



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

14/01/2025

First name	Begoña		
Family name	Guirao Abad		
Gender (*)	Female	Birth date (dd/mm/yyyy)	
Social Security, Passport, ID number			
e-mail		URL Web	www.upm.es
Open Researcher and Contributor ID (ORCID) (*)		0000-0003-4138-0073	

(*) Mandatory

A.1. Current position

Position	Professor		
Initial date	21/07/2023		
Institution	Universidad Politécnica de Madrid		
Department/Center	Ingeniería del Transporte, Territorio y Urbanismo	ETSI Caminos	
Country	Spain	Teleph. number	9106 74218
Key words	Transport infrastructure, transport planning, road safety		

A.2. Previous positions (research activity interruptions, art. 14.2.b))

Period	Position/Institution/Country/Interruption cause
1997-2000	FPU grant from the Spanish Ministry of Education at UPM
2000-2003	Full Time Lecturer (UCLM)
2003-2006	Associate Professor (UCLM)
2006 - 2023	Associate Professor (UPM)
2023- act	Full Professor (UPM)

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
Máster in Civil Engineering	Universidad Politécnica de Madrid	1996
PhD in Civil Engineering	Universidad Politécnica de Madrid	2000

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

Begoña Guirao holds a master's degree in civil engineering. Universidad Politécnica de Madrid UPM (1990-1996). She enjoyed an FPU grant from the Spanish Ministry of Education (1996-2000) and read her doctoral thesis in 2000, in the Department of Civil-Transport Engineering (UPM). During the period 2000-2003, she was Research Fellow at ETSI Caminos of the University of Castilla-La Mancha (UCLM), and in 2003 she was appointed Associate Professor of University at UCLM in the field of Engineering and Infrastructure of Transports. She moved in 2006 to UPM, was appointed Full Professor in 2023 and develops her teaching and research activity for more than 15 years in the *Department of Transport Engineering, Territory and Urban Planning* of UPM. Her research activity has been recognized with 3 sexeniums by ANEP. She is the author of more than 44 JCR publications (h-index=17, 750 cites, January 2025), 51 Scopus Publications (h-index=18, 896 cites, January 2025) and has participated in more than

15 research projects financed in national and European competitive calls (3 as Main Researcher- IP), in addition to research contracts. From 2003 to 2014, Begoña Guirao was the Spanish Delegate of COST (European Cooperation in Science & Technology) for the TUD domain (Transport and Urban Development TUD). She has taught at numerous Masters, technical conferences and postgraduate courses in the field of Transport and Urban planning, and has run and organized international workshops, such as the Business Roundtable "Rail Transport USA-Spain" (financed by the US Chamber of Commerce in Spain). At institutional level, she has been Vice-Dean of Academic Management at UCLM (ETSI Caminos), Deputy Director of Department at UPM and currently leads the Educational Innovation Group in Transports at UPM (GIE Transports).

The research activity of Begoña Guirao begins with the elaboration of her doctoral thesis, focused on the methodologies of estimation of the demand induced by the new high-speed lines in Spain. This line of research was further expanded, studying the impact that the new high-speed lines generate on the territory, socio-economy and mobility, especially in tourist environments. In 2012, her research is reoriented towards urban sustainable mobility analysis using ITCs. Particularly relevant are her contributions to the study of the quality of service perceived by public transport users (urban buses). In this field, she ran the first doctoral thesis (2016) and began to use QR codes to systematize surveys of public. With the emergence in the big cities of the new car sharing systems (Free-Floating Car Sharing FFCS), based on the collaborative economy, she developed innovative methodologies to collect and analyze web data through a tracking platform. Within this topic, Begoña Guirao run her second doctoral thesis (2020) and joined, as leader of the UPM team, two international projects within thematic networks CYTED that analyze urban mobility: URBENERE (Comunidades URBanas ENERgéticamemnte Eficientes) and CIRES (Ciudades Inclusivas, Resilientes, Eficientes y Sustentables). Following this research line, Prof Guirao leaders (with Prof. Ortuño), the national research project MOVI-GUEST (Analysis of the urban mobility and behaviour of tourist home guests, using digital technologies).

Since 2016, Begoña Guirao has developed a new line of research in the field of road safety by analyzing the influence of territorial aspects on the road accidents. With financial support from the Directorate-General for Traffic, she conducted a study on road accident rates on Spanish crosstown roads under a holistic territorial approach and supervised his third doctoral thesis (2020). To align the research on sustainable mobility with road safety, her scientific studies in traffic accidents have, in last years, been centred on cities and new road safety challenges, like the implications of ride-hailing's services on urban road accidents; or more deeply, studies on pedestrians' crashes and older pedestrian crashes (due to ageing societies). Within this latter topic he has supervised her fourth doctoral thesis (2025). Since her dedication to road traffic accidents, there has been a focus in her research on investigating the road safety of vulnerable users and promotion active mobility in cities. This concern in the field of safety has been extended to Begoña Guirao's involvement in service-learning projects, financed by UPM fostering interaction between Civil Engineering students and victims of traffic accidents, as well as vulnerable users (elderly pedestrians, pedestrians with intellectual disabilities, etc.). For this work and at the proposal of Traffic Accident Victim Associations, Professor Guirao received the "Women and Traffic Management Award" in 2018. Regarding scientific output in the field of road safety, her CV shows clearly that the publication of scientific articles in journals has increased significantly in this area in recent 5 years.

