

RSS 2022 Conference Draft Programme



RSS 2022

8th Road Safety & Simulation International Conference

Road Safety and Digitalization

www.nrso.ntua.gr/rss2022

 **08-10 June, 2022**

 **Zappeion Megaron, Athens, Greece**

Co-organised by:

Under the auspices:



National Technical
University of Athens



Hellenic Institute of
Transportation Engineers



HELLENIC REPUBLIC
MINISTRY OF INFRASTRUCTURE AND TRANSPORT



CITY OF
ATHENS

Conference Programme Outline

Time		Event	Tuesday 7 June 2022	Wednesday 8 June 2022			Thursday 9 June 2022			Friday 10 June 2022		
08:00	09:00	Registration	Registration	Registration			Registration			Registration		
09:00	11:00	Sessions	Workshops	Session 1	Session 2	Session 3	Session 10	Session 11	Session 12	Session 19	Session 20	Session 21
11:00	11:30	Coffee Break		Coffee Break			Coffee Break			Coffee Break		
11:30	13:00	Plenary		Opening - Keynote 1			Keynote 2 - Panel Discussion			Keynote 3 - Awards		
13:00	14:00	Lunch	-	Lunch			Lunch			Lunch		
14:00	16:00	Sessions	Workshops	Session 4	Session 5	Session 6	Session 13	Session 14	Session 15	Session 22	Session 23	Session 24
16:00	16:15	Coffee Break		Coffee Break			Coffee Break					
16:15	18:15	Sessions		Session 7	Session 8	Session 9	Session 16	Session 17	Session 18			
20:00		Social Event		Welcome Reception			Conference Gala Dinner					

Conference Topics

Room 4 <ul style="list-style-type: none"> • Big Data (Session 1 - Session 4 - Session 7) • Connected and Automated vehicles (Session 10 - Session 13 - Session 16) • Microsimulation (Session 19 - Session 22) 	Room 5 <ul style="list-style-type: none"> • Driving Simulation (Session 2 - Session 5) • Naturalistic Driving (Session 8 - Session 11) • Vulnerable road users' safety (Session 14 - Session 17) • Human Factors (Session 20 - Session 23) 	Room 6 <ul style="list-style-type: none"> • Safety Modelling (Session 3 - Session 6 - Session 9 - Session 12) • Roadway Infrastructure (Session 15 - Session 18) • Emerging Technologies (Session 21 - Session 24)
---	---	---

Conference Detailed Programme

Workshops Day / Tuesday, 7 June 2022			
08:00- 09:00 Registrations			
09:00 - 13:00 Workshops			
	Zappeion Megaron	i-Dreams Workshop: Safety Tolerance zone calculation and interventions for driver – vehicle – environment interactions under challenging conditions (Room 5)	Aimsun Microsimulation Training Course: Aimsun Next Pedestrian Simulator for Modeling Mobility (Room 3)
14:00 - 16:00 Workshops			
	Zappeion Megaron	Levitare Workshop: Societal Level Impacts of Connected and Automated Vehicles (Room 5)	

Day 1 / Wednesday, 8 June 2022

08:00- 09:00 Registrations

09:00 - 11:00 Sessions

	Room 4	Session 1: Big Data (1/3)	239	Exploring the Impact of Truck Traffic on Road Segment-based Severe Crash Proportion using Extensive Weigh-in-Motion Data	Chuan Xu, Kaan Ozbay, Hongling Liu, Kun Xie and Di Yang
			200	A Systematic Review of Machine Learning Methods for Traffic Crash Data Modeling and Analysis	Yang Li and Xiao Qin
			226	Towards ML-based real-time traffic simulation	Ferran Torrent, Javier Frade and Jordi Casas
			126	A Survival Analysis with Random Parameter Approach for Assessing Temporal Instability in Treatment Effect	Di Yang, Kaan Ozbay, Kun Xie and Hong Yang
			215	The effect of speed limits on accident frequency on the German Autobahn - A causal machine learning approach	Maike Metz-Peeters
			24	Analysis of Hurricane Evacuation Data by Vehicle Classification	Katerina Koliou, Evangelos Kaiser and Scott Parr
	Room 5	Session 2: Driving Simulation (1/2)	3	A Driving Simulator Study to Evaluate the Effects of Different Types of Median Separation on Driving Performance on 2+1 Roads	Alessandro Calvi, Salvatore Damiano Cafiso, Carmelo D'Agostino, Mariusz Kieć and Gianmarco Petrucci
			18	Analyzing Speed Choice Near Pedestrian Crossing Treatments	Jorge Ugan, Mohamed Abdel-Aty and Qing Cai
			58	The effect of geometry, on-coming traffic and treatment on driver performance at curves of two-lane rural roads using structural equation models: A driving simulator study	Sanaz Kazemzadehazad, Saeed Monajjem, Gregoire Larue and Mark King
			135	Relationships between oncoming traffic intensity, subjective predictions about oncoming traffic, and intentions to overtake	Sarah Schlichtherle and Rainer Höger
			165	Correlation between clinical tests and driving simulator performance of commercial drivers in the United States.	Shelley Bhattacharya, Hannes Devos, Corinna Lemke, Chase Branstetter and Abiodun Akinwuntan
			59	Enhancing Driver Monitoring Systems using Peripheral Cardiac Signals	Lourenço A. Rodrigues, André Lourenço, Pedro Costa, Carlos Carreiras and Ana Fred
	Room 6	Session 3: Safety Modelling (1/4)	33	Improving Safety Performance Function Model Fit Using Exploratory Regression Techniques	Eric Green, Reg Souleyrette, Riana Tanzen and Arnold Stromberg
			71	What is the Systematic Risk and Individual Risk of Urban Crashes Based on Different Crash Types? Evidence from Shenzhen City, China	Peijie Wu, Xinyu Liang and Xianghai Meng
			224	Issues in Developing and Applying Crash-Conflict Models	Thanushan Rajeswaran, Bhagwant Persaud and Alireza Jafari Anarkooli
			83	Road Network Inconsistency based Models for Macro-level Safety Evaluation	Shilpa Nair and B. K. Bhavathrathan
			238	Incorporating Crash Severity to Improve Highway Safety Project Prioritization	Riana Tanzen, Reginald Souleyrette, Teng Wang and William Staats
			196	The impact of traffic flow distribution over arms at junctions on crash risk	Evita Papazikou, Athanasios Theofilatos, Apostolos Ziakopoulos, Ashleigh Filtness, Claire Quigley and Eleonora Papadimitriou

11:00 - 11:30 Coffee Break

Day 1 / Wednesday, 8 June 2022

11:30 - 13:00 Plenary

Room 4
Opening: Kostas Karamanlis (Minister of Infrastructure and Transport), Kostas Bakogiannis (Mayor of Athens)
NTU Athens: Prof. Andreas Boudouvis (Rector of NTU Athens), Prof. Nikos Lagaros (Dean at the School of Civil Engineering)
Conference Chairs: Prof. George Yannis (NTU Athens), Prof. Fabrizio D'Amico (URoma Tre), Asst. Prof. Panagiotis Papantoniou (HITE)
Keynote: Road Safety Policy in Europe and beyond, Claire Depré, Head of Road Safety Unit, DG MOVE. European Commission

