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# CIT2023

LA LAGUNA, TENERIFE

XV Congreso de Ingeniería del Transporte

**14, 15 y 16**  
de junio de 2023

**INNOVACIÓN  
EN MOVIMIENTO**



## **XV Congreso de Ingeniería del Transporte (CIT 2023)**

Facultad de economía, empresa y turismo. Avenida José Luis Moreno  
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**Foro de Ingeniería del Transporte**

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Edita: **POSTER 95 S.L.**

ISBN: **978-84-09-48462-1**

## ÍNDICE / CONTENTS

<b>11/12</b>	<b>PRESENTACIÓN / PRESENTATION</b>		
<b>13</b>	<b>FORO DE INGENIERÍA DEL TRANSPORTE / FORUM OF TRANSPORT ENGINEERING</b>		
<b>14</b>	<b>COMITÉ ORGANIZADOR / ORGANIZER COMMITTEE</b>		
<b>14</b>	<b>COMITÉ CIENTÍFICO / SCIENTIFIC COMMITTEE</b>		
<b>15</b>	<b>ORGANIZACIÓN Y PATROCINIO / ORGANIZATION AND SPONSORSHIP</b>		
<b>16/17</b>	<b>ACTO DE INAUGURACIÓN Y CONFERENCIA PLENARIA / OPENING CEREMONY AND PLENARY SESSION</b>		
<b>18/19</b>	<b>ÁREAS TEMÁTICAS / CONFERENCE TOPICS</b>		
<b>20</b>	<b>PROGRAMA DEL CONGRESO / CONFERENCE PROGRAM</b>		
<b>43</b>	<b>ACTAS / PROCEEDINGS</b>		
<b>44</b>	<b>Jóvenes investigadores / Young researchers</b>		
45	<b>Teleworking and its impact on mobility in the Region of Madrid</b> Abid Al-Akioui, Andrés Monzón	143	<b>Análisis de la gravedad de los accidentes entre un vehículo de micromovilidad y un vehículo motorizado</b> Almudena Sanjurjo de No, Ana María Pérez Zuriaga, Alfredo García
55	<b>Urban evolution and its relationship with tramway during the 19th and 20th centuries: a gis-based method</b> Irene Méndez-Manjón, Pedro Plasencia-Lozano	153	<b>MaaS potential users' profiles characterisation with a k-means clustering algorithm</b> Iago Medeiros Aguiar, Andrés Monzón de Cáceres, Iria López Carreiro
65	<b>Modelización del diseño de una red de Park-and-Ride con aproximaciones continuas</b> Biel Pallarès Salcedo, Hugo Badia Rodríguez, Miquel Estrada Romeu	153	<b>Analyzing pedestrians' crash injury risk factors in Barcelona</b> Ahmad Aiash, Francesc Robusté
75	<b>Microscopic modeling of Connected Autonomous Vehicles platooning: stability and safety analysis</b> Seshadri Naik Moode, Francesc Soriguera	174	<b>Efectos del tráfico en la contaminación atmosférica. Evidencia empírica en las olas de Covid-19 en la ciudad de Madrid</b> Jorge Bañuelos-Gimeno, Natalia Sobrino, Rosa M <sup>a</sup> Arce
85	<b>Estudio experimental del hueco aceptable para el perfeccionamiento de la maniobra de cambio de carril en vehículos autónomos</b> Sofía Sanchez-Mateo, Alberto Cruz-Ruiz, Felipe Jiménez	184	<b>Resource optimization problems to meet passenger demand in a public transport company</b> Guillermo Esquivel González, Antonio Sedeño Noda, Ginés León Rodríguez
92	<b>Los viajes de las mujeres en América Latina: el costo de oportunidad y la gestión de la demanda del transporte público</b> Laura Daniela Ramírez Leuro, Daniel Andrés Sandoval Pedreros	195	<b>SCALIBUR: technological system to optimize the organic waste collection and transport for its valorization</b> Francisco Vicente Sánchez, César Aliaga, Theodoros Giourkas
103	<b>Policies towards the resilience of road-based transport networks to wildfire events. The Iberian case</b> Erica Arango, María Nogal, Pilar Jiménez, Hélder S. Sousa, José C. Matos, Mark G. Stewart	201	<b>Análisis del efecto de la pandemia de COVID-19 en el uso y la propiedad de coches en ciudades europeas</b> María Vega-Gonzalo, Juan Gómez, Panayotis Christidis
113	<b>Analysis of the Elderly Pedestrian Injury Severity in Urban Traffic Accidents in Spain using Machine Learning Techniques</b> Daniel Gálvez-Pérez, Begoña Guirao, Armando Ortuño	210	<b>BIM-based Assessment of Solar Glare Risk on a Road Section</b> Ana Pérez-García, José Ángel Aranda, Norena Martín-Dorta
123	<b>A Tradable Mobility Credit Scheme Considering Urban Freight Distribution Vehicles</b> Siyu Li, Francesc Robusté	219	<b>Is bus passengers' satisfaction influenced by company's application and website features in long-distance bus services?</b> Shaghayegh Rahnama, Adriana Cortez, Andrés Monzón
133	<b>Preferencias de fuentes de información entre los usuarios de Cercanías Madrid: Elección y Satisfacción</b> Carlos Romero, Clara Zamorano, Andrés Monzón		

## 229 Economía del transporte | *Transport Economic*

- |     |  |     |   |
|-----|--|-----|---|
| 230 | <b>Eficiencia en Costes y Valor Añadido Bruto en el Sistema Portuario Español</b><br>Juan José Díaz-Hernández, David José Cova-Alonso, Eduardo Martínez-Budría   | 260 | <b>¿Gastan más las familias españolas en transporte público? Un análisis de los efectos de la gran recesión económica hasta la pandemia de COVID-19</b><br>Borja López del Campo, Jorge Bañuelos-Gimeno, Carlos Romero, Rosa Mª Arce Ruiz |
| 240 | <b>Análisis de las Preferencias por la Movilidad como un Servicio en Entornos Turísticos</b><br>Rosa Marina González, Concepción Román, Juan Carlos Martín, Raquel Espino, Imanol L. Nieto-González, Ginés Guirao, M. Candelaria Gil | 269 | <b>Comparación de patrones estacionales en llegadas diarias de pasajeros de líneas aéreas</b><br>Gloria Martín-Rodríguez, José Juan Cáceres-Hernández   |
| 250 | <b>Public-private partnerships in European high-speed railway infrastructures: case studies</b><br>Mario González-Medrano, José-María Rotellar-García  |     |   |