Part C. RELEVANT MERITS (sorted by typology)

C.1. Publications (see instructions)

Journal articles

1. Gálvez-Pérez, D., **Guirao, B.**, Villar-Juez, D. (2025). The effect of COVID-19 on older pedestrian road safety: a holistic analysis through pandemic phases. *Transport and Health*, Volume 41, 101986
2. Gálvez-Pérez, D., **Guirao, B.**, Ortuño, A. (2024). Analysis of the elderly pedestrian traffic accidents in urban scenarios: the case of the Spanish municipalities. *International Journal of Injury Control and Safety Promotion*. 31(3), 376–395

3. Gálvez-Pérez, D.; **Guirao, B.**; Ortuño, A. (2024). Age-Friendly Urban Design for Older Pedestrian Road Safety: A Street Segment Level Analysis in Madrid. *Sustainability*, 2024, 16, 8298.
4. Flor M, Ortuño A and **Guirao B.** (2022) Ride-hailing services: Competition or complement to public transport to reduce accident rates. The case of Madrid. *Frontiers in Psychology*. 13:951258.
5. Gálvez-Pérez, D.; **Guirao, B.**; Ortuño, A.; Picado-Santos, L. (2022) The Influence of Built Environment Factors on Elderly Pedestrian Road Safety in Cities: The Experience of Madrid. *International Journal Environmental Research and Public Health*, 19, 2280
6. Ampudia-Renuncio, M.; **Guirao, B.**; Molina-Sánchez, R.; Engel de Álvarez, C. (2020). Understanding the spatial distribution of free-floating carsharing in cities: Analysis of the new Madrid experience through a web-based platform, *Cities*, 98 - 102593, pp. 1 - 16.
7. Casado-Sanz, N., **Guirao, B.**; Gálvez-Pérez, D. (2019). Population ageing and rural road accidents: Analysis of accident severity in traffic crashes with older pedestrians on Spanish crosstown roads. *Research in Transportation Business & Management*. 30 - 100377, pp. 1 - 1
8. Ampudia-Renuncio, M.; **Guirao, B.**; Molina-Sánchez, R (2018). The impact of free-floating carsharing on sustainable cities: analysis of first experiences in Madrid with the university campus. *Sustainable Cities and Society*, 43, pp. 462 - 475.

Books and Book chapters:

9. **Guirao, B.** (2021) Transport Demand Management, in "International Encyclopedia of Transportation", pp 374-379. Elsevier, 2021. ISBN: 978-0-081026724
10. **Guirao, B.**; Arce, R. and López-Lambas (2021). New trends in urban mobility, in "Sustainable Urban Development Topics, Trends and Solutions", pp IOP Publishing, ISBN: 978-0-7503-3971-1

C.2. Conferences

1. **Guirao, B.**, Gálvez-Pérez, D.; Casado-Sanz, N. (2023). The impact of the cyclist infrastructure type on bike accidents: the experience of Madrid. Oral presentation. XV Conference on Transport Engineering (CIT 2023), La Laguna (Spain), June 14-16, 2023.
2. Gálvez-Pérez, D.; **Guirao, B.**; Ortuño, A. (2023). Analysis of the Elderly Pedestrian Injury Severity in Urban Traffic Accidents in Spain using Machine Learning Techniques. Oral presentation. XV Conference on Transport Engineering (CIT 2023), La Laguna (Spain), June 14-16, 2023.
3. Gálvez-Pérez D., **Guirao, B.** Picado-Santos, Casado-Sanz, The effect of built environment features on vehicle-pedestrian collisions in big cities: a comparison between Lisbon and Madrid, TRANSPORT RESEARCH ARENA (TRA) 2022, European Commission, Lisboa (Portugal), November 14-18, 2022
4. Flor, M., Ortuño, A., **Guirao, B.**, Casares, J. (2021). Urban Road Accidents and Ride-Hailing Services: A study of dependence in Madrid. Oral presentation. XIV Conference on Transport Engineering (CIT 2021), virtually held in Burgos (Spain), July 6-8, 2021.
5. Gálvez-Pérez, D., **Guirao, B.** and Ortuño, A. (2021). Road safety of elderly pedestrians in the urban context: an approach based on infrastructure and socioeconomic variables. Oral presentation. XIV Conference on Transport Engineering (CIT 2021), virtually held in Burgos (Spain), July 6-8, 2021
6. Casado-Sanz, N., **Guirao, B.** (2018). Analysis of the impact of population ageing and territorial factors on crosstown roads safety: the Spanish case study. Oral presentation. XIII Conference on Transport Engineering (CIT 2018), Gijón (Spain), 6-8 July 2018.
7. **Guirao, B.**; Lezcano, J.; Berrios, A.; Molina, R. (2018). Oportunidades para el coche eléctrico compartido en las estaciones ferroviarias: un ejemplo de sostenibilidad urbana. Presentación oral. Congreso de Sustentabilidad Urbana (URBENERE-CIRES). Vitoria (Brasil), 5-8 December 2018.

