



ISAAP

International Symposium on
Accident Analysis and Prevention

November 19, 2021

International Symposium on Accident Analysis & Prevention 2021 (ISAAP2021) **Road Safety under the Environment of Intelligent Connected Vehicles**

The Editorial Board of the Accident Analysis & Prevention is organizing the second International Symposium on Accident Analysis & Prevention (ISAAP2021) on November 19, 2021. The symposium principally focuses on the road safety under the environment of intelligent connected vehicles (ICVs). The emergence of ICVs is expected to drastically change various fields in the transportation system. The symposium aims at providing a forum for transportation researchers to foster an exchange of research ideas and experience in traffic safety, especially in the emerging topics of the ICV. The Special Issue of Accident Analysis & Prevention: Road Safety under the Environment of Intelligent Connected Vehicles accepted 36 papers from seven different countries, and the main authors are invited to lectern or poster presentation. The symposium is held online via Zoom.

Date/time

November 19, 2021 (08:30 – 17:00, Beijing Time)

On-line participation

http://zoom.us/webinar/register/WN_rYWjKxINQMGS7tPzjbwq3w

Website (outside China)

<http://isaap2021.com/>

WeChat Official Account (in China)

<https://mp.weixin.qq.com/s/iPf6fwEQHgKO5ufue1a32g>

Symposium Agenda

November 19, 2021

Opening Remarks

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| 08:30 – 08:40 | Brief Introduction to the Symposium and the Special Issue on Safety of ICVs
<i>Jaeyoung Lee, Executive Chair, Central South University, China</i> |
| 08:40 – 09:10 | Speech on Recent Trends of Academic Journal Publications
<i>Ms. Joice Jiang, Publisher, Elsevier, China</i> |
| 09:10 – 09:40 | Speech on Academic Development History of the Fifty Years and Future Directions of Accident Analysis & Prevention
<i>Helai Huang, Conference Chair & Editor-in-Chief of the Accident Analysis & Prevention, Central South University, China</i> |

Section 1: Driving behavior of ICVs and safety assessment (Moderator: Dr. Jaeyoung Lee)

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| 09:40 – 10:05 | Integration of automated vehicles in mixed traffic: Evaluating changes in performance of following human-driven vehicles
<i>Asad J. Khattak, University of Tennessee Knoxville, USA</i> |
| 10:05 – 10:30 | The impact of the connected environment on driving behavior and safety: A driving simulator study
<i>Md. Mazharul Haque, Queensland University of Technology, Australia</i> |
| 10:30 – 10:55 | An examination of teen drivers' car-following behavior under naturalistic driving conditions: With and without an advanced driving assistance system
<i>Shan Bao, University of Michigan, USA</i> |
| 10:55 – 11:15 | Development and application of connected vehicle technology test platform based on driving simulator: Case study
<i>Haijian Li, Beijing University of Technology, China</i> |
| 11:15 – 11:40 | A comparative study of state-of-the-art driving strategies for autonomous vehicles
<i>Li Li, Tsinghua University, China</i> |

Section 2: ICV evaluation, risk perception and warning strategies (Moderator: Dr. Md. Mazharul Haque)

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| 14:00 – 14:25 | Rear-end collision warning of connected automated vehicles based on a novel stochastic local multivehicle optimal velocity model
<i>Jianghui Wen, Wuhan University of Technology, China</i> |
| 14:25 – 14:50 | The adaptability and challenges of autonomous vehicles to pedestrians in urban China
<i>Ke Wang, Chongqing University, China</i> |
| 14:50 – 15:15 | Risk perception and the warning strategy based on safety potential field theory
<i>Linheng Li, Southeast University, China</i> |
| 15:15 – 15:40 | An integrated architecture for intelligence evaluation of automated vehicles
<i>Heye Huang (Jianqiang Wang), Tsinghua University, China</i> |
| 15:40 – 16:05 | Exploring drivers' mental workload and visual demand while using an in-vehicle HMI for eco-safe driving
<i>Xiaomeng Li, Queensland University of Technology, Australia</i> |

16:05 – 16:30 Safety effectiveness and performance of lane support systems for driving assistance and automation – Experimental test and logistic regression for rare events
Salvatore Cafiso, University of Catania, Italy

16:30 – 16:50 Closing Remarks
Helai Huang, Conference Chair & Editor-in-Chief of the Accident Analysis & Prevention, Central South University, China

Special Issue on Road Safety under the Environment of Intelligent Connected Vehicles

The following publications published in the special issue will be freely accessible until February 28, 2022.

Authors	Paper Title	DOI
Ali, Yasir, Anshuman Sharma, Md Mazharul Haque, Zuduo Zheng, and Mohammad Saifuzzaman	The impact of the connected environment on driving behavior and safety: A driving simulator study	10.1016/j.aap.2020.105643
Wang, Ke, Gang Li, Junlan Chen, Yan Long, Tao Chen, Long Chen, and Qin Xia	The adaptability and challenges of autonomous vehicles to pedestrians in urban China	10.1016/j.aap.2020.105692
Mousavi, Seyedeh Maryam, Osama A. Osman, Dominique Lord, Karen K. Dixon, and Bahar Dadashova	Investigating the safety and operational benefits of mixed traffic environments with different automated vehicle market penetration rates in the proximity of a driveway on an urban arterial	10.1016/j.aap.2021.105982
Feng, Shuo, Yiheng Feng, Xintao Yan, Shengyin Shen, Shaobing Xu, and Henry X. Liu	Safety assessment of highly automated driving systems in test tracks: A new framework	10.1016/j.aap.2020.105664
Iman Mahdinia, Amin Mohammadnazar, Ramin Arvin, Asad J. Khattak	Integration of automated vehicles in mixed traffic: Evaluating changes in performance of following human-driven vehicles	10.1016/j.aap.2021.106006
Zhao, Can, Li Li, Xