



Curriculum Vitae

Ali Pirdavani

Background

- Ali became a Civil Engineer in 2004. In 2007, he obtained his Master's degree in Road & Transportation Engineering.
- Ali obtained his Ph.D. in Transportation Sciences in 2012.
- In 2013, he became a Research Foundation – Flanders (FWO) postdoctoral fellow.
- Ali was appointed a professor at the Faculty of Engineering Technology of Hasselt University in 2016.

Personal details

NAME	Ali Pirdavani
ADDRESS (WORK)	Faculty of Engineering Technology Agoralaan Gebouw H Kantoor H-B107 BE-3590 Diepenbeek Belgium and Transportation Research Institute (IMOB) Witte Kazerne Kantoor WK-1-23 Maastrichterstraat 100 BE-3500 Hasselt Belgium
PHONE NUMBER (WORK)	+32 (0)11/292183
MOBILE PHONE NUMBER	+32 (0)488/061082
EMAIL ADDRESS (WORK)	ali.pirdavani@uhasselt.be
DATE OF BIRTH	11/11/1980
PLACE OF BIRTH	Tehran, Iran
GENDER	Male
NATIONALITY	Iranian/Belgian
MARITAL STATUS	Married

Skills

- Road safety analysis
- Crash modeling
- Road infrastructure and automated vehicles
- Road engineering
- Driving simulation

Experience

PROFESSIONAL EXPERIENCE Ali supervised various doctorates in the field of road safety (road design and automated vehicles, dangerous crash locations, and driving simulator analysis) and directed several projects.

Ali has conducted various reviews for leading international scientific journals and conferences. He is the editor of the KSCE Journal of Civil Engineering and Sustainability journal and a member of the editorial board for "Advances in Transportation Studies".

Ali served as a consultant engineer in various consulting companies and the Tehran Traffic & Transportation Organization, Tehran Municipality, and Technical Activities Department.

Projects

Here is the list of 5 projects in the last three years:

AI for Vision Zero in Road Safety	
Start date	01/11/2023
End date	31/10/2027
Partners	Technische Universiteit Delft (NL), Ethnicon Metsovion Polytechnion (GR), Universiteit Hasselt (BE), Sveuciliste U Zagrebu Fakultet Prometnih Znanosti (CR), Oseven Single Member Private Company (GR), Agilysis Limited (UK), International Road Assessment Programme (UK), Psa Automobiles Sa (FR), Cegeka Nv (BE), Abeonaconsult (BE), Cardioid Technologies Lda (PT), Haskoningdhv Nederland Bv (NL), Nederlandse Organisatie Voor Toegepast Natuurwetenschappelijk Onderzoek TNO (NL), Fred Engineering Srl (IT), Evropski Institut Za Ocenjevanje Cest - Eurorap (SL), Traffic Injury Research Foundation Of Canada (Canada), Groupement D'interet Economique Derecherches Et D'etudes Psa Renault (FR), Instituto Superior De Engenharia De Lisboa (PT), West Midlands Combined Authority (UK), Infranea (BE)
Personal role in the project	Promoter of one Ph.D. candidate within the network
Budget (€)	Total: 3,335k EUR For IMOB: 499k EUR
Client	<input checked="" type="checkbox"/> Public <input type="checkbox"/> Private Name client: European Commission - HORIZON-MSCA-2022

Methodology for determining challenging road sections in terms of road safety for powered two-wheelers on rural roads

Start date	01/11/2020
End date	31/10/2024
Partners	University of Zagreb, Croatia
Personal role in the project	Project director
Budget (€)	Hasselt University provides funding.
Client	<input checked="" type="checkbox"/> Public <input type="checkbox"/> Private Name client: Hasselt University

RMSF – Road markings and road signs for the future

Start date	01/12/2020
End date	09/02/2023
Partners	University of Zagreb, AKKA, TU Graz
Personal role in the project	Partner, responsible for research on human factors and cost-benefit analysis
Budget (€)	Total: 150k EUR For IMOB: 50k EUR
Client	<input checked="" type="checkbox"/> Public <input type="checkbox"/> Private Name client: European Commission – DG MOVE