## 279 Logística y transporte de mercancías | *Logistics and freight transport*

- |     |   |     |  |
|-----|---|-----|--|
| 280 | <b>¿Cómo lograr una distribución urbana de mercancías sostenible? Perspectiva de los stakeholders</b><br>Laura Garrido, Juan Nicolas Gonzalez, Jose Manuel Vassallo   | 380 | <b>Diseño de una herramienta para la gestión de un servicio de transporte de emergencias utilizando las APIs de google maps</b><br>María Jesús López Boada, Javier García Guzman, Daniel García Pozuelo-Ramos, Jose María Armingol Moreno, María Araceli Sanchis de Miguel, Hortensia Elena Amaris Duarte, Jose Manuel Molina Lopez, Roberto Losada Maestre, María Jesús Nieto Sanchez, Juanita Pedraza Córdoba, Beatriz López Boada |
| 290 | <b>The LogiSmile project – Piloting autonomous vehicles for lastmile logistics in European cities</b><br>Clément Lemardelé, Albert Baldó, Laia Pagés, Adina Aniculaesei, Andreas Rausch, Mariona Conill, Lars Everding, Thomas Vietor, Torben Hegerhorst, Roman Henze, László Mátyus, István Tóháti, Vidal Roca, Alberto Sanfeliu, Angel Santamaria-Navarro | 390 | <b>From road freight transport outsourcing chains to complex collaborative networks: a case study</b><br>Aitor Salas-Peña, Juan Carlos García Palomares, Blanca Rosa Cases Gutiérrez   |
| 300 | <b>Commercial agreements with retailers to strengthen an early response to earthquakes in an area of Mexico City</b><br>Luis Reynaldo Mota-Santiago, Angélica Lozano  | 400 | <b>Dynamic routes for waste collection in tourist destinations</b><br>Helí Alonso, Beatriz Gutiérrez, José Andrés Moreno-Pérez, Julio Brito Santana  |
| 310 | <b>Analysis of explanatory variables for estimating freight trip attraction in a commercial area in Mexico City</b><br>Adrián Esteban Ortiz-Valera, Angélica Lozano   |     |  |
| 320 | <b>Sistema inteligente para la gestión predictiva de la estancia y tránsito de vehículos pesados</b><br>Sergio Benítez-Delgado, Israel López-Plata, Belén Melián-Batista, Airam Expósito-Márquez, Christopher Expósito-Izquierdo, J. Marcos Moreno-Vega   |     |  |
| 330 | <b>Fire hazard reduction in ro-ro spaces by means of using a cargo distribution algorithm including fire risk management during the stowage process</b><br>Francisco Rodero Blánquez, África Marrero  |     |  |
| 340 | <b>Posicionamiento de los puertos en la transición energética. Desafíos y oportunidades del concepto de puerto verde</b><br>Alberto Camarero Orive, Javier Vaca Cabrero, María Nicoletta González Cancelas, José Ignacio Parra Santiago, David Díaz Gutiérrez, Francisco de Asís de Manuel López  |     |  |
| 349 | <b>Using Heuristics to Enhance Real-Life Warehouse Replenishment Processes in the Fashion Industry</b><br>Juliana Castaneda, Erika M. Herrera, Julio C. Londoño, Javier Panadero, Ángel A. Juan   |     |  |
| 359 | <b>Analysis and simulation of the capacity of the PLAZA intermodal railway station as a future rail motorway terminal</b><br>Jaime Escobar de la Iglesia, Emilio Larrodé Pellicer   |     |  |
| 369 | <b>Modelo de decisión para la evaluación de los criterios críticos de éxito de una operación de transporte sincromodal ferrocarril-carretera</b><br>Shaghayegh Rahnama, Victoria Muerza Marín, Emilio Larrodé Pellicer  |     |  |

## 411 Movilidad inteligente y nuevas tecnologías / *Smart mobility and new technologies*

- 412 **Clasificación de tipologías de vehículos mediante LiDAR 3D en la infraestructura**  
 Felipe Jiménez Alonso, Alberto Cruz Ruiz, Miguel Clavijo Jiménez, Guillermo Sánchez Gutiérrez-Cabello
- 422 **Sistema de seguimiento de trayectoria de un vehículo mediante control H $\infty$  por realimentación de salidas considerando perturbaciones en las medidas**  
 Manuel Jiménez Salas, Miguel Meléndez Useros, Fernando Viadero Monasterio, María Jesús López Boada, Beatriz López Boada
- 432 **Light-field and stereo cameras solutions applied to automotive industry**  
 Miguel Jiménez-Gomis, Ricardo Oliva-García, José Manuel Rodríguez-Ramos
- 440 **A Tourist Trip Design Problem involving capacity issues: model and heuristic resolution**  
 Dolores R. Santos-Peñate, José A. Moreno-Pérez, Clara Campos-Rodríguez, Rafael R. Suárez-Vega
- 450 **Análisis de la deformación y deterioros en pavimentos de carreteras debido al tráfico de vehículos pesados autónomos con modelos de elementos finitos**  
 Carlos Alonso Troyano, David Llopis Castelló, Alfredo García García
- 460 **Validation of a driving simulator for speed research on two-lane rural roads**  
 Santiago Higuera de Frutos, Marta Sáez Torner, María Castro Malpica
- 470 **GNSS data analysis, positioning and attitude determination using neural networks for air navigation**  
 Raúl de Celis, Luis Cadarso
- 478 **Análisis de la velocidad automatizada en vehículos de nivel SAE2**  
 Griselda López Maldonado, Sara Moll Montaner, David Llopis Castelló, Francisco Javier Camacho Torregrosa, Alfredo García García
- 488 **Microsimulation of the platooning of connected automated vehicles on freeways**  
 Laura Oriol, Margarita Martínez-Díaz, Marcel Sala, Francesc Soriguera
- 498 **Pagos digitales como transformación del transporte público**  
 Natalia Aldanondo Sánchez, Carlos Acha Ledesma
- 504 **Movilidad urbana en el temporal Filomena: un análisis a partir de datos de telefonía móvil en Madrid**  
 Yeray Cara Santana, Enrique Santiago Iglesias, Borja Moya Gómez, Juan Carlos García Palomares
- 514 **Balizas para el carril BUS VAO ITS de Tenerife**  
 Paula González de Chaves Assef, Miguel Pintor Sepúlveda
- 523 **Ecosistema virtual portuario: hacia los metapuertos**  
 Javier Vaca Cabrero, María Nicoletta González Cancelas, Alberto Camarero Orive, David Díaz Gutiérrez, Francisco de Asís de Manuel López, José Ignacio Parra Santiago
- 533 **Aplicación de datos de vehículos conectados para la planificación del transporte**  
 Rodrigo Vázquez Alonso, Carolina Schallibaum
- 543 **Health Care Logistics in Depopulated Mountainous Areas: the case of Lleida's Pyrenees**  
 Cristian Castillo, Laura Calvet, Javier Panadero, Eduard J. Alvarez-Palau, Marta Viu Roig, Angel A. Juan
- 553 **Recommendation of tourist itineraries with transport mode selection**  
 Cristina G. Navasa, Helí Alonso, José Andrés Moreno-Pérez, Julio Brito
- 563 **Urban crowdsensing by personal mobility vehicles to manage air pollution**  
 Pilar Jiménez, José Santa, Jesús Rubio-Aparicio, Emilio Ramos, Ramón Martínez, Esteban Egea-López
- 573 **Real options of distributed DAS sensing applied to transport engineering**  
 Ignacio Robles Urquijo, Adolfo Cobo García, Luis Rodríguez Cobo, M<sup>a</sup> Ángeles Quintela Incera
- 583 **Smart on-Road Technologies and Road Safety: A short overview**  
 Francesco Angioi, Alberto Portera, Marco Bassani, Juan de Oña, Leandro L. Di Stasi
- 593 **MaaS. El punto de vista del operador de transporte público.**  
 Natalia Aldanondo Sánchez, Carlos Acha Ledesma
- 598 **Keys to MaaS development. A qualitative approach based on the expectations of potential users**  
 Guadalupe González-Sánchez, Elvira Maeso-González, Francisco José Ávila-Giménez, María Isabel Olmo-Sánchez
- 608 **Spatial allocation of polling places considering urban mobility applied to Santiago, Chile**  
 Marcos Medina-Tapia, Tamara Sawady, Andrea Alvarado, Ricardo Crespo, Miquel Estrada, Benjamín Julio