8. **Guirao, B.**, Casado-Sanz, N. (2018). The impact of community severance and population ageing on rural roads safety: Evidence from the Spanish crosstown roads. Invited presentation. NECTAR Cluster 6 Meeting-Accessibility. Maspalomas. Gran Canaria (España), 14-15 December 2018.

9. **Guirao, B.**, Escobar, J.; González, M.; Arce, R.; López-Lambas, M.E. (2016). Impacto del vehículo eléctrico compartido sobre la movilidad de los estudiantes: la experiencia Car2go en Madrid. Oral Presentation, Congreso Nacional de Medio Ambiente. CONAMA, Madrid 28/11/2016-01/12/2016

C.3. Research projects

1. Project Title: "Analysis of the urban mobility and behaviour of tourist home guests, using digital technologies MOVI-GUEST" (PID2021-124428OB-I00). Duration: 2022-2025. Financing entity and type of call: Spanish Participating entities: UPM, U. Alicante, U. Complutense Madrid, Funding amount: 96.800 euros. Main Researcher: **Begoña Guirao** and Armando Ortuño.

2. Project Title: "Ciudades Inclusivas, Resilientes, Eficientes y Sustentables CIRES" (CYTED-418RT0556). Duration 2018-2021. Financing entity and type of call: CYTED. Programa de Redes temáticas. Participating entities: U.Minho, UPM, Iberoamerican Universities. Funding amount: 115.000 euros Main Research: Cristina Engel de Álvarez. Universidad de Vitoria (Brasil). Responsibilities: Collaborator researcher

3. Project Title: "Comunidades URBanas ENERgéticamente Eficientes URBENERE" (Proyecto CYTED-P714RT0163). Duration: 2014-2017. Financing entity and type of call: CYTED. Programa de Redes temáticas. Participating entities: U.Minho, UPM, Iberoamerican Universities. Funding amount: 115.000 euros. Main Research: Luis Braganza. Universidade Minho (Portugal). Responsibilities: Collaborator researcher.

4. Project Title: "Caracterización de la seguridad vial de las travesías y su relación con la movilidad, la infraestructura y la población, con especial atención al factor de envejecimiento" (SAFEPASS-SPIP2017-02199). Financing entity and type of call: Dirección General de Tráfico (Ministerio del Interior) Ayudas a la investigación 2017. Participating entities: U.Minho, UPM, Iberoamerican Universities. Duration: 09/08/2017-09/08/2018 (12 months). Funding amount: 48.950 euros. Main Researcher: **Begoña Guirao**.

5. Project Title: "Caracterización estadística de la movilidad y su relación con la infraestructura y el riesgo vial en entorno urbano" (SPIP2014-01457). Financing entity and type of call: Dirección General de Tráfico (Ministerio del Interior). Ayudas a la investigación 2014. Participating entities: UPM Duration: 21/11/2014-21/11/2015 (12 months). Funding amount: 49.934 euros. Main Researcher: María Eugenia López-Lambas. Responsibilities: Collaborator researcher

6. Project Title: "Equity analysis: assessment and integration of equity criteria in transportation planning (TEA)," COST TUD1209. Financing entity and type of call: UE. Cost Cooperation. COST Program (annual call 2012) - FAB 66.05.13. Participating entities: UPM/UE Universities Duration: 10/04/2013-10/04/2017 (4 years). Funding amount: 450.000 euros. Main Researcher: Floridea Di Ciommo. Responsibilities: Collaborator researcher.

C.4. Contracts, technological or transfer merits

1. Transfer merits: "Services Learning Projects on Road Safety UPM ("road safety victims Associations, Madrid Council, Fundación A LA PAR)". Financing entity and type of call: UPM-Aps-Office Total Funding amounts (2018-2024): 15000 euros. Main Researcher: **Begoña Guirao**.

2. Project Title: (P10 0430-742). Financing entity and type of call: American Chamber of EEUU in Spain (AMCHAM Spain). Participating entities: UPM, FCC, Ministerio de Fomento, ADIF, OHL, Ferrovial, Globalvia. Duration: 10/10/2010-10/10/2014. Funding amount: 8.325,25 euros. Main Researcher: **Begoña Guirao**.