13:00 - 14:00 Lunch

14:00 - 16:00 Sessions

Room 4	Session 4: Big Data (2/3)	4	Using Complementary Intersection and Segment Analyses to Identify Crash Hot Spots	Grant Schultz, Camille Lunt, Timo Pew and Richard Warr
		185	Exploring Transferability of Real-time Crash Prediction Models using Transfer Learning under Imbalanced Data Setting	Cheuk Ki Man, Akis Theofilatos and Mohammed Quddus
		248	Investigating the Association Between Crowdsourced Data and Driving Behavior in Developing Countries	Ahmed Osama, Hesham El Masry, Mostafa Telima, Mahmoud Farrag and Salma Abu Bakr
		244	Crash Data Analysis & Prediction in Zimbabwe: An Application of ARIMA Models	Cliford Gobo and Thabani Nyoni
		51	Methodology for the Evaluation of Safety Interventions	Eva Michelaraki, Christos Katrakazas, Ashleigh Filtness, Rachel Talbot, Graham Hancox, Chiara Gruden, Ariane Cuenen, Kris Brijs, Tom Brijs and George Yannis
		20	Causal Analysis and Classification of Traffic Crash Injury Severity Using Machine Learning Algorithms	Meghna Chakraborty, Timothy J. Gates and Jhelum Chakravorty
	Session 5: Driving Simulation (2/2)	102	Validation of an Eye-Tracking System for Use in Driving Simulator Research	Fabrizio D'Amico, Alessandro Calvi, Chiara Ferrante and Luca Bianchini Ciampoli
		233	The effectiveness of an intelligent speed assistance system with real-time speeding interventions for truck drivers: a Belgian simulator study	Bart De Vos, Ariane Cuenen, Veerle Ross, Hélène Dirix, Kris Brijs and Tom Brijs
		90	Analyzing driver eye movements to investigate the impact of distraction on driving behaviour	Roja Ezzati Amini, Christelle Al Haddad, Debapreet Batabyal, Alyssa Ryan, Isidora Gkena, Bart De Vos, Ariane Cuenen, Tom Brijs and Constantinos Antoniou
		242	Analyzing ADHD and NonADHD Driver Differences in City vs. Rural Simulated Driving Environments	Melissa Paciulli, Song Gao, Michael Knodler, Tracy Zafian and Donald Fisher
		63	Mental Workload Influence of Drivers Reaction Time on Unexpected Events: A Driving Simulation Study	Anna Poulou, Fotini Kehagia, Evangelos Bekiaris, Magdalini Pitsiava-Latinopoulou and Georgios Poullos
		160	Exploring the Relationship Between Early Drinking Patterns and Vehicle Control Measures in Driving Simulation Among Sober Young Adults	Barbara Banz, Jia Wu, Michael Crowley, Deepa Camenga and Federico Vaca
	Session 6: Safety Modelling (2/4)	180	Estimating the Conflict-Crash Relationship	Andrew Tarko
		240	Safety Performance Functions for Two-Lane Urban Arterial Segments	Bekir Bartın, Kaan Ozbay and Chuan Xu
		220	A real-time crash risk estimation framework for signalized intersections	Yasir Ali, Md. Mazharul Haque and Simon Washington
		178	Overtaking Trajectory Assessment Utilizing Data from Driving Simulator	Vassilios Matragos, Stergios Mavromatis, Konstantinos Apostoleris, Alexandros Alvertis and Giorgos Chatzieleftheriou
		211	Evaluating Individual Heterogeneity in the Probability of Crash Involvement	Mariane Bobermin and Sara Ferreira
		234	Economic and social costs of traffic crashes in Saudi Arabia	Saif Alarifi, Khalid Alkahtani and Miasem Bajowaiber

16:00-16:15 Coffee Break

Day 1 / Wednesday, 8 June 2022

16:15-18:15 Sessions

Room 4	Session 7: Big Data (3/3)	216	The usefulness of Artificial Intelligence in safety assessment of different transportation modes	Dimitrios Tselentis, Eleonora Papadimitriou and Pieter van Gelder
		81	Modeling the concept of a Safety Tolerance Zone: State-of-the-art and proposed alternatives	Eva Michelaraki, Christos Katrakazas, Amir Pooyan Afghari, Eleonora Papadimitriou, Christelle Al Haddad, Kui Yang, Constantinos Antoniou, Tom Brijs and George Yannis
		217	An extrapolation method on European accident data based on weighting and data harmonization	Albine Chanove, Maria Pohle, Martin Urban and Jorge Lorente Mallada
		183	Towards Risk-based Safety Management: A Pilot Study for Rural Freeways	Raul Pineda-Mendez, Qiming Guo and Andrew Tarko
		39	Exploring critical driving parameters affecting speeding using data from smartphones	Dimosthenis Marios Tzoutzoulis, Armira Kontaxi, Apostolos Ziakopoulos and George Yannis
		223	Analysis of Road Traffic Crash Severity Through Machine Learning	Tanishq Garg, Sudipa Chatterjee and Bhargab Maitra
	Session 8: Naturalistic Driving (1/2)	171	Intersection Scanning Behavior Due to Intersection Collision Warning Systems	Shauna Hallmark, Neal Hawkins, Raju Thapa and Skylar Knickerbocker
		188	Design of an on-road driving experiment on assessing driving behaviour of older drivers	Dimosthenis Pavlou, Petros Fortsakis and George Yannis
		42	Modelling risky driving behaviours of professional drivers under the operation of Advanced Driver Assistance Systems	Ioanna Spyropoulou, Georgios Laskaris, Dimitris Sermpis and Fanis Papadimitriou
		54	Identifying crucial factors of the impact of COVID-19 on driving behaviour using feature analysis on naturalistic driving data	Marios Sekadakis, Christos Katrakazas, Eva Michelaraki, Apostolos Ziakopoulos and George Yannis
		169	Speed pedelecs for commuting - a field trial	Nina Senitschnig, Philipp Blass, Veronika Zuser, Christoph Breuer, Eveline Braun and Aggelos Soteropoulos
		167	Correlation of declared and revealed driver behaviour using smartphone sensors	Konstantina Kokkali, Apostolos Ziakopoulos, Armira Kontaxi and George Yannis
	Session 9: Safety Modelling (3/4)	254	Identification of evasive action in traffic interactions and conflicts	Carl Johnsson and Aliaksei Lareshyn
		19	Estimating the Safety Effects of Raising Speed Limits on Rural Freeways in Ohio	Deogratias Eustace, Oluwaseun Oluwobi, Peter Hovey and Philip Appiah-Kubi
		43	Exploratory Assessment of Road Traffic Crashes on the Intercity Expressway in India	Laxman Singh Bisht, Geetam Tiwari, Kalaga Ramachandra Rao and K. N. Jha
		30	Safety-Critical event identification on rural roads based on driving characteristics	Akrivi Varela, Christos Katrakazas and George Yannis
		177	Hazard Assessment of Intersections on Rural Undivided Highways	Vassilios Matragos, Konstantinos Apostoleris, Fotis Mertzanis, Panagiotis Pasias and Stergios Mavromatis
		179	Vehicle Data Collection for Predicting Driving Behavior on Interchanges	Panagiotis Pasias, Vassilios Matragos, Konstantinos Apostoleris, Fotis Mertzanis and Stergios Mavromatis

18:30 Welcome Reception at Zappeion Megaron

Day 2 / Thursday, 9 June 2022

08:00- 09:00 Registrations

09:00 - 11:00 Sessions

Room 4	Session 10: Connected and Automated vehicles (1/3)	80	The impact of a dedicated lane for connected and automated vehicles on the behavioral adaptation of drivers of manual vehicles	Solmaz Razmi Rad, Haneen Farah, Henk Taale, Bart Van Arem and Serge Hoogendoorn
		87	A Quantitative Method to Determine What Collisions Are Reasonably Foreseeable and Preventable	Erwin de Gelder and Olaf Op den Camp
		98	Analysis of an advanced driver-assistance system to improve safety of cyclists overtaking by driver characteristics	Filomena Mauriello, Tom Brijs, Alfonso Montella, Francesco Galante, Kris Brijs and Veerle Ross
		155	Determining Region of Influence of Ego-Vehicle on Roadways for Vehicle Decision Making	Wushuang Bai, Srivenkata Satya Prasad Maddipatla, Evan Pelletier, Liming Gao and Sean Brennan
		245	Environmental Impacts of Connected and Automated Vehicles Considering Traffic Flow and Road Characteristics	Saad Roustom, Adam Weiss and Yasser Hassan
		243	Internet of Things and Road Safety: Challenges and Opportunities for Africa	Cliford Gobo and Thabani Nyoni
	Session 11: Naturalistic Driving (2/2)	222	Risk factors, monitoring techniques, and intervention strategies: experiences and lessons from different transport sectors	Amir Pooyan Afghari, Eleonora Papadimitriou, Sally Maynard, Rachel Talbot, Ashleigh Filtneiss and Geert Wets
		22	Discovering the influence of feedback on driver behavior through a multiphase experiment based on a smartphone application	Armira Kontaxi, Apostolos Ziakopoulos and George Yannis
		74	Association of Crash Potential of Powered Two Wheelers (PTW) with the State of Traffic Stream	Suvin P. Venthuruthiyil, Shivasai Samalla and Mallikarjuna Chunchu
		77	Investigating the impacts of COVID-19 pandemic on Eco-driving behavior	Eleni Mantouka, Panagiotis Fafoutellis, Eleni Vlahogianni and Petros Fortsakis
		247	Braking Behavior Profiling of Professional Car Drivers using Instrumented Vehicle Data	Jahnvi Yarlagadda and Digvijay S. Pawar Pawar
		14	Which driving performance parameters affect speeding. A naturalistic driving experiment	Panagiotis Papantoniou, Christina Gonidi, Armira Kontaxi and George Yannis
	Session 12: Safety Modelling (4/4)	34	A state-of-the-art Review on Crash Occurrence Analysis and Hazardous Location Identification	Paola Tiberi, Antonino Tripodi, Anastasios Dragomanovits, Katerina Deliali and George Yannis
		110	Modelling Probability of Critical Crossing Conflicts at Unsignalized Intersections under Mixed Traffic Conditions	Aninda Bijoy Paul, Ninad Gore, Shriniwas Arkatkar and Gaurang Joshi
		116	The Causal Effect of Citywide Speed Limit Reduction on Crash Risk	Guocong Zhai, Kun Xie and Di Yang
		1	A Holistic Strategy Development of Road Accidents Injuries in Arabian Gulf Countries	Sharaf Alkheder
		251	Requirement of ICT based parking system in congested areas of Delhi	Abdul Ahad and Farhan Kidwai
		241	Analysis of automatic motorcycle accidents on the extreme Cangar-Pacet downhill road, Mojokerto regency, Indonesia	Dwi Bakti Permana and Budi Susandi

11:00 - 11:30 Coffee Break

Day 2 / Thursday, 9 June 2022

11:30 - 13:00 Plenary

Room 4

Keynote: Novel Approaches in Safety R&D: Co-Simulation, AI, Big Data & Computer Vision Applications, Prof. **Mohamed Abdel Aty**, Leader of the Future Safety Initiative, University of Central Florida, US
Panel Discussion: Road Safety at the Digital Era, Prof. **Pete Thomas** (ULoughborough), Prof. **Andrew Tarko** (UPurdue), Asst. Prof. **Eleonora Papadimitriou** (TU Delft), Assoc. Prof. **Alessandro Calvi** (URoma Tre), Prof. **Nikiforos Stamatiadis** (UKentucky)

13:00 - 14:00 Lunch

14:00 - 16:00 Sessions

Room 4

**Session 13:
Connected and
Automated
vehicles (2/3)**

65	A Statistics and Reaction Time based Framework for Impact Prediction of Automated Vehicles on Road Safety of Vulnerable Road Users	Andreas Hula, Rins de Zwart, Celina Mons, Wendy Weijermars, Hitesh Boghani and Pete Thomas
141	Boxes-based Representation and Data Sharing of Road Surface Friction for CAVs	Liming Gao, Craig Beal, Wushuang Bai, Satya Prasad Maddipatla, Cindy Chen, Kshitij Jerath, Hossein Haeri, Lorina Sinanaj and Sean Brennan
253	The impact of a dedicated lane for connected and automated vehicles on the behavior of drivers of manual vehicles	Solmaz Razmi Rad, Haneen Farah, Henk Taale, Bart Van Arem and Serge Hoogendoorn
92	Proposal of a Method for Classification of Interpretability of Road Markings and Traffic Signs for Autonomous Vehicle Traffic Based on Computer Vision	Lucas Franceschi and Jorge Destri Jr.
10	Short Term Future Proofing Strategies for Local Agencies to Prepare for Connected and Automated Vehicles	Shauna Hallmark, Jonathan Wood, David Veneziano and Theresa Literal
168	Methodological framework of creating the Levitate Policy Support Tool for Connected and Automated Transport Systems	Apostolos Ziakopoulos, Julia Roussou, Amna Chaudhry, Hitesh Boghani, Hu Bin, Martin Zach, Maria Oikonomou, Knut Veisten, Knut Johannes Liland Hartveit, Eleni Vlahogianni, Pete

Room 5

**Session 14:
Vulnerable
road users'
safety (1/2)**

230	Using Microsimulation to Investigate the Optimal Deployment of Leading Pedestrian Intersections	Maryam Hasanpour and Bhagwant Persaud
44	Evaluation of Cyclist Galvanic Skin Response and Visual Attention in Commercial Vehicle Loading Zones	Hisham Jashami, Ivan Sinkus, Douglas Cobb, Yujun Liu and David Hurwitz
85	Predicting Bicyclist Maneuvers using Explicit and Implicit Communication	Georgios Grigoropoulos, Patrick Malcolm, Andreas Keler, Fritz Busch and Klaus Bogenberger
175	Analysis of Walking Speeds and Success Rates on Mid-Block Crossings using Virtual Reality Simulation	Alberto Figueroa-Medina, Didier Valdés-Díaz, Benjamin Colucci-Ríos, Natacha Cardona and Andrés Chamorro
219	Assessing the Impact of Three Intersection Treatments on Bicyclist Safety Using a Bicycling Simulator	Logan Scott-Deeter, David Hurwitz, Brendan Russo, Edward Smaglik and Sirisha Kothuri
221	Pedestrian's choice at mid phase of green countdown display at signalized intersections	Mohamed Juzaafi, Vasantha Wickramasinghe, Hana Iny and Sunanda Dissanayake

Room 6

**Session 15:
Roadway
Infrastructure
(1/2)**

49	A Guide of Effective Countermeasures for Low Volume Road Fatalities in the Southeast USA	Nikiforos Stamatiadis, Jennifer Weast and Eric Green
26	Road Safety Audit Implementation – an international inquiry	Anastasios Dragomanovits, Ourania Basta, Dimosthenis Pavlou and George Yannis
236	An Empirical Assessment on the Effect of Geometry and Non-Geometry Factors in Work zone Crashes with Unobserved Heterogeneity	Mouyid Islam
79	Safety Evaluation of Urban Roundabouts in India: A Safety Performance Function based Approach	Vinayaraj V S and Perumal Vedagiri
106	The role of traffic speed in road safety - the case of two-lane rural roads	Konstantinos Apostoleris, Stella Sarma, Basil Psarianos and Stergios Mavromatis
176	Retroreflection Performance of Urban Road Signs	Vassilios Matragos, Stergios Mavromatis, Georgia Kaperoni and Odysseas Mavrodimos

16:00-16:15 Coffee Break

Day 2 / Thursday, 9 June 2022

16:15-18:15 Sessions

Room 4	Session 16: Connected and Automated vehicles (3/3)	197	Users' Perceptions and Attitudes toward Autonomous Vehicle Technologies after Simulation Exposure – A Study across the Lifespan	Virginia Sisiopiku, Wencui Yang, Justin Mason, Brandy McKinney, Seung Woo Hwangbo and Sherrilene Classen
		213	Pedestrians' Understanding of a Fully Autonomous Vehicle's Intent to Stop: Utilizing Video-based Crossing Scenarios (New)	Michal Hochman Gur, Yisrael Parmet and Tal Oron Gilad
		231	How Does Training Influence Use and Understanding of Advanced Vehicle Technologies: A Simulator Evaluation of Driver Behaviour & Mental Models	Anuj Pradhan, Apoorva Hungund, Ganesh Pai and Jaji Pamarthi
		113	A review of risk factors associated with elderly, truck and office worker drivers for automated driving applications	Marios Sekadakis, Christos Katrakazas, Erika Santuccio, Peter Mörtl and George Yannis
		86	Insights on human driving behavioral adaptation when interacting with automated vehicles in mixed (HDV and AV) traffic	Nagarjun Reddy, Haneen Farah and Serge Hoogendoorn
		250	Research on urgency classification of emergency supplies based on combined method	Jianyou Zhao and Yu Xiao
	Session 17: Vulnerable road users' safety (2/2)	64	The Demands of Road Environments as Perceived by Vulnerable Road Users	Sophia Vardaki, Anne Dickerson, Ion Beratis, George Yannis and Sokratis Papageorgiou
		246	Investigating Pedestrian Safety-Related Behavior in Developing Countries: Egypt as a Case	Abduallah Bayomi, Mohamed Shawky, Mohamed Okail and Ahmed Osama
		73	Examination of vulnerable road users conflict severity in shared space using a mixed logit model with heterogeneity	Xinyu Liang, Peijie Wu and Xianghai Meng
		189	Assessing driving performance of older drivers – A literature review	Dimosthenis Pavlou and George Yannis
		252	Assessment of the Accessibility of Public Transportation to Persons with Disabilities in Malabon City	Joshua Ivan Capuno, Angelica Lirio Gorom and Rjade Nicole Dela Cruz
		210	Analysis of the amniotic fluid impact on the fetus during traffic accidents	Iwona Jatowczyc and Maciej Zawislak
	Session 18: Roadway Infrastructure (2/2)	16	A Behavioral Approach to Improving Pedestrian Infrastructure at Intersections	Amy Wyman and David Hurwitz
		25	A state-of-the-art review on Crash Prediction Modelling	Anastasios Dragomanovits, Ourania Basta, Katerina Deliali and George Yannis
		112	Evaluation of Bridge Guardrails for Potential Safety Improvement on Low-Volume Rural Roads in Kansas Using Roadside Safety Analysis Program (RSAP)	Eric Fitzsimmons and Peng Wang
		134	Effects of building a bypass highway on road safety: A case study of a rural road in Serbia	Emir Smailovic, Dalibor Pešić, Boris Antić, Krsto Lipovac and Marija Dotto
		156	How is Traffic Safety Affected by Changes in Traffic Speeds Following Speed Limit Increases?	Nischal Gupta, Megat-Usamah Megat-Johari, Nusayba Megat-Johari, Hisham Jashami and Peter Savolainen
		28	Investigation of Accident Modelling Data in Greece	George Yannis, Dimitrios Nikolaou and Anastasios Dragomanovits