## 618 Movilidad urbana | Urban Mobility

- 619 **Evolution of public transport demand in the Region of Madrid because of the Covid-19 pandemic**  
 Ángel D. Alonso Herrero, Andrés Monzón de Cáceres
- 629 **Uber y Cabify, ¿complemento o competencia del transporte público para reducir los accidentes urbanos? El caso de Madrid**  
 María Flor García, Armando Ortuño Padilla, Begoña Guirao Abad, Jairo Casares Blanco
- 639 **MaaS. Análisis de una experiencia piloto. El caso de ZUM en Zaragoza**  
 Antonio García Pastor, Clara Moreno, Nadim Matuk
- 650 **¿Cuál es el efecto de las políticas de transporte vinculadas a objetivos medioambientales en la demanda de aparcamiento en Madrid (España)?**  
 Juan Nicolás González, Juan Gómez, Jose Manuel Vassallo
- 660 **Urban Form Factors at Trip Origin and Destination as Determinants of Car Use: Evidence from Madrid Region**  
 Anna Ibraeva, Andrés Monzón de Cáceres, Elena López
- 670 **Evaluation of urban bus service quality in a medium-sized city: Case study Oviedo**  
 Shireen Al Suleiman, Adriana Cortez, Andrés Monzón
- 680 **Enabling Smart Urban Logistics: The Role of Open Data in Pamplona Mobility**  
 Anas Al-Rahamneh, Adrián Serrano-Hernández, Aitor Ballano Biurrun, Javier Faulin
- 690 **The 15-Minute City: Analysing Accessibility to Essential Daily Destinations by Active Mobility in Seville**  
**Miklós Radics, Panayotis Christidis, Borja Alonso Oreña, Luigi dell'Olio**  
 Security and safety of public transportation in irregular settlements of the Metropolitan Zone of México City  
 Clemencia Santos Cerquera, Angélica Lozano
- 709 **La movilidad laboral cotidiana de los trabajadores de los hoteles del Grupo Fedola en Costa Adeje (Tenerife)**  
 Fernando Davara Méndez, Moisés Simancas Cruz, David Suarez Perera
- 719 **NEOMOVILIDAD: Hacia la implementación de un sistema de transporte bajo en carbono en La Habana**  
 Reynier Campos Pompa
- 726 **Demand forecast on bike-sharing station using machine learning regression analysis**  
 Enrique Jiménez Meroño, Francesc Soriguera Martí
- 736 **Instrumentalización de un patinete eléctrico para evaluar la seguridad y el confort de la micromovilidad**  
 Víctor Just Martínez, Ana María Pérez Zuriaga, David Llopis Castelló, Alejandra Sofia Fonseca Cabrera, Carlos Alonso Troyano, Alfredo García
- 746 **Diferenciación entre los modos de transporte en los carriles bici**  
 Juan Benavente Ponce, Andrés Rodríguez Gutiérrez, Patricia Suarez Valero
- 756 **Modelos estadísticos y de aprendizaje automático para predecir las tarifas de viajes compartidos de los VTC**  
 Túlio Silveira-Santos, José Manuel Vassallo Magro, Thais Rangel Guilherme Christiano, Anestis Papanikolaou
- 766 **Are Demand Responsive Transport systems really justified to replace conventional bus service?**  
 Pau Cardona Olives, Miquel Estrada Romeu
- 776 **Urban mobility of tourism home guests: analysis of the rental homes location and their accessibility to the transport urban**  
 Armando Ortuño Padilla, Patricia Valenzuela, Begoña Guirao Abad, Fernando de Mingo López, María Flor García, Daniel Gálvez Pérez
- 785 **Optimisation of urban space based on geometric analysis of parallel parking lots**  
 Pedro Plasencia-Lozano, Irene Méndez-Manjón
- 795 **Los servicios municipales de movilidad. El reto de la transformación digital**  
 Ofelia Manjón-Cabeza Cruz
- 805 **La pervasión de las licitaciones del transporte público: abecedario de buenas prácticas para cambiar de paradigma**  
 Ana Díaz del Consuelo, Andrés García Martínez, Juan Ignacio Alcaide Bazán, Lucía Sarasola Sanz, Antonio García Pastor
- 815 **Un marco conceptual para integrar las TIC en las medidas espaciotemporales de accesibilidad**  
 Elizondo-Candanedo, Raúl F., Arranz-López, Aldo., Soria-Lara, Julio A.
- 825 **Nuevas soluciones de movilidad urbana y satisfacción con el viaje**  
 Yenis López Esalas, Lidón Mars Aicart, Rosa Arroyo, Beatriz Martín Rollón, Tomás Ruiz
- 835 **La ciudad de los 15 minutos ¿utopía o realidad?**  
 Cristina López García de Leániz, Allison Fernández Lobo
- 846 **Satisfacción y frustración de las necesidades psicológicas básicas en la movilidad urbana**  
 Beatriz Martín Rollón, Yenis López Esalas, Lidón Mars Aicart, Rosa Arroyo, Tomás Ruiz
- 856 **Regulación motivacional en la movilidad urbana de personas**  
 Tomas Ruiz Sánchez, Lidón Mars Aicart, Rosa Arroyo López, Pablo García Garcés

## 866 Operación y gestión / Operation and management

- 867 **Proyecto Centro de Control de la Movilidad de Gran Canaria**  
Rodrigo Pérez Senderos
- 876 **Model for updating traffic counts at level crossings in the spanish railway network**  
Jose-Manuel García, Jorge Murillo, Daniel Del-Moral, Francisco Cabrera
- 885 **Cooperative operation of public transport infrastructure to prevent crowding**  
Candela Martin, Juan Benavente, Raky Julio, Andrés Monzón
- 895 **Gestión de la velocidad límite de carreteras convencionales con tráfico ciclista mediante microsimulación del tráfico**  
Sara Moll, Griselda López, Alfredo García

- 905 **Experimental verification of the methodology to estimate transit dwell time from the Transit Capacity and Quality of Service Manual**  
Yaiza Montero-Lamas, Alfonso Orro, Margarita Novales, Graham Currie, James Reynolds

## 915 Planificación, infraestructuras y servicios / Planification, infrastructures and services

- 916 **Settlement Models Review for Ballasted Railway Tracks as a Tool to Analyze the Influence of the Horizontal Alignment Design on the Maintenance Period**  
Ali Alqatawna, Santos Sánchez-Cambronero García-Moreno, María Inmaculada Gallego Giner
- 926 **Assessing the added value of mapping scenario narratives for collaborative transport and urban planning**  
Amor Ariza-Álvarez, Julio A. Soria-Lara
- 936 **Planificación estratégica de estacionamientos en vía considerando competencia entre vehículos de pasajeros y de carga**  
Maira Milena Delgado Lindeman, José Luis Moura Berodia, Julián Arellana Ochoa
- 943 **Tail assignment-driven aircraft routing model**  
Rubén Jiménez Moreno, Francisco López Ramos, Manuel Fuentes González, Luis Cadarso Morga
- 953 **Evaluating the safety impact of employing a dedicated lane for connected and autonomous vehicles on a motorway section**  
Tasneem Miqdady, Rocío de Oña, Juan de Oña
- 963 **Posibilidades de recuperación de la calidad de los servicios de Cercanías en España: diagnóstico y propuestas**  
Ricardo Insa Franco, Pablo Salvador Zuriaga, Ignacio Villalba Sanchis, Pablo Martínez Fernández
- 973 **Air-rail timetable synchronisation for seamless multimodal passenger travel: a case study for Valencia-Lanzarote door-to-door journey**  
Jerónimo Bueno-González, Javier Burrieza-Galán, Oliva C. Cantú-Ros, Clarissa Livingston, Stefano Penazzi, Clara Buire, Aude Marzuoli, Daniel Delahaye
- 983 **A behavioral framework for the evaluation of airport infrastructure investments**  
Álvaro Rodríguez-Sanz, Luis Rubio Andrada
- 993 **El mercado de cruceros. Una inversión en auge en el Mediterráneo**  
José Ignacio Parra Santiago, David Díaz Gutiérrez, Alberto Camarero Orive, Rodrigo Pérez Fernández, Nicoletta González Cancelas, Javier Vaca Cabrero
- 1003 **Influencia del contenido de cemento en la resistencia de los firmes reciclados con cemento**  
Alaitz Linares-Unamunzaga, Hernán Gonzalo-Orden, María Nadia Aponte-Sanjinez, Heriberto Pérez-Acebo
- 1013 **Analytical study of sustainable bituminous pavements with artificial and reclaimed aggregates**  
Ángel Vega Zamanillo, Leticia López López, David Gómez Carrascal, Miguel Ángel Calzada Pérez, Evelio Teijón López-Zuazo
- 1023 **International Roughness Index (IRI) prediction models for freeways**  
Heriberto Pérez-Acebo, Miren Isasa, Itziar Gurrutxaga, Harkaitz Garcia, Aimar Insausti
- 1033 **Machine Learning Applied to Flexible Pavement Performance Prediction**  
Tiago Tamagusko, Adelino Ferreira
- 1040 **Probabilistic international roughness index (IRI) prediction model for a climate homogeneous region**  
Ángela Alonso-Solórzano, Heriberto Pérez-Acebo, Alaitz Linares-Unamunzaga, Hernán Gonzalo-Orden
- 1050 **Utilización de ecomateriales para la reconstrucción y recuperación de infraestructuras de carreteras en entornos volcánicos**  
Amílcar José Cabrera García
- 1060 **Caracterización de las estructuras territoriales en zonas rurales y su influencia en los servicios de transporte y la movilidad**  
David Ramírez-Cajigas, Amparo Moyano, José María Coronado
- 1070 **Diseño de una variante mediante programación matemática: carretera N-640 en Meira (Lugo)**  
Pedro Blanco-Valcárcel, Gerardo Casal, Alberte Castro, Duarte Santamarina, Miguel E. Vázquez-Méndez
- 1080 **Estudio del proceso de bateo de vía mediante técnicas de Machine Learning**  
Pablo Martínez Fernández, Ignacio Villalba Sanchis, Pablo Salvador Zuriaga, Ricardo Insa Franco



- 11090 **Problemática en el mantenimiento de la vía en placa tranviaria**  
Raúl Parra Hermida
- 11100 **Análisis de los parámetros de diseño involucrados en el diseño de la geometría en planta del trazado de las líneas de Ferrocarril de Alta Velocidad y su influencia en el período de explotación y mantenimiento**  
Santos Sánchez-Cambronero, Ali Alqatawna, Inmaculada Gallego, Ana Rivas
- 11110 **Integración de las estaciones de ferrocarril de Alta Velocidad en los sistemas de transporte a la demanda en entornos rurales**  
Carlos Tejero Beteta, Amparo Moyano Enríquez de Salamanca, Santos Sánchez-Cambronero García-Moreno
- 11220 **Macrosimulación para la planificación de transportes de altas prestaciones. Caso del Área Metropolitana de San Salvador (AMSS)**  
Fady Awad Núñez, Andrés Perriñán Fernández, Julián Sastre González, David Álvarez Castillo, Jaime Salom García
- 11330 **Influencia de la percepción de seguridad en el reparto modal de transporte de Madrid**  
Teresa López Moreno, María Eugenia López Lambas
- 11440 **Modelo de demanda de transportes: Modelo de la Comunidad de Madrid**  
Guillermo Maldonado Riesgo, Elena Fernández Muñoz, María Magdalena Esteban-Infantes Corral
- 11550 **Modelo de decisión de modo y tipología de aparcamiento en la transición hacia la era de la movilidad autónoma**  
Andrés Rodríguez Gutiérrez, Luigi dell'Olio, Ricardo Daziano, José Luis Moura
- 11660 **Extending accessibility for multi-modal analysis: the case of Madrid's low emission zone**  
Anastasia Soukhov, Javier Tarrío Ortiz, Julio A. Soria-Lara, Antonio Páez
- 11663 **Diseño de redes de movilidad en bicicleta utilizando técnicas de aproximación continua**  
Angélica Caicedo Mafla, Miquel Àngel Estrada Romeu
- 11772 **Consideraciones para un diseño integral enfocado en el uso de la bicicleta como medio de transporte**  
Daniel Chacón Oviedo, Daniela Segura Segura
- 11881 **Modelización peatonal: auge e importancia para su integración en la movilidad**  
M<sup>a</sup> del Rocío de la Cal Álvarez, Ángela Barba Muñoz
- 119191 **Universal accessibility and multimodal calm traffic on secondary streets to reduce pedestrian and vehicular conflicts**  
Gloria Londoño Mejía, Angélica Lozano Cuevas
- 1201201 **Factores clave para la regulación de patinetes eléctricos compartidos en áreas urbanas: un estudio del caso español**  
Natalia Sobrino, Juan Nicolás González, José Manuel Vassallo, María de los Ángeles Baeza
- 1211211 **A Biobjective Optimization Model to decide the lines attending a bus-stop with high passenger demands**  
Ginés León Rodríguez, Guillermo Esquivel González, Antonio Sedeño Noda
- 1221221 **Proyecto DIGIZITY. Un paso de gigante en la automatización y conectividad del transporte público**  
Borja López López, Antonio García Pastor
- 1231231 **Open Data for Evaluating Transit Systems. Challenges in Converting Real-Time Data into GTFS**  
Borja Moya-Gómez, Mariana Giannotti
- 1241241 **Metodología para la estimación de matrices de origen-destino en redes complejas de autobús con tratamiento de transbordos**  
Alfonso Orro, Margarita Novales, Ángel Monteagudo, Yaiza Montero-Lamas
- 1251251 **Integrating auto-rickshaws with a BRT system**  
Luis Márquez, Víctor Cantillo
- 1262262 **Desarrollos Orientados al Transporte. La experiencia de La Habana (Cuba)**  
David Álvarez Castillo, Julián Sastre González, María Cuello León, Reynier Campos Pompa, Lauger Leonel Medina Suárez, Guadalupe Rodríguez Rodríguez
- 1272272 **Fusión de datos pasivos geolocalizados de Google Maps y encuestas tradicionales de movilidad**  
Rosa Arroyo López, Tomás Ruiz Sánchez, Ignacio Villalba Sanchis, M<sup>a</sup> Lidón Mars Aicart, Angela Santini
- 1282282 **La implantación de un sistema de pago por uso de infraestructuras en España: ¿Qué efecto tendría sobre la equidad social y territorial?**  
Keila González Gómez, Juan Gómez Sánchez, Lucía Tapiador Cebrían, José Manuel Vassallo Magro
- 1292292 **What's favoring the expansion of new built-up areas? The correlation between transportation infrastructure and land development in Spain**  
Ali Maddahi, Eduard J. Alvarez Palau, Carles Mendéz Ortega
- 1302302 **La Última Milla en América**  
Isabel Amat Vall, Julián Sastre González, Martha Gutiérrez Echeverri
- 1312312 **Simheuristics algorithm for the Stochastic Home Social Care Scheduling Problem**  
Daniel Badell, Jéssica de Armas
- 1322322 **The role of stakeholders in early planning stages of urban mobility measures: anticipating barriers and challenges**  
Marí Luz Brownrigg-Gleeson, Adriana Cortez, Andrés Monzón
- 1332332 **Análisis de las experiencias de viaje de los usuarios del servicio de taxis de la ciudad de Medellín**  
Saúl Emilio Rivero Mejía, Katherine Bolaño Restrepo, Carlos Andrés Rodríguez Toro, Andrés Felipe Cossio Galeano, Yesica Alejandra Rodas Cano, Andrés Felipe Delgado Mejía



## 1342 Seguridad / Safety

- 1343 **Identificación de patrones accidentológicos de ciclistas en España. Periodos: 2000-2015 y 2016-2019**  
 Blanca Arenas Ramírez, Almudena Sanjurjo de No, Giovanni Pablo Pillajo Quijia, Edinalva Gomes Bastos, Francisco Aparicio Izquierdo
- 1353 **Utilización de algoritmos de reglas de asociación en la predicción de la gravedad de las lesiones causadas por accidentes en el transporte de mercancías**  
 Luis David Berrones-Sanz, Dulce María Monroy Becerril, Esteban Martínez Díaz
- 1364 **Recursos económicos dedicados a las carreteras y sus efectos sobre la seguridad vial de motociclistas en España**  
 José Navarro-Moreno, Juan de Oña, Francisco Calvo-Poyo
- 1374 **Un enfoque integral para la evaluación de mejoras en la seguridad vial a lo largo del proceso de inversión**  
 Julia Slowy, Francisco Reina Barranco, José Antonio Navarro Moreno
- 1384 **New test methodology for the assessment of bike-pavement skid-resistance**  
 Celia Delgado Durán, Daniel Álvarez Mántaras, Jorge Roces García, Luis Ángel Sañudo Fontaneda, Pablo Luque Rodríguez
- 1394 **Cuantificación de los efectos de las incertidumbres de un modelo de amortiguador magneto-reológico en un sistema de suspensión dinámica**  
 Ramón Alberto Gutiérrez Moizant, María Jesús López Boada, Beatriz López Boada, María Ramírez Berasategui, Andrés
- 1404 **Ricardo Valdez**  
**Certifications related to road safety in automotive passenger transport companies**  
 Héctor Rubén Tarcaya, Antonio Adrián Arciénaga Morales
- 1412 **Análisis de la eficacia del panel que indica la velocidad como medida de calmado de tráfico en carreteras de calzada única afectadas por obras**  
 Heriberto Pérez-Acebo, José Manuel Baraibar-Díez, Uxue Arteagabeitia-Villanueva, Ander Atín-Ruiz-de-Viñaspre
- 1422 **Técnicas de Coordinación Semafórica. Evaluación en un Caso Práctico de Estudio**  
 Marta Rojo, Andrés Rodríguez-Gutiérrez, Borja Alonso-Oreña, Hernán Gonzalo-Orden
- 1432 **Are panels indicating vehicles' speed an efficient traffic calming measure in short urban areas, when they are placed alone?**  
 Miguel Ángel Salas, Heriberto Pérez-Acebo, Robert Ziolkowski, Hernán Gonzalo-Orden
- 1442 **The impact of the cyclist infrastructure type on bike accidents: the experience of Madrid**  
 Begoña Guirao, Daniel Gálvez- Pérez, Natalia-Casado-Sanz, Antonio Peco

## 1452 Sostenibilidad y transporte / Sustainability and transport

- 1453 **Characterisation of oil spills using hyperspectral technology and feature selection**  
 María Gema Carrasco García, María Inmaculada Rodríguez García, Juan Jesús Ruiz Aguilar, Javier González Enrique, Ignacio José Turias Domínguez
- 1463 **Emisiones de CO2 evitadas por la implantación de metros ligeros**  
 Raúl Parra Hermida
- 1470 **Balance Neto de Carbono en carreteras de la isla de Tenerife**  
 C. Gara Ramos Morales, Josefina Hernández Márquez, Miguel Pintor Sepúlveda, Ignacio Demaria Castañeda, Raul J. Pradana Yuste, Marta Espejo Rayo
- 1480 **Air Pollution forecasting using Long Short-Term Memory Networks in the Bay of Algeciras (Spain)**  
 María Inmaculada Rodríguez García, María Carrasco García, Juan Jesús Ruiz Aguilar, Javier González Enrique, Ignacio José Turias Domínguez
- 1490 **Collaboration futures in urban and transportation scenarios**  
 Alberto Rojas Rivero, Miguel Navarro-Ligero, M.a Eugenia López Lambas, Julio A. Soria-Lara
- 1500 **Impacto en la demanda de las reducciones tarifarias en transporte urbano y metropolitano**  
 Javier Abellán Cubría, Clara Moreno
- 1510 **Identification of long-distance tour purpose through ML-based data fusion techniques for combining mobile network and survey data**  
 Javier Burrieza-Galán, Ignacio Martín, Francisco Nicolai, Javier Monroig, Javier Torres, Miguel Picornell
- 1520 **Desafío 2050: el uso del escape room como alternativa para el aprendizaje de la movilidad sostenible**  
 Silvia Sipone, Andrés Rodríguez Gutiérrez, José Luis Moura Berodia, Marta Rojo Arce
- 1530 **Criterios de sostenibilidad en la planificación y proyectos de transporte y proceso de defensa del cambio climático en infraestructuras de transporte**  
 Elena Curto Alonso, María Carpio López
- 1540 **Identifying latent variables for active cycling mobility. An application for university students**  
 Raquel Espino Espino
- 1550 **Elección de modo de transporte en los desplazamientos al campus: una aplicación a la ciudad de Valencia**  
 Bárbara Vázquez Paja, María Feo Valero, Salvador del Saz Salazar
- 1560 **Uso de herramientas de micro simulación para validar modelos teóricos de estimación de la demanda peatonal**  
 Elena Díaz Burgos, Santos Sánchez - Cambroner, Monica Gentili, Ana María Rivas
- 1570 **¿Cómo influye comprar por internet en las pautas de movilidad de la población?**  
 Juan Gómez Sánchez, Lucía Tapiador Cebrián, Laura Garrido Maza, José Manuel Vassallo Magro
- 1580 **Low Emission Zones: exploring emerging forms of collaboration in ecological-transition environments**  
 Miguel L. Navarro-Ligero, Julio A. Soria-Lara

