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TWIN-SAFE NEWSLETTER

January 2026, ISSUE 02

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Building on the **previous issue published in January 2025**, this newsletter presents a **full year of TWIN-SAFE project activities**, covering developments through to **January 2026**.

Dear reader,

Welcome to the Second TWIN-SAFE Project Newsletter!

Funded by the Horizon Europe Research and Innovation Programme, the TWIN-SAFE project - launched in May 2024 - is now well into its second year and has strengthened road safety research at the University of Zagreb's Faculty of Transport and Traffic Sciences (FTTS) through close collaboration with Lund University (LU) and Hasselt University (HU).

Since the first newsletter, the project team has made substantial progress in sharing and disseminating road safety knowledge. We have continued PhD seminars and organized six additional seminars given by researchers from FTTS, LU, and HU. Based on an overview of partners' strategic research areas and exogenous factors, we produced a synthesis of common research directions with strong potential for joint future research. FTTS also organized five online workshops on road safety assessment methodologies and a five-day training program on road safety audits for HU and LU researchers. Furthermore, we developed a Civic University Framework and held several workshops on grant writing and funding strategies. The second edition of the Road Safety Summer School was successfully organized from August 25 to September 2, 2025. The nine-day program brought together 26 participants from 13 countries and covered human factors, vehicle and infrastructure safety, crash analysis, road safety assessment methods, and practical field-based applications.

On the research side, the naturalistic driving study and data collection using the mobile app developed by HU have been finalized, and the first publication was presented and published at the TRANSCODE conference. A new driving simulator, co-financed by the TWIN-SAFE project, has been implemented at FTTS. The simulator is a key piece of equipment supporting the setup of the Road Simulation Laboratory, enabling high-fidelity simulation and experimental road safety research within WP3. The laboratory will further develop FTTS's Center of Excellence for Road Traffic Safety (CERTS).

Thank you for reading our newsletter and following the progress of the TWIN-SAFE project. We invite you to visit our website, follow us on social media, or contact us directly for more information and updates.

Yours sincerely,



Asst. prof. Dario Babic
Project coordinator



TWIN-SAFE OVERVIEW

Road safety remains a pressing global issue, with road crashes causing 1.19 million deaths annually and leaving countless individuals injured. These incidents take a devastating toll on families, communities, and economies, with costs reaching 1-3% of GDP. In the EU, around 20,000 people lose their lives on the roads each year. While significant progress has been made, the disparity in road safety between EU Member States highlights the need for more unified and effective strategies.

To address this issue, the EU has set ambitious targets: a 50% reduction in road deaths and serious injuries by 2030 and zero road deaths by 2050 under its "Vision Zero" initiative. Central to this plan is the Safe System Approach, which anticipates human errors and designs systems to minimize fatal consequences by ensuring safe road users, vehicles, infrastructure, speeds, and post-crash care.

Croatia faces unique challenges despite having high-quality road infrastructure and EU-aligned legislation. The country lacks more concrete interdisciplinary collaboration among legislators, authorities, the public and private sectors, NGOs, and academia.

The TWIN-SAFE project focuses on advancing the Faculty of Transport and Traffic Sciences University of Zagreb (FTTS) by enhancing its research and education, with a strong emphasis on road safety. It aims to support the development of the newly established Centre of Excellence in Road Traffic Safety (CERTS) at FTTS, solidifying its role in pioneering road safety research and innovation.

The project leverages partnerships with Hasselt University (HU) and Lund University (LU) to incorporate best practices and expertise, enhancing FTTS's position as a leader in road safety research and innovation. This collaboration is strengthened by the "Q-helix" model, which brings together academia, industry, public authorities, and end-users to address road safety challenges through a multidisciplinary approach.

An important part of the TWIN-SAFE project is its research component, in which the research team will employ mobile tools, such as the iDREAMS app, to monitor driver behaviour and GIS to identify high-risk road sections. These insights, evaluated using the iRAP methodology, will guide the design of safer road systems.