20:00 Conference Gala Dinner at Bolivar Beach Bar

Day 3 / Friday, 10 June 2022

08:00- 09:00 Registrations

09:00 - 11:00 Sessions

Room 4	Session 19: Micro - simulation (1/2)	91	An integrated simulation framework to validate a traffic conflict prediction algorithm	Nicolette Formosa, Mohammed Quddus, Alkis Papadoulis and Andrew Timmis
		99	Safety impact of dedicated lanes for connected and autonomous vehicles – a traffic microsimulation study	Hua Sha, Mohit Kumar Singh, Amna Chaudhry, Rajae Haouari, Mohammed Quddus, Wendy Weijermars, Pete Thomas, Evita Papazikou and Andrew Morris
		105	Simulation of the Effects of Different Speeds on Road Safety and Car Journey Times in Austria	Veronika Zuser, Marlene Mellauner, Aggelos Soteropoulos, Nina Senitschnig, Alexander Pommer, Ernst Tomasch, Julian Kammerlander, Margarethe Staudner, Benjamin Kigilcim and Marielis Fischer
		161	Examining Road Safety Impacts of Green Light Optimal Speed Advisory (GLOSA) System	Amna Chaudhry, Rajae Haouari, Athina Tympakianaki, Leyre Nogues, Evita Papazikou, Hua Sha, Mohit Singh, Mohammed Quddus, Wendy Weijermars, Pete Thomas and Andrew Morris
		228	Assessing the impacts of traffic calming at network level. A multimodal agent-based simulation	Eftychia Zargiannaki, Panagiotis G. Tzouras, Eleni Antoniou, Christos Karolemeas and Konstantinos Kepaptsoglou
		119	Calibrating driver's decision to cross or not during the yellow phase; a microsimulation study	Emmanouil Lilis, Anastasia Nikolaidou, Efthymis Papadopoulos, Ioannis Politis and Panagiotis Papaioannou
Room 5	Session 20: Human Factors (1/2)	227	The Effects Of Music Background On Hazard Perception Among Young Adult Drivers	Warren Brodsky and Avinoam Borowsky
		55	Head-turning and Visual Search Behaviors at Intersections with Permissive Signal Phasing: An Eye-Tracker Experiment	Yi-Shih Chung
		115	Exploring the development of an open data platform for road safety KPIs	Milan Tešić, Katerina Folla and George Yannis
		129	The role of values in road safety culture: Are motorcycle riders' higher accident risk a result of their appreciation of freedom?	Tor-Olav Nævestad, Alexandra Laiou and George Yannis
		7	Driver performance at horizontal curves: Bridging critical research gaps to increase safety	Alyssa Ryan, Emily Hennessy, Chengbo Ai, Cole Fitzpatrick, Michael Knodler and Wooseong Kwon
		101	Investigation of traffic and safety behavior of pedestrians while talking on mobile phone	Dimitra Typa, Dimitrios Nikolaou and George Yannis
Room 6	Session 21: Emerging Technologies (1/2)	214	Shockwave Detection and Visualization for Rear-End Collision Avoidance	Hironori Suzuki and Takumi Arai
		195	Identifying E-Scooter Hazard Hotspots	Michael Hardinghaus, Simon Nieland, Rebekka Oostendorp and Jan Weschke
		199	Driver Foot Behavior with Regenerative Braking	Christopher Rundus, Daniel McGehee and Chris Schwarz
		174	Defining Vehicle Passing Trajectories utilizing GNSS Data	Stergios Mavromatis, Vassilios Matragos, Nikolaos-Panagiotis Trantas and Vangelis Zacharis
		172	User safety attitudes towards Urban Air Mobility	Annitsa Koumoutsidi, Ioanna Pagoni and Amalia Polydoropoulou
		207	Measures to improve the operation of passenger transport and urban mobility	Denis Kapski and Sergej Semtschenkow