- 1590 **Dificultades y retos en la implantación de un PMUS en municipios canarios: el caso de la Villa de La Orotava en la Isla de Tenerife**  
 Pedro Josafat Brito Castro, Sergio Navarrete González, Eva Luna Romero González, Pablo Oromí Fragoso, Ana María Rodríguez Alloza
- 1600 **Impacto de las Zonas de Bajas Emisiones en el cambio modal**  
 Javier Tarrío Ortiz, Juan Gómez Sánchez, Julio Alberto Soria Lara, José Manuel Vassallo Magro
- 1610 **Low Emission Zones Implementation Pathways for medium and small cities: a multi-stakeholder and multi-city approach (LEZIPA)**  
 Mohammadnour Mashagba, Juan de Oña, Francisco Calvo-Poyo
- 1620 **Diseño de mezclas bituminosas sostenibles para su uso en carriles bici**  
 David Llopis Castelló, Carlos Alonso Troyano, Pablo Álvarez Troncoso, Aida Marzá Beltrán, Alfredo García García
- 1630 **Estudio experimental sobre la incorporación de la fracción mixta del reciclaje de plástico como reemplazo parcial del ligante en mezclas asfálticas**  
 Diana Movilla-Quesada, Aitor C. Raposeiras, Luis T. Silva-Klein
- 1641 **Análisis del comportamiento reológico de la interfaz filler-ligante de másticos bituminosos con cenizas volantes**  
 Aitor C. Raposeiras, Diana Movilla-Quesada, Manuel Lagos-Varas, Natali Cabrera-Sepúlveda
- 1653 **Análisis de ciclo de vida de mezclas bituminosas con caucho procedente de NFVU introducido por la vía seca y aditivos de mezclas semicalientes para reducir la temperatura de fabricación y compactación**  
 Ana María Rodríguez-Alloza, Daniel Garraín, A.R. Pasandín, María del Cristo Adrián de Ganzo
- 1662 **Sustainable road concrete pavements with recycled aggregate from reclaimed asphalt pavement and construction and demolition waste**  
 Evelio Teijón López-Zuazo, Ángel Vega Zamanillo, Miguel Ángel Calzada Pérez, Leticia López López, Juan Manuel Refoyo Vara
- 1672 **Análisis de las estrategias para la descarbonización del transporte de mercancías por carretera**  
 M<sup>a</sup> Victoria Muerza Marín, Emilio Larrodé Pellicer
- 1682 **Impactos de la pandemia en la distribución modal de la movilidad urbana y sus derivadas medioambientales: el caso Cartagena (España)**  
 Salvador García-Ayllón Veintimilla
- 1692 **The effects of the COVID-19 pandemic on mobility: what the evidence tells us**  
 Clara Soler, Genís Majoral, Sergi Saurí, Jordi Pons-Prats
- 1702 **Análisis del uso de los servicios de moto compartida en la sociedad post-COVID: aplicación a las ciudades españolas**  
 María Vega Gonzalo, Álvaro Aguilera García, Juan Gómez Sánchez, José Manuel Vassallo Magro
- 1712 **Research on technologies for highly safe autonomous and connected mobility in complex environments**  
 Patricia Navarro, José Ignacio Garrigós, Laura Esteban, Marta Garrido, Nuria Herranz, Javier Zabaleta
- 1721 **Experiencing the Autonomous Bus: Results from a tourist survey**  
 María Eugenia López Lambas, Amor Ariza-Álvarez, Julio A. Soria-Lara
- 1731 **Exploring working profiles in the era of teleworking: The case of Madrid (Spain)**  
 Iria López-Carreiro, Andrés Monzón, Elena López
- 1741 **Transporte público y accesibilidad universal: Estado de la cuestión y perspectivas post-COVID**  
 María Cuello León, Alicia González Marín, Julián Sastre González
- 1751 **Vinculando las percepciones del uso del Metro de Madrid al espacio a partir de datos de Twitter**  
 Joaquín Osorio Arjona
- 1760 **Diseño preliminar de una planta de producción de biodiésel en Canarias para el fomento del transporte sostenible**  
 Laura Díaz Rodríguez, Karina E. Rodríguez Espinoza, Candela Díaz García, L. Antonio González Mendoza, Douglas J. Escalante Ayala, Alicia Torres Gil, J. Aythami Pérez-Remedios, Rocío Castelo Mato
- 1770 **La digitalización del seguimiento del desherbado químico de infraestructuras como herramienta de minimización del impacto ambiental**  
 María Montero Cuéllar, María Berlanga Ruiz, Eva López Martínez, Fernando Ruiz Gámez
- 1779 **Índice de Sostenibilidad para el Transporte Público de la Ciudad de México**  
 Luis David Berrones-Sanz
- 1791 **Diseño de encuestas para conocer las preferencias del usuario en el uso de las App móviles que fomenten el transporte público**  
 Juan Francisco Coloma, Marta García, Andrés Monzón
- 1801 **Assessing urban bus users' satisfaction in Tangier, a developing medium-sized city**  
 Adriana Cortez, Andrés Monzón
- 1811 **Personalización de las aplicaciones de viaje en ciudades medias-pequeñas para conseguir pautas de movilidad más sostenibles**  
 Marta García García, Juan Francisco Coloma Miró, Lucía Gil Portillo, Andrés Monzón de Cáceres
- 1821 **Methodology for public passenger transport in developing countries: a survey**  
 Carmen Angelina García-Cerrud, Idalia Flores de la Mota
- 1831 **Design and evaluation of a recovery propulsion system: parametric analysis towards the improvement of energy efficiency in air transport**  
 Jorge Saavedra, Luis Cadarso
- 1841 **Life cycle assessment of eVTOL vehicles in island system. Case Study: Canary Island**  
 Néstor Velaz Acera, Dánae Arcauz Durán, David Borge Diez
- 1851 **Análisis de las emisiones de contaminantes en aeropuertos**  
 Raquel Rodríguez Quintana

**1861 Vehículos, material móvil y equipos / Vehicles, mobile material and equipment**

1862 **Influencia de la disposición de la batería AV sobre las sollicitaciones experimentadas por un ocupante de un vehículo eléctrico en una colisión lateral**  
Ana L. Olona Solano, Luis Castejón Herrero

1872 **Optimización de la estructura de protección de la batería de tracción de un vehículo eléctrico**  
Ana L. Olona Solano, Luis Castejón Herrero

1882 **Predictive model for the evaluation of liquefied natural gas rail traction on non-electrified routes**  
Pablo Luque Rodríguez, Daniel Álvarez Mántaras, Luciano Sánchez Ramos

1892 **Factors associated with young drivers traffic accidents in urban areas: the experience of Madrid**  
Natalia Casado-Sanz, Begoña Guirao, Daniel Gálvez-Pérez

1902 **Platooning of Connected Autonomous Vehicles in freeway traffic: state of the art**  
Seshadri Naik Moode, Francesc Soriguera

1912 **Route optimization for EV fleets in freight urban distribution with real-time autonomy management and CO2 emissions blockchain-powered tracking**  
Emilio Larrodé Pellicer, Juan Bautista Arroyo García, M<sup>a</sup> Victoria Muerza Marín

1921 **The effect of driving/braking torque vectoring on electric vehicle efficiency**  
Daniel Álvarez Mántaras, Pablo Luque Rodríguez, Marta Alonso Villarmarzo, Alberto García Martínez

**1931 PREMIOS A PONENCIAS PRESENTADAS POR JÓVENES INVESTIGADORES / AWARD FOR PRESENTATIONS SUBMITTED BY YOUNG RESEARCHERS**

**1932 AGRADECIMIENTOS / ACKNOWLEDGMENTS**

# **URBAN MOBILITY OF TOURISM HOME GUESTS: ANALYSIS OF THE RENTAL HOMES LOCATION AND THEIR ACCESSIBILITY TO THE TRANSPORT URBAN SYSTEM**

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## **ABSTRACT**

The implementation of the collaborative economy or also called “platform economy” in the tourist sector has led to a relocation of traditional accommodation centres (hotels and resorts), which were previously concentrated in specific areas of the city, thus facilitating the organization of public space and the provision of urban transport. The rental of tourist homes in countries whose national economy is highly dependent on the tourism sector (such as Spain) places a “floating tourist” in the city, who travels through it generating impacts on the local activity centers (restaurants, shops, museums, etc.) and on the public space and mobility. These new tourists will define new frequent street itineraries around the city, access public transport in a more relocated way and probably visit different activity centers than if they were staying in a traditional hotel.

This new scenario poses a series of challenges to our knowledge of the effects on both the tourism sector itself and on the urban environment that serves as physical, social, economic and cultural support. Where do these tourists stay? What areas, monuments, public amenities or public spaces do they visit? What kind of shops do they frequent? And how do they move around our cities?

The location of tourism homes within city districts is particularly relevant to study this mobility and, until now, few studies in the literature use this approach to assess the behavior of this type of tourist and his impact on local economies.

This study is part of the first stage of the project MOVI-GUEST (PID2021-124428OB-100),

financed by the Spanish Ministry of Science and Innovation, whose main objective is to analyze the behavior of travelers and, specifically, their mobility patterns: the location of tourism homes, modes of urban transport used during the stay and itineraries selected, main amenities and public spaces visited and so on.

In this paper we advance the general results offered by Fevitur (Spanish Federation of Holiday Rental Association) for the main important touristic cities in Spain and introduce the case study of Malaga, Madrid and Alicante, where the detailed study will be carried out. The results of this research can help policy makers to better understand the mobility flows of tourist home guests and its impact on the transport system and public space.

## 1. INTRODUCTION

Actually, holiday homes represent 32% of the regulated tourist accommodation capacity in Spain. In the Autonomous Communities with the longest tourist tradition, especially in coastal destinations, holiday homes represent more than 50% of the regulated accommodation capacity. The housing destined for tourist use provides a capillarity and territorial implantation that no other type of accommodation provides, boosting the economy both of the main tourist destinations and of the municipalities with less tourist tradition.

With 285,868 (National Institute of Statistics, 2022a) dwellings for tourist use in Spain, these accommodations represent only 1.28% (National Institute of Statistics, 2022b) of the total housing stock.