Key work packages driving the TWIN-SAFE vision

Project Coordination and Management

WP1



Goals

Efficiently coordinate and manage the TWIN-SAFE project to achieve its objectives.



Activities

Ensure smooth collaboration between partners, oversee project progress, manage administrative tasks, and ensure compliance with EU funding requirements.

Innovation and Commercialization

WP4



Goals

Strengthen FTTS expertise in road safety approaches and foster interdisciplinary collaboration.



Activities

Conduct training workshops, summer schools, researcher exchanges, and define joint PhD research areas.

Internationalisation and Gender Inclusion

WP5



Goals

Boost FTTS's global outreach, management, and innovation skills.



Activities

Develop an English curriculum, organize workshops, establish an innovation office, and facilitate internships.

Capacity Building for Road Safety Research

WP2



Goals

Map FTTS's current capabilities and develop a roadmap for improving road safety research infrastructure.



Activities

Benchmark technologies, identify investment priorities, and strategize infrastructure enhancements.

Research on Driver Behaviour and Infrastructure

WP3



Goals

Investigate the relationship between rural road infrastructure and driver behaviour.



Activities

Collect and analyse driving data, assess high-risk locations, propose safety measures, and validate them through simulations and user feedback.

Dissemination and Sustainability

WP6



Goals

Ensure dissemination, sustainability, and impact of project outcomes.



Activities

Host summer schools, present solutions at conferences, and provide policy recommendations.

CONSORTIUM



The Faculty of Transport and Traffic Sciences (FTTS), established in 1984 as part of the University of Zagreb, is a leading institution in transport and traffic engineering in Croatia. Specializing in transport technology, intelligent transport systems (ITS), logistics, and aeronautics, FTTS actively participates in national and international research projects to address critical transport challenges. Particularly prominent in road safety, FTTS has led or partnered in several EU-funded initiatives, contributing to the development of innovative solutions and strategies for improving traffic safety and efficiency. These efforts position FTTS as a key player in advancing transport research and fostering safer, more sustainable mobility.



Lund University, Scandinavia's largest institution for education and research, is consistently ranked among the world's top 100 universities and has a strong focus on road safety research through its Transport and Roads unit. This multidisciplinary team, with around 30 permanent staff members, is involved in various EU projects related to traffic safety. The unit promotes the Vision Zero initiative, aiming for zero fatalities and serious injuries in road traffic while fostering safer and more sustainable transportation systems.



The Transportation Research Institute (IMOB) at Hasselt University conducts fundamental and applied research in transportation and road safety and transportation modelling, employing a total of 50 staff members, including faculty and researchers. Their road safety research unit, comprising 20 specialists, focuses on human factors related to road infrastructure and vehicle technology, employing innovative methods like driving simulations camera-based studies, and drone technology to analyse and improve traffic safety outcomes.



Continuation of the Online PhD Seminar Series

JANUARY to JUNE 2025

Building on the **first four PhD seminars**, the **series continued** with the **5th session starting in January 2025**, bringing together researchers from **FTTS, Lund University, and Hasselt University**.

The PhD seminar series **concluded in June 2025**, having provided a valuable **platform for PhD students to present their ongoing research** in transportation and road safety, while encouraging knowledge exchange and academic collaboration across partner institutions.

Over the 10-month period, the **seminars attracted a total of 210 participants**, with **10–30 attendees per session** and strong representation from FTTS, Lund University and Hasselt University.

...opening the next chapter of the seminar series.



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Funded by the European Union

ONLINE PhD seminar
January 24th 2025
10:00 AM

Scan to REGISTER!

Marija Ferko
Faculty of Transport and Traffic Sciences, University of Zagreb/Hasselt University Belgium

"Assessment of influential factors on motorcyclists' safety on rural roads"

STOP @ LinkedIn Instagram Facebook

5th PhD Seminar Session

January 24th 2025

Presented by: Marija Ferko

Assessment of influential factors on motorcyclists' safety on rural roads



SEMINAR MATERIALS LINK



SEMINAR MATERIALS LINK

6th PhD Seminar Session

February 21st 2025

Presented by: Oksana Yastremska-Kravchenko

Application of video recordings in traffic studies



twinsafe
Funded by the European Union

ONLINE PhD seminar
February 21st 2025
10:00 AM

Scan to REGISTER!

Oksana Yastremska-Kravchenko
Lund University

"Application of video recordings in traffic studies"

STOP @ LinkedIn Instagram Facebook

tw:nsafe
Funded by the European Union

ONLINE PhD seminar
March 21st 2025
10:00 AM

Scan to REGISTER!

Imran Nawaz
Hasselt University, Belgium

"Evaluating the Effectiveness of an Online Gamified Traffic Safety Education Platform for Adolescent Motorcyclists in Pakistan"

STOP @ LinkedIn Instagram Facebook

7th PhD Seminar Session

March 21st 2025

Presented by: **Imran Nawaz**

Evaluating the Effectiveness of an Online Gamified Traffic Safety Education Platform for Adolescent Motorcyclists in Pakistan



SEMINAR MATERIALS LINK



SEMINAR MATERIALS LINK

8th PhD Seminar Session

April 11th 2025

Presented by: **Leonid Ljubotina**

Predictive Model for Assessing a City's Bikeability Potential

Hand cursor icon

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Funded by the European Union

ONLINE PhD seminar
April 11th 2025
10:00 AM

Scan to REGISTER!

Leonid Ljubotina
Faculty of Transport and Traffic Sciences, University of Zagreb

"Predictive Model for Assessing a City's Bikeability Potential"

STOP @ LinkedIn Instagram Facebook

tw:nsafe
Funded by the European Union

ONLINE PhD seminar
May 23rd 2025
10:00 AM

Scan to REGISTER!

Elvira Grahn
Lund University

"Conflicted Streets: knowledge, rationality, and traffic safety in contested street-level retraction of automobility"

STOP @ LinkedIn Instagram Facebook

9th PhD Seminar Session

May 23rd 2025

Presented by: **Elvira Grahn**

Conflicted Streets: knowledge, rationality, and traffic safety in contested street-level retraction of automobility

SEMINAR MATERIALS LINK

10th PhD Seminar Session

June 13th 2025

Presented by: **Marija Ferko**

Unveiling the Key Factors Behind Injury Severity in Single-Vehicle Motorcycle Crashes

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Funded by the European Union

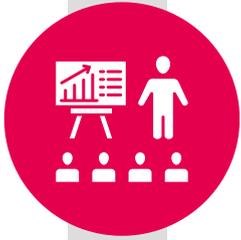
ONLINE PhD seminar
June 13th 2025
2:00 PM (CET)

Scan to REGISTER!

Marija Ferko
Faculty of Transport and Traffic Sciences

"Unveiling the Key Factors Behind Injury Severity in Single-Vehicle Motorcycle Crashes"

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Road Safety Auditors Training

MARCH to APRIL 2025

Five-day intensive training



From **March 31st to April 4th, 2025**, FTTS hosted a **five-day Road Safety Auditors (RSA) training programme in Zagreb**, bringing together researchers from **Lund University** and **Hasselt University**.

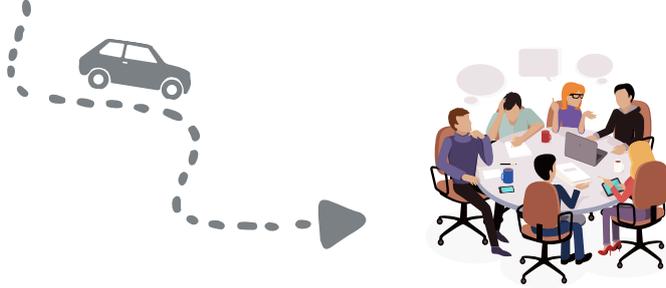
LU and HU staff gained **specialised expertise** from FTTS in **road safety assessment methodologies** and **road safety audits**.

5 participants from LU and 2 from HU participated in the Road Safety Auditors Training

Training covered:

- Road safety audit principles and legislation
- Safety and risk assessment techniques
- Audits with a focus on PTWs
- Role and quality of road markings and sign in road safety





TWIN-SAFE Train the Trainer Program

FEBRUARY to APRIL 2025

In the **first half of 2025**, FTTS launched a **new online TWIN-SAFE Workshop Series** focusing on various **road safety assessment methodologies** and **tools** from the **perspective of different road users**.

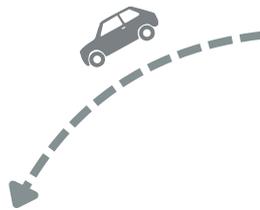
iRAP Star Rating Assessment

February 14th 2025



EU Network Wide Road Safety Assessment (NWRSA)

February 28th 2025



Road Safety Audits (RSA)

March 4th 2025



CycleRAP

March 25th 2025



Black (Hot) Spot Management

April 9th 2025

Each workshop had between **20 and 40 participants**.



Prepared and hosted by **FTTS team**



Advancing the Civic University Mission: Continued Activities in 2025

JULY and SEPTEMBER 2025

In 2025, FTTS and Hasselt University held two online follow-up workshops (July and September) to jointly develop the framework, vision, and strategic direction of FTTS's Civic University Mission, building on earlier groundwork.

The first faculty in Croatia to actively embark on the journey towards becoming a Civic University.



The workshops focused on identifying FTTS needs, defining the civic mission and objectives, and discussing key performance indicators (KPIs), contributing directly to the document outlining FTTS Civic Mission, Strategy and Objectives.



Grant Writing Webinar Series

OCTOBER AND NOVEMBER 2025

**Funding for multidisciplinary research –
how, where, when and with whom?**
Lund University

Introduction to grantsmanship
Lund University



Writing the impact – Consultants
(StemWISE)



**Coordinating horizon project:
experience from i-DREAMS Project**
Hasselt University



Moderated by FTTS



Internships on Project Management and Research Practices



As part of the project's capacity-building and knowledge-exchange activities, project team members participated in two internships focused on project management, research support, and innovation management, held in Hasselt, Belgium, and Lund, Sweden.



Lund University

September - October 2025

The internship in Lund addressed ethical, organisational, and communication aspects of research projects, with a focus on simulations and experiments involving human participants. Key topics included ethics and privacy management, science communication, and experience sharing from ERC-funded projects, alongside group-based project work and study visits to Lund University laboratories and research offices.

Overall, these internships significantly strengthened the project team's capacities in project management, research support, ethics, and international research collaboration.

Additional sessions addressed innovation and spin-off policies, as well as GDPR, ethics, and research data management.

Hasselt University Instituut voor Mobiliteit

November 2025

The internship in Hasselt focused on research and project management within the academic and innovation ecosystem, covering industrial research funding mechanisms, project management and support structures, business development, research consultancy, and proposal writing.

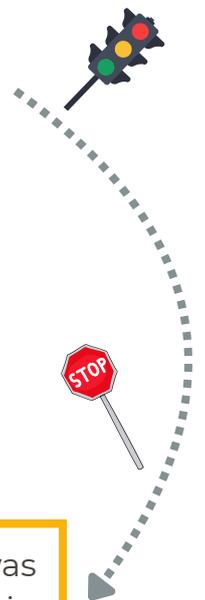


Road Safety Summer School 2025

AUGUST to SEPTEMBER 2025

RS Road Safety *Summer* SCHOOL 2025

[WEBSITE](#)



The **nine-day Road Safety Summer School 2025** was hosted by the Faculty of Transport and Traffic Sciences in Zagreb, **bringing together participants in an international learning environment focused on road safety.**

The programme covered **human factors, vehicle and infrastructure safety, crash analysis, road safety assessment** methods, and **practical field-based applications.**

The training brought together **26 participants from 13 countries!**

Activities



Expert lectures on road safety

Group work and interdisciplinary collaboration

Field activities and practical road safety analysis

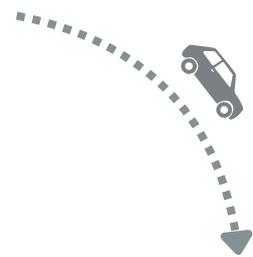
International networking and knowledge exchange





Participants benefited from lectures delivered by **internationally recognised experts** from FTTS and leading European universities and industry organisations.

Lecturers included experts from **FTTS, Lund University, Hasselt University, SWARCO, Lindsay Corporation, Micro-link, Croatian Roads** and the **University of Győr**.



Topics:

- Road Safety Across Borders
- Human factors in traffic safety
- Safe road design
- Crash analysis
- Road safety management
- Field work

Road Safety Summer SCHOOL 2025

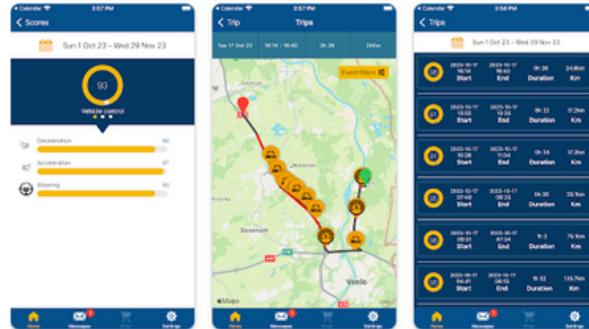


Progress of the Project's Research Activities



A total of 72 participants were successfully recruited for the purposes of collecting naturalistic driving data, including 53 car drivers and 19 motorcyclists, thereby exceeding the originally defined KPI target of 40 participants.

Using the **TOECAN** mobile application, naturalistic driving data were continuously collected until June 2025. The dataset includes a total of 8,338 hours of driving for car drivers and 2,106 hours for motorcyclists, covering cumulative distances of **417,399 km** and **107,659 km**, respectively.



The first scientific results have already been achieved !
Turn the page



The project team is collaborating with Croatian Roads Ltd. and collecting road infrastructure data. Furthermore, the collected data will undergo detailed statistical analysis to identify correlations between driver behaviour and infrastructure features, leading to the identification of risky road segments.



To promote transparency and further scientific collaboration, the collected dataset has been published in open access and is publicly available via the **Zenodo repository**.



From Data Collection to Scientific Output!



Data collection:

Using the **TOECAN app**, naturalistic driving data have been continuously collected until June 2025. with data analysis currently ongoing. This work has already **resulted in a peer-reviewed paper**.



Exploring motorcyclist speeding through naturalistic riding data

Authors: M. Ferko, D. Babić, T. Brijs, A. Pirdavani

Published: November 2025

[Download here](#)



TWIN-SAFE at TRANSCODE Conference:

The paper was selected for presentation at the **TRANSCODE 2025 International Scientific Conference**, reflecting the project's ongoing research activities and scientific output. The conference took place on **11 and 12 December 2025** in **Zagreb**.



FTTS and HU Phd student Marija Ferko presenting the paper on TRANSCODE

TRANSCODE 2025

International Conference - The Science and Development of Transport



Organised by **FTTS**, **TRANSCODE 2025** brought together over a hundred **participants from Croatia and abroad**, including researchers, practitioners, and industry representatives, to explore new directions in transport and logistics.

The programme featured engaging presentations, panel discussions, and parallel sessions focused on **innovative, research-based solutions** and their **practical application**.

These sessions addressed **key challenges** in **transport and logistics**, including **supply chains**, **transport processes**, and **sustainable, technology-driven development**.



Members of the **TWIN-SAFE** team participated in the event, **contributing to discussions** and **presenting the project's scientific work**, further **linking our research with developments in transport and safety**.



Panel discussion highlighting Women in Transport & Logistics at TRANSCODE



New Driving Simulator at FTTS

DECEMBER 2025



Co-financed by the TWIN-SAFE project, a **new driving simulator** has **been installed** at the **Faculty of Transport and Traffic Sciences**, University of Zagreb.



The driving simulator represents a **key piece of equipment** supporting the setup of the **Road Simulation Laboratory**, enabling **high-fidelity simulation and experimental road safety research**.

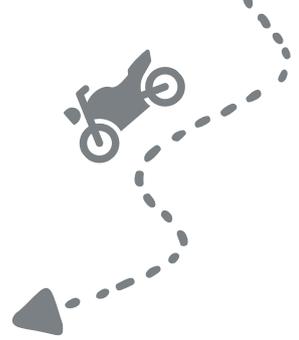




The Double Doctorate stories

MARIJA FERKO

10 December 2025



The first double doctoral dissertation focusing on motorcyclist safety was successfully defended, marking the completion of a demanding and highly rewarding research journey.



The PhD was conducted under a cotutelle agreement between the University of Zagreb, Faculty of Transport and Traffic Sciences, and Hasselt University, Faculty of Engineering Technology.

The research addressed motorcyclist safety from multiple perspectives, aiming to improve the understanding of risks faced by vulnerable road users and to contribute to the development of more effective safety measures.

This achievement represents a valuable contribution to the academic community and a strong example of successful international collaboration.

The Double Doctorate stories



LEONID LJUBOTINA



Leonid's PhD research focuses on the safety of cycling infrastructure in urban and rural environments, with particular attention to interactions between cyclists and motorized traffic and the influence of infrastructure design and user behavior.

Part of the research was conducted in collaboration with Hasselt University through two three-month research stays in 2024 and 2025, which included methodological development, safety data analysis, comparative assessment of European cycling design practices, and preparation of conference papers.

"The ultimate objective of the PhD is to develop evidence-based recommendations and modelling approaches that support safer design of cycling infrastructure on both urban streets and rural roads."

BERNARD KOSOVEC

The research mainly relies on data from the TWIN-SAFE project, combining naturalistic driving data collected via the TOECAN application with traffic crash data to identify high-risk locations on rural roads, including horizontal curves, unsignalized intersections, pedestrian crossings, and transition zones near settlements.

Identified high-risk road segments are replicated in a driving simulator to evaluate innovative traffic calming measures aimed at reducing speed and improving driving behaviour, after which

the most effective measures will be implemented on real roads and assessed through before-and-after evaluations. This year will be Bernard's first stay at Hasselt University, which will be a valuable opportunity for sharing expertise and gaining new perspectives.



"Overall, my research will combine naturalistic driving data, driving simulation, and real-world implementation to identify high-risk locations, evaluate innovative traffic calming measures, and assess their safety effects through before-and-after analyses."

TWIN-SAFE 2026

Upcoming activities....



- **Continuation of the work on data analysis and investigation on how road infrastructure impact driving behaviour and road safety**
- **Literature review of common infrastructure measures for eliciting desired driver behaviour**
- **Development of new and innovative infrastructure enhancement proposals and testing them on the driving simulator**
- **Develop Technology transfer strategy for FTTS**
- **Develop Innovation strategy for FTTS**
- **Organization of a summer school on Diversity, Equality, and Inclusion**
- **Setup of knowledge centre within CERTS**
- **Develop innovation rewarding policies for FTTS**
- **Organise Road Safety Summer School 2026**
- **Initiate collaboration on PhD topics**
- **Educate researchers on using European Open Science Cloud (EOSC)**
- **Develop English curriculum on road safety**

Thanks for keeping up with the TWIN-SAFE project. There's plenty more ahead as we continue working towards safer roads through research, collaboration, and innovation. In the coming months, expect more updates on our research findings, upcoming events, and new opportunities to get involved. Whether you're interested in our training workshops, research insights, or partnerships, we encourage you to stay connected.

Visit our website for the latest news, follow us on social media for real-time updates, or reach out to our team directly, we're always open to new ideas and collaborations.

Where to find us:

twinsafe



Contact Point:

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Project coordinator

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