Automated vehicles' impact on pavement performance

Start date	15/03/2019
End date	14/03/2023
Partners	-
Personal role in the project	Project director
Budget (€)	Hasselt University provides funding.
Client	<input checked="" type="checkbox"/> Public <input type="checkbox"/> Private Name client: Hasselt University

Safety and geometric road design implications of connected and automated vehicles

Start date	16/10/2017
End date	15/10/2021
Partners	-
Personal role in the project	Project director
Budget (€)	Hasselt University provides funding.
Client	<input checked="" type="checkbox"/> Public <input type="checkbox"/> Private Name client: Hasselt University

Teaching activities

Courses taught at the Bachelor-Master Industrial Engineering – Construction (Faculty of Engineering Technology) and
Transportation Sciences Program (School for Transportation Sciences):

- Transportation infrastructure
- Pavement design and sustainability
- Microsimulation models
- Road infrastructure design
- Road safety evaluation: methods and applications
- Traffic engineering
- Bachelor's thesis - Construction
- Integrated Project - Construction
- Master's thesis - Construction

Awards, fellowships, and grants

- Postdoctoral Fellowship (2013) – awarded by the Research Foundation – Flanders (FWO)
- Grant for participation at a congress abroad (2011) – granted by the Research Foundation – Flanders (FWO)
- Travel Grant for a long stay abroad (2015) – granted by the Research Foundation – Flanders (FWO)
- Grant for participation at a congress abroad (2017) – granted by the Research Foundation – Flanders (FWO)
- Grant for participation at a congress abroad (2022) – granted by the Research Foundation – Flanders (FWO)

List of ongoing and accomplished Ph.D. supervisions, with students holding fellowships

AS PROMOTER:

- Ph.D. Candidate: Leonid Ljubotina
Title of the Ph.D. project: Predictive Model for Assessing a City's Bikeability Potential
Funding agency: Hasselt University partial funding, Flemish Government
- Ph.D. Candidate: Solomon Ntow Densu
Title of the Ph.D. project: Pedestrian Traffic Crashes in Urban Areas: An Integrated GIS-Based Hotspot Identification and Spatiotemporal Analysis
Funding agency: Kwame Nkrumah University of Science & Technology (Ghana)
- Ph.D. Candidate: Marija Ferko
Title of the Ph.D. project: Methodology for Determining Challenging Road Sections in Terms of Road Safety for Powered Two-wheelers on Rural Roads
Funding agency: Hasselt University partial funding, Flemish Government
- Ph.D. Candidate: Ali Yeganeh
Title of the Ph.D. project: Automated Vehicles' Impact on Pavement Performance
Funding agency: Hasselt University funding, Flemish Government

- Ph.D. candidate: Muhammad Wisal Khattak
Title of the Ph.D. project: Development and Calibration of Safety Performance Functions for Flanders-Belgium
Funding agency: Pakistan Higher Education Commission (HEC)
- Ph.D. candidate: Pavlos Tafidis
Title of the Ph.D. project: Safety and Geometric Road Design Implications of Connected and Autonomous Vehicles
Funding agency: Hasselt University funding, Flemish Government

AS CO-PROMOTER:

- Ph.D. candidate: Mayssa Hamdani
Title of the Ph.D. project: Toward a Smarter Monitoring of Road Traffic Infrastructures Based on an Intelligent Blockchain Approach
Funding agency: Hasselt University funding, Flemish Government
- Ph.D. candidate: Tufail Ahmed
Title of the Ph.D. project: Developing a Methodology for Bicycle Infrastructure Condition Assessment and Solutions Based on Spatial Characteristics of City Network
Funding agency: Higher Education Committee (Pakistan)
- Ph.D. candidate: Qinaat Hussain
Title of the Ph.D. project: The Effectiveness of Advanced Traveler Information System (ATIS) and Perceptual Countermeasures for Improving Traffic Safety and Management in Areas with a Multicultural Population
Funding agency: Qatar National Research Fund (QNRF)
- Ph.D. candidate: Hammad Hussain Awan
Title of the Ph.D. project: Evaluation of Traffic Safety of New Infrastructure Designs Using Driving Simulator
Funding agency: Pakistan Higher Education Commission (HEC)
- Ph.D. candidate: Monique Martins Gomes
Title of the Ph.D. project: Evaluating the Impacts of Enriched Information on Crash Prediction Performance: Case Studies in Brazil and Flanders
Funding agency: National Counsel of Technological and Scientific Development – CNPq
- Ph.D. candidate: Kristof Mollu
Title of the Ph.D. project: Evaluating the Impacts of Road Design on Safe Driving Behavior Using a Driving Simulator
Funding agency: Hasselt University funding, Flemish Government
- Ph.D. candidate: Nora Reinolsmann
Title of the Ph.D. project: Modeling the Impacts of Different Variable Message Sign Strategies on Driver Behavior Using Driving Simulations
Funding agency: Qatar National Research Fund (QNRF)
- Ph.D. candidate: Syed Adnan Raheel Shah
Title of the Ph.D. project: Analysis of Road Traffic Accidents Concerning Geometric Road Features and Traffic Flow Characteristics
Funding agency: Pakistan Higher Education Commission (HEC)
- Ph.D. candidate: Alexandru Sterpu
Title of the Ph.D. project: Modelling of the Cyclic Behavior of Concrete and Application to Plain Concrete Pavements
Funding agency: Hasselt University funding, Flemish Government

Academic quantitative indicators

- Total number of journal publications indexed in Web-of-Science: 49
- Total number of book chapters: 2
- Total number of conference papers: 40
- Total number of supervised and concluded Master's dissertations: 60
- Total number of supervised Doctoral theses: 15
- Google Scholar brief retrieved on January, 15th 2024: Total Citations = 1274, h-index = 22, i10-index = 36

Links to the web pages:

Link to MyCitations (Google Scholar):

<https://scholar.google.be/citations?user=ScHpX3YAAAAJ&hl=en>

Link to MyResearcherID (ISI): <http://www.researcherid.com/rid/L-2361-2018>

Link to ORCID: <https://orcid.org/0000-0001-8374-9305>

Link to personal webpage:

https://www.uhasselt.be/fiche_en?voornaam=ali&naam=pirdavani

Publications

Below, you can find the academic publications of Ali Pirdavani for the last 3 years. For a complete publication overview, kindly check [this link](#).

2024

JOURNAL CONTRIBUTION

FERKO, Marija; PIRDAVANI, Ali; Babić, Dario (2024). *Exploring the Factor Structure of a Modified Motorcyclist Behavior Questionnaire: Croatian Context*.

In: Transportation research procedia (Online), 73, p. 250-256, DOI: 10.1016/j.trpro.2023.11.915 [Article - cat: A1]

PIRDAVANI, Ali; Bunjong, Siwagorn; Coenen, Dries; Nulens, Jens (2024). *Analytical assessment of the impact of material properties on the performance of flexible and composite highway pavements in Flanders*.

In: Transportation research procedia (Online), 73, p. 118-125, DOI: 10.1016/j.trpro.2023.11.899 [Article - cat: A1]

PIRDAVANI, Ali; Muzyka, Stephano; Vandervoort, Victor; Van Hoyer, Sander (2024). *Application of building information modeling (BIM) for transportation infrastructure: a scoping review*.
In: Transportation research procedia (Online), 73, p. 110-117, DOI: 10.1016/j.trpro.2023.11.898 [Article - cat: A1]

2023

YEGANEH, Ali; VANDOREN, Bram; PIRDAVANI, Ali (2023). *Pavement rutting performance analysis of automated vehicles: contribution of flexible pavement layers' characteristics*.
In: Road Materials and Pavement Design, DOI: 10.1080/14680629.2023.2268728 [Article - cat: A1]

Mendes, Olga Beatriz Barbosa; Larocca, Ana Paula Camargo; Rodrigues Silva, Karla; PIRDAVANI, Ali (2023). *Assessing the Performance of Highway Safety Manual (HSM) Predictive Models for Brazilian Multilane Highways*.
In: Sustainability, 15 (Art N° 10474), DOI:10.3390/su151310474 [Article - cat: A1]

