santos-Berbel, C. (2015). A Methodology for Estimation of Vertical-Alignment Geometric Parameters. 5th International Symposium on Highway Geometric Design, (Canada), 22-24 June 2015. Poster.