The average stay in holiday homes is higher than in hotel establishments (5.28 (Muñoz et al., 2017) nights in holiday homes compared to 3.60 (National Institute of Statistics, 2019) nights in hotels). Holiday homes reduce tourist pressure on the main tourist resources, distributing tourist flows throughout the territory. A long average stay also offsets the carbon footprint.

The average length of stay is inversely proportional to both tourism pressure and carbon footprint. Therefore, for the same number of overnight stays, the longer the average stay, the lower the stress on the main tourist resources, the better the distribution of tourist flows throughout the territory and the better the carbon footprint is offset (EXCELTUR, 2023).

One of the characteristics of tourist housing is its capillarity in the cities. This means, at the city level, advantages in terms of mobility of the tourists who stay there, encouraging de-gentrification, as opposed to other types of accommodations, which are mainly concentrated in the center of the cities, such as hotels. This characteristic, practically unique to this type of accommodation, promotes different mobility patterns of its guests. Indeed, the main challenges of this research work are to identify these patterns.

## **2. STATE OF THE ART ON TOURISM HOUSING AND ITS IMPACT ON MOBILITY AND SOCIOECONOMICS**

### **2.1 Analyzing the behavior of travelers staying in holiday homes in urban destinations**

These questions have probably not been answered in the scientific field because the only consistent way of quantifying impacts requires detailed geolocation tracking of a sample of tourists and the massive processing of this data.

The possibilities offered today by the development and massive use of TICs allow a new working framework for the scientific field. This fact is also taking place at a time when the concern for generating sustainable tourism is at its peak. The COVID-19 crisis has also highlighted the resilience of tourist housing, as it allows a greater social distance from hotels.

Under this hypothesis, the MAIN GOAL of this study is to analyze the behavior of travelers staying in tourist housing in urban destinations using a METHODOLOGY for monitoring the mobility of guests with digital tools (tracking the geolocation of people), so that local administrations have tools that allow them to make decisions about the transport system and the management of public spaces.

## **3. LOCATION OF SPANISH TOURIST DWELLINGS AND THE MODES OF TRANSPORT USED FOR GUEST TRAVEL**

In order to have more exhaustive and concrete data for our main study, first, we will analyse a study led by Fevitur and carried out by the University of Salamanca (2022). This study, called "Observatorio de la vivienda turística en España 2022", aims to determine the behavior of travelers.

The main goal of this project is to have an x-ray of the tourist housing (VT) user in Spain throughout the year 2022.

As a first approach to mobility patterns, we start with the study of tourists. The report focused on users who are residents in Spain.

It is a report that complements the information offered by the INE or other entities.

Spain has a competitive tourism sector that accounts for a very important part of our GDP (12.4%)

We have a supply of tourist accommodations capable of fully satisfying the demands of users according to their preferences. The holiday homes (VUT) has a very presence in all the developed tourist markets, covering the market space that is generated by user demand, related to independence of use, cost of rental and stay, or location. The Public Administrations must ensure that this supply of VUTs continues to be sufficient and competitive both for its users and companies that promote it.

Sample selection for Fevitur study:

Target population: People resident in Spain, aged 18 to 74 years old, who during the last year have used at least one full rental tourist dwelling in Spain in 2022. According to the dates of the survey, we are referring to the period from December 2021 to November 2022, both inclusive.

In a first phase of prospecting to establish a preliminary sample of people targeted by the study, the invitation to respond was sent to a large initial sample of Netquest panel members. This sample was selected respecting the quotas of the Spanish population according to INE, Avance del Padrón a 1 de enero de 2021 according to sex, age group and Autonomous Community of residence.

A total of 17,632 people began answering the “Observatorio de la vivienda turística en España 2022” survey.

From the total of the 17,632 participants of the initial sample to whom the invitation to answer the preliminary filtering questionnaire was sent, 1,889 completed questionnaires were obtained, which served as the basis for obtaining the random samples for the national report and for the samples for the reports of each of the Autonomous Communities of interest. In the case of the sample of 1,100 individuals used to prepare the national report, the quotas per Autonomous Community of destination for trips using a VUT are respected, according to the INE's Resident Tourism Survey 2021.

### **3.1 Main conclusions of the barometer: “Observatory of tourist housing in Spain”**

Overview of the main items analyzed in the study:

**a.1. The Use of VUTs (tourist housing):** 31.8% of people between 18 and 74 years old who went on a trip staying at least one night away, have used a VUT, which represents a sensitive increase compared to the 23% recorded in 2019. The forecast for 2023 is that 84.4% of VUT users will return to this type of accommodation on their trips in 2023.

VUT users have used this type of accommodation 2.6 times throughout 2022, significantly higher than the 1.26 in 2019.

**a.2. Loyalty to VUT:** for 41.5 % (47.2 % in 2019) of these users VUT is the only type of accommodation they were interested in, while for 50.6 % (46.1 % in 2019) they hired VUT after comparing with the hotel offer.

**a.3. User profile:** VUT was hired for 5.5 nights and to accommodate 3.9 people on average. Families are still the group that uses VUT the most (38.1 %), but their weight has decreased compared to the 2019 figures, in favour of couples (36.5 %) and groups of friends (20.4 %) who see their participation increase. Going to the beach (24.7%), visiting cities or artistic



heritage (22.2%) and enjoying nature and the countryside (19.4%) are the main motivations for travel using a VUT.

**a.4. Determinants in the choice of the VUT:** In the search for and selection of the VUT that was purchased, they mainly looked at its location and price, a result that coincides with what is observed in past years.

**a.5. Preferences on the location of the accommodation**

The chosen VUT is usually in the center of the places to which one goes (56.3%) and somewhat less in the outskirts (43.7%), which implies that the means and time of travel change.

**3.2 Preferences on the location of the accommodation**

Before concentrating on the main focuses of our study (location and mobility patterns), the most important determinants for tourists in the decision making process of booking VUTS will be described.

When making the decision to book a VUT, users evaluate the available accommodation alternatives and finally select the one they consider most suitable according to a series of determinants. The two main determinants most valued when choosing the VUT are the price and the location of the housing in the area (4.4 points). These determinants seem to be even more relevant in 2022 compared to 2019.

The location of housing in the area is more important for the age group between -35 and 44 years compared to the younger ones. -

Price is more relevant for the age group between 35 and 44 years compared to those between 65 and 74 years.

	Media
Comments or ratings from previous users on the internet about this property	4,13
Price	4,42
Information about security against thieves and burglaries	3,45
Dealing with the person in charge of the VUT	3,89
Location of the property in the area	4,43
Environmental and sustainability commitment: LED light bulbs, intelligent air conditioning, water economizers, waste separation...	3,05
Information about spaces and interior and exterior equipment of the house.	4,18

**Table 1 - Important determinants in the decision to book VUT**

### 3.3 Preferences about the location of the accommodation and mobility patterns

Given the relevance of the location of the accommodation when selecting it, we are going to analyze the degree of sensitivity that the user has to the distance of the accommodation to the places of interest of the tourist destination and their preferences. Any measure adopted on the location of the tourist accommodations offered has a crucial importance in the degree of user satisfaction with the vacation experience. If comparing the data for 2022 with those for 2019, it is observed that the VUT is located to a greater extent in the center (56.3%) compared to 2019 (51.3%).

When it comes to choose the mode of travel, in 2022 users staying in the center indicate a greater use of car, motorcycle or public transport (51.7% vs. 47.5% in 2019), and therefore fewer trips on foot, bicycle or scooter.

In terms of commuting times, the vast majority (52.7%) indicate that they spent between 10 and 20 minutes commuting. If we look at those who used a VUT that was located on the outskirts, we observe that 84.4% use car, motorcycle or public transport, a higher percentage compared to VUTs in the center, and also higher than in 2019 (78.8%).