TAFIDIS, Pavlos; PIRDAVANI, Ali (2023). *Application of surrogate safety measures in higher levels of automated vehicles simulation studies: A review of the state of the practice*.
In: Traffic Injury Prevention, p. 1-8, DOI: 10.1080/15389588.2023.2176711 [Article - cat: A1]

AHMED, Tufail; PIRDAVANI, Ali; JANSSENS, Davy; WETS, Geert (2023). *Utilizing Intelligent Portable Bicycle Lights to Assess Urban Bicycle Infrastructure Surfaces*
In: Sustainability, 15 (5), (Art N° 4495); DOI: 10.3390/su15054495 [Article - cat: A1]

Naaman, Ali; Shiran, Gholamreza; Alavi, Maryam; PIRDAVANI, Ali (2023). *Dynamics of Campus Travel Behavior under the COVID-19 Pandemic*.
In: Future Transportation, 3, p. 1085-1107, DOI: 10.3390/futuretransp3030060 [Article - cat: A2]

CONFERENCE MATERIAL

AHMED, Tufail; PIRDAVANI, Ali; JANSSENS, Davy (2023). *Assessment of Bicycle Infrastructure Surface with Portable Bicycle Lights*.
In: The Transportation Research Board (TRB) 102nd Annual Meeting, Washington, D.C, USA, January 8–12, 2023 [Paper - cat: C2]

YEGANEH, Ali; VANDOREN, Bram; PIRDAVANI, Ali (2023). *Automated Vehicles: Contribution of Flexible Pavement Layers' Characteristics to Rutting Performance*.
In: The Transportation Research Board (TRB) 102nd Annual Meeting, Washington, D.C, USA, January 8–12, 2023 [Paper - cat: C2]

AHMED, Tufail; PIRDAVANI, Ali; JANSSENS, Davy; WETS, Geert (2023). *Evaluating Cyclist Ride Quality on Different Bicycle Streets*.
In: 25th Euro Working Group on Transportation Meeting (EWGT 2023), Santander, Spain, September 6-8, [Paper - cat: C2]

2022

JOURNAL CONTRIBUTION

Schio Rondora, Maria Emília; PIRDAVANI, Ali; Camargo Larocca, Ana Paula (2022). *Driver Behavioral Classification on Curves Based on the Relationship between Speed, Trajectories, and Eye Movements: A Driving Simulator Study*.

In: Sustainability, 14 (10) (Art N° 6241). DOI: 10.3390/su14106241 [Article - cat: A1]

FERKO, Marija; Babić, Dario; Babić, Darko; PIRDAVANI, Ali; Ševrović, Marko; Jakovljević, Marijan; Luburić, Grgo (2022). *Influence of Road Safety Barriers on the Severity of Motorcyclist Injuries in Horizontal Curves*.

In: Sustainability, 14 (22) (Art N° 14790) DOI: 10.3390/su142214790 [Article - cat: A1]

YEGANEH, Ali; VANDOREN, Bram; PIRDAVANI, Ali (2022). *Pavement rutting performance analysis of automated vehicles: impacts of wander mode, lane width, and market penetration rate*.

In: International Journal of Pavement Engineering, p. 1-18. DOI: 10.1080/10298436.2022.2049264 [Article - cat: A1]

REINOLSMANN, Nora; Alhajyaseen, Wael; BRIJS, Tom; PIRDAVANI, Ali; ROSS, Veerle; HUSSAIN, Qinaat; BRIJS, Kris (2022). *Delay or travel time information? The impact of advanced traveler information systems on drivers' behavior before freeway work zones*.

In: Transportation Research Part F-Traffic Psychology And Behaviour, 87, p. 454 -476 DOI: 10.1016/j.trf.2022.05.001 [Article - cat: A1]

CONFERENCE MATERIAL

KHATTAK, Wisal; De Backer, Hans; De Winne, Pieter; BRIJS, Tom; PIRDAVANI, Ali (2022). *Development of Crash Prediction Models for Urban Road Segments Using Poisson Inverse Gaussian Regression*. Wei, Heng (Ed.).