11:00 - 11:30 Coffee Break

Day 3 / Friday, 10 June 2022

11:30 - 13:00 Plenary

Room 4

Keynote: - Simulation in Road Safety, Prof. **Tom Brijs**, Hasselt University & DriveSim Solutions, Belgium
Round Table Discussion: Perspectives of Road Safety in Greece, **Xifaras Ioannis** (Ministry of Transport and Infrastructure), **Thimios Mpakogiannis** (Ministry of the Environment and Energy),
Ioannis Golias (Athens Urban Transport Organization - OASA), **Chronis Akritidis** (Athens Anaplasia), **Kostas Koutsoukos** (Hellastron)
RSS2022 Awards Ceremony

13:00 - 14:00 Lunch

14:00 - 16:00 Sessions

Room 4

**Session 22:
Micro -
simulation (2/2)**

96	Estimation and safety validation of a roundabout gap-acceptance model in a simulated environment	Evangelos Paschalidis, Albert Solernou, Mohamed Hasan, Gustav Markkula, He Wang and Richard Romano
157	Driver Classification Using Self-reported, Psychophysiological, and Performance Metrics within a Simulated Environment	Vishal Kummetha, Umair Durrani, Justin Mason, Sisinnio Concas and Alexandra Kondyli
17	Pedestrian behaviour and safety at roundabouts: a comparative study between real and microsimulation outcomes	Chiara Gruden, Irena Ištoka Otković and Matjaž Šraml
218	Simulation of individual injury risks with an agent-based transport model	Qin Zhang, Carlos Llorca, Mehmet Baran Ulak, Rolf Moeckel and James Woodcock
158	Calibrating Stochastic Traffic Simulation Models for Safety and Operational Measurements Based on Drone Data and Traffic Conflict Distributions	Di Sha, Jingqin Gao, Di Yang, Fan Zuo and Kaan Ozbay
103	Assessing Different Freeway Interchange Design Impacts on Traffic Emissions and Fuel Consumptions through Microsimulation	Fayezeh Samandi, Deogratias Eustace, Samuel Zephaniah and Philip Appiah-Kubi

Room 5

**Session 23:
Human Factors
(2/2)**

249	Impact of the Visible Enforcement Speed Cameras on Speeding Behavior of Drivers	Mohamed Shawky
69	Drivers behavior in interchange ramps depending on their age, vehicle type and vehicle age	Antonios Trakakis, Konstantinos Apostoleris and Basil Psarianos
149	Examination of Factors Associated with Fault Status and Injury Severity in Intersection-Related Rear-End Crashes: Application of Binary and Bivariate Ordered Probit Models	Brendan Russo, Fan Yu and Edward Smaglik
52	Real-Time Monitoring of Driver Distraction: State-of-the-art and future insights	Eva Michelaraki, Christos Katrakazas, Susanne Kaiser, Tom Brijs and George Yannis
46	Evaluation of factors influencing the usage of child car seat for nursery school travel	Ioanna Armouti, Roja Ezzati Amini and Constantinos Antoniou
94	Investigation of critical factors for identifying safety events in urban areas	Fotini Bardi, Christos Katrakazas and George Yannis

Room 6

**Session 24:
Emerging
Technologies
(2/2)**

229	Influence of V-ISA technology on driver behavior along curves with sight limitations	Abrar Hazoor, Alberto Terrafino, Leandro Di Stasi and Marco Bassani
136	Modelling Roundabout Capacity using Artificial Neural Networks	Apostolos Anagnostopoulos, Fotini Kehagia and Georgios Aretoulis
2	Development of the Effective Voice Warning for Drivers at Open Section	Kouji Yamamoto, Hideki Takahashi, Takashi Yamamoto and Hideki Yazawa
206	Speed Control Measures in Minsk	Denis Kapski and Denis Livanovich
201	New educational program and the organization of the educational process in Master's Degree in Road Safety and Auditing	Denis Kapski and Luca Persia
198	Analyzing the Africa Road Safety Action Plan through the SaferAfrica Crowdsourcing tool	Brayan Gonzalez-Hernandez, Davide Shingo Usami and Luca Persia

Under the Auspices



HELLENIC REPUBLIC
MINISTRY OF INFRASTRUCTURE AND TRANSPORT



CITY OF
ATHENS

Silver Sponsors



ΑΝΑΠΛΑΣΗ ΑΘΗΝΑΣ Α.Ε.



Sponsors