Travel times are similar to those of users with VUT in the center, although a higher percentage of respondents indicate that they took more than 20 minutes (23.5% vs. 15.7%). There are no significant differences in these figures by sex or age group.

	2022	2019
In the center of the city	56,27	51,33
In the outskirts	43,73	48,67

**Table 2 - Location of the lodging in the area.**

The chosen VUT is usually in the center of the places to which one goes (56.3%) and somewhat less in the outskirts (43.7%), which implies that the means and time of travel change.

When the VUT is in the center, the means used is almost equally divided between travel by car, motorcycle or public transport (51.7%) and walking, bicycle or scooter (43.7%); on the other hand, when it is in the outskirts, motorized travel increases (84.4%) and walking, bicycle or scooter travel decreases (15.6%). Relative to 2019, there has been a five percentage point increase in downtown VUT hiring.

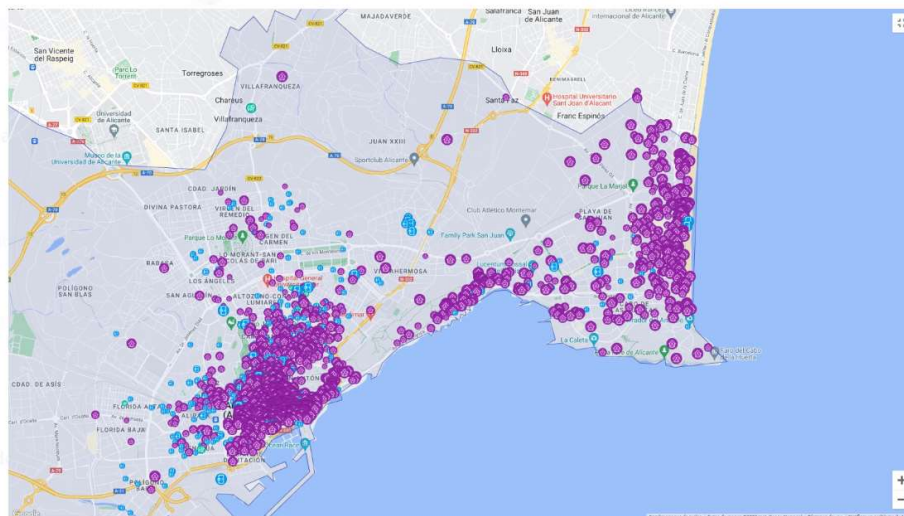
## 4. CASE STUDIES (MALAGA, MADRID AND ALICANTE) AND PROPOSED METHODOLOGY. MAPS AND SOME CLUES AS TO WHERE WE ARE GOING TO GO FROM HERE

Following the conclusions obtained in the "Observatory of tourist housing in Spain 2022" conducted by the University of Salamanca and led by Fevitur, we have decided to expand the information on a series of aspects.

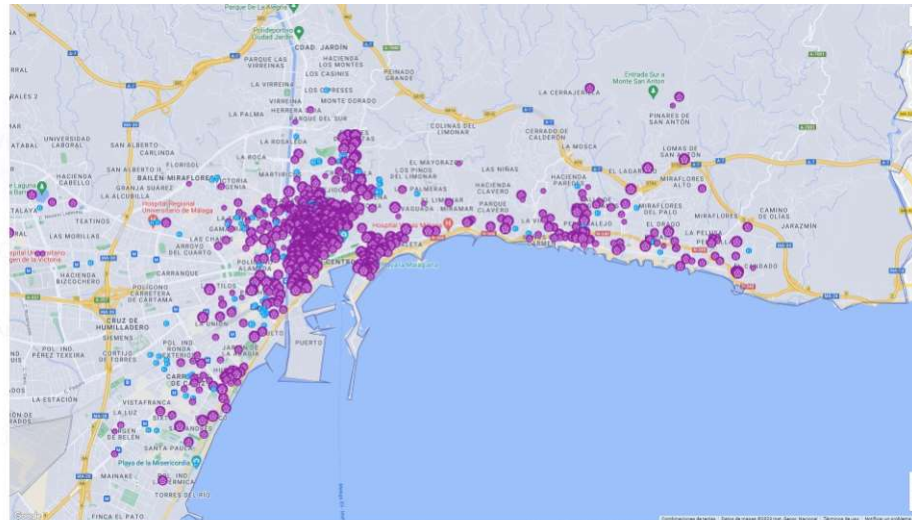
The project will take as case studies the cities of Madrid, Malaga and Alicante, since they can reliably reflect the Spanish reality of tourist housing rental. Madrid corresponds to big city tourism, a very diversified leisure tourism, with a strong weight of business travel. Malaga is associated with cultural tourism and, finally, Alicante represents an urban destination linked to sun and beach.

The results pursued by this analysis will include indicators of the most used itineraries and modes of transport, trip duration and schedules. We will identify the centers of activity visited, their location, the order of the visits, the frequency of visits to the tourist centers, the way of accessing these centers by transport, the average expense made per guest and their distribution by activities and districts of the city. All these indicators will be used to design recommendations to facilitate decision-making by local administrations.

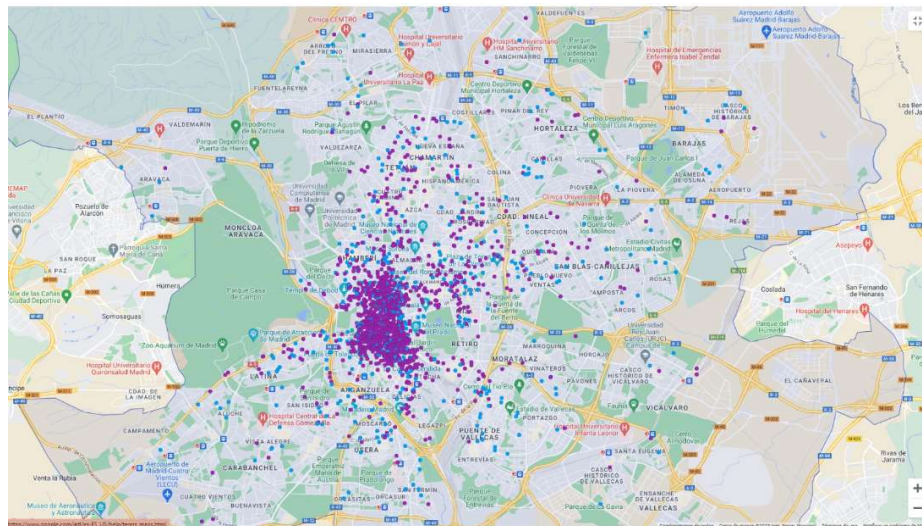
The following are the maps of the three cities of the study in which the tourist housing units are depicted. It can be observed how they are located not only in city centers but along the neighbourhoods of the cities.



**Fig. 1 – Tourist accommodation present in the municipality of Alicante. Source: AIRDNA**



**Fig. 2 – Tourist accommodation present in the municipality of Málaga. Source: AIRDNA**



**Fig. – Tourist accommodation present in the municipality of Madrid. Source: AIRDNA**

## ACKNOWLEDGMENTS

"The publication/result/equipment/video/activity/contract/other is part of the project PID2021-124428OB-I00, funded by MCIN/AEI/10.13039/501100011033/ERDF, EU", where PID2021-124428OB-I00 is the reference that appears in the award resolution; MCIN is the acronym of the Ministry of Science and Innovation; AEI is the acronym of the State Research Agency; 10.13039/501100011033 is the DOI (Digital Object Identifier) of the Agency; and ERDF is the acronym of the European Regional Development Fund. In case of space limitations, particularly in publications, the following will be mentioned: PID2021-124428OB-I00 Project reference/ AEI/10.13039/501100011033/ ERDF, EU.

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