In: International Conference on Transportation and Development 2022: Transportation Safety, p. 107 -119, [Paper - cat: C1]

KHATTAK, Wisal; De Backer, Hans; De Winne, Pieter; BRIJS, Tom; PIRDAVANI, Ali (2022). *Analysis of Factors Influencing Road Crashes in the Urban Areas: The Application of Generalized Poisson Model vs Negative Binomial Model*.

In: The 6th International Symposium for Highway Geometric Design, Amsterdam, The Netherlands, 26-29 June 2022 [Paper - cat: C2]

KHATTAK, Wisal; PIRDAVANI, Ali; De Winne, Pieter; BRIJS, Tom; De Backer, Hans (2022). *Studying the Impact of Roadway Cross-Section, On-Street Parking and Traffic Volume on the Crash Frequency of Urban Road Segments*.

In: The 6th International Symposium for Highway Geometric Design, Amsterdam, The Netherlands, 26-29 June 2022 [Paper - cat: C2]

2021

JOURNAL CONTRIBUTION

REINOLSMANN, Nora; Alhajyaseen, W; BRIJS, Tom; PIRDAVANI, Ali; HUSSAIN, Qinaat; BRIJS, Kris (2021). *Investigating the impact of a novel active gap metering signalization strategy on driver behavior at highway merging sections*.

In: Transportation research. Part F, Traffic psychology and behaviour, 78, p. 42 -57. DOI: 10.1016/j.trf.2021.01.017 [Article - cat: A1]

YEGANEH, Ali; VANDOREN, Bram; PIRDAVANI, Ali (2021). *Impacts of load distribution and lane width on pavement rutting performance for automated vehicles*. In: International Journal of Pavement Engineering DOI: 10.1080/10298436.2021.1935938 [Article - cat: A1]

TAFIDIS, Pavlos; FARAH, Haneen; BRIJS, Tom; PIRDAVANI, Ali (2021). *"Everything Somewhere" or "Something Everywhere": Examining the Implications of Automated Vehicles' Deployment Strategies*. In: Sustainability (Basel), 13 (Art N° 9750) DOI: 10.3390/su13179750 [Article - cat: A1]

HUSSAIN, Qinaat; Alhajyaseen, Wael K.M.; PIRDAVANI, Ali; BRIJS, Kris; Shaaban, Khaled; BRIJS, Tom (2021). *Do detection-based warning strategies improve vehicle yielding behavior at uncontrolled midblock crosswalks?* In: Accident Analysis and Prevention, 157, (Art N° 106166) DOI: 10.1016/j.aap.2021.106166 [Article - cat: A1]
Almallah, Mustafa; HUSSAIN, Qinaat; Alhajyaseen, Wael; PIRDAVANI, Ali; BRIJS, Kris; Dias, Charitha; BRIJS, Tom (2021). *Improved traffic safety at work zones through animation-based variable message signs*. In: Accident Analysis and Prevention, 159, (Art N° 106284) DOI: 10.1016/j.aap.2021.106284 [Article - cat: A1]

HUSSAIN, Qinaat; Alhajyaseen, Wael; REINOLSMANN, Nora; BRIJS, Kris; PIRDAVANI, Ali; WETS, Geert; BRIJS, Tom (2021). *Optical pavement treatments and their impact on speed and lateral position at transition zones: A driving simulator study*. In: Accident Analysis and Prevention, 150, (Art N° 105916) DOI: 10.1016/j.aap.2020.105916 [Article - cat: A1]

KHATTAK, Wisal; PIRDAVANI, Ali; De Winne, Pieter; BRIJS, Tom; De Backer, Hans (2021). *Estimation of safety performance functions for urban intersections using various functional forms of the negative binomial regression model and a generalized Poisson regression model*. In: Accident Analysis and Prevention, 151, DOI: 10.1016/j.aap.2020.105964 [Article - cat: A1]

REINOLSMANN, Nora; Alhajyaseen, Wael; BRIJS, Tom; PIRDAVANI, Ali; HUSSAIN, Qinaat; BRIJS, Kris (2021). *Sandstorm animations on rural expressways: The impact of variable message sign strategies on driver behavior in low visibility conditions*. In: Transportation research. Part F, Traffic psychology and behaviour, 78, p. 308-325 DOI: 10.1016/j.trf.2021.02.015 [Article - cat: A1]

TAFIDIS, Pavlos; FARAH, Haneen; BRIJS, Tom; PIRDAVANI, Ali (2021). *Safety implications of higher levels of automated vehicles: a scoping review*. In: Transport Reviews, DOI: 10.1080/01441647.2021.1971794 [Article - cat: A1]

CHAUDHRY, Amna; TAFIDIS, Pavlos; PIRDAVANI, Ali (2021). *Public trust and expectations on the safety performance of driverless vehicles: a survey study in Belgium*. In: Journal of Transport & Health, 22 [Article - cat: M]

CONFERENCE MATERIAL

YEGANEH, Ali; VANDOREN, Bram; PIRDAVANI, Ali (2021). *The Effects of Automated Vehicles Deployment on Pavement Rutting Performance*. In: Airfield and Highway Pavements 2021: Pavement Design, Construction, and Condition Evaluation, p. 280 -292 [Paper - cat: C1]

KHATTAK, Wisal; De Backer, Hans; De Winne, Pieter; BRIJS, Tom; PIRDAVANI, Ali (2021). *Investigating the Impact of Road Cross-Section Elements on Crash Occurrence in Urban Areas*.

In: The Transportation Research Board (TRB) Annual Meeting, Washington, D.C., 25-29/01/2021 [Paper - cat: C2]

TAFIDIS, Pavlos; Haneen Farah; BRIJS, Tom; PIRDAVANI, Ali (2021). *Readiness of the Current Road Infrastructure for Automated Vehicles*.

In: The Transportation Research Board (TRB) Annual Meeting, Washington, D.C., 7-13/01/2022 [Paper - cat: C2]

2020

JOURNAL CONTRIBUTION

HUSSAIN, Qinaat; Alhajyaseen, Wael; BRIJS, Kris; PIRDAVANI, Ali; BRIJS, Tom (2020). *Improved Traffic Flow Efficiency During Yellow Interval at Signalized Intersections Using a Smart Countdown System*.

In: IEEE transactions on intelligent transportation systems (Print), DOI: 10.1109/TITS.2020.3030130 [Article - cat: A1]

Reinolsmann, Nora; Alhajyaseen, Wael; Brijs, Tom; Pirdavani, Ali; Ross, Veerle; Hussain, Qinaat & Brijs, Kris (2020). *Dynamic travel information strategies in advance traveler information systems and their effect on route choices along highways*.

In: Procedia Computer Science, 170, p. 289-296. DOI: 10.1016/j.procs.2020.03.042. [Article - cat: A1]

Awan, Hammad; Pirdavani, Ali; Adnan, Muhammad; Yasar, Ansar; Wets, Geert & Brijs, Tom (2020). *Standard freeway merge designs support safer driver behaviour compared to taper designs: a driving simulator study*.

In: ERGONOMICS. DOI: 10.1080/00140139.2020.1722858. [Article - cat: A1]

Hussain, Qinaat; Alhajyaseen, Wael K.M.; Brijs, Kris; Pirdavani, Ali & Brijs, Tom (2020) *Innovative countermeasures for red-light running prevention at signalized intersections: A driving simulator study*.

In: Accident analysis and prevention, 134 (Art N° 105349). DOI: 10.1016/j.aap.2019.105349. [Article - cat: A1]

CONFERENCE MATERIAL

KHATTAK, Wisal; PIRDAVANI, Ali; De Winne, Pieter; BRIJS, Tom; De Backer, Hans (2020). *Examining the Effects of Geometric Features, Traffic Control, and Traffic Volume on Crash Frequency at Urban Intersections*. Zhang, Guohui (Ed.).

In: International Conference on Transportation and Development 2020: Transportation Safety, ASCE Library, p. 95 -106, 10.1061/9780784483145.009 [Paper - cat: C1]

YEGANEH, Ali; VANDOREN, Bram; PIRDAVANI, Ali (2020). *Impacts of Load Distribution and Lane Width on Pavement Rutting Performance for Automated Vehicles*.

In: The Transportation Research Board (TRB) Annual Meeting, Washington, D.C., 25-29/01/2021 [Paper - cat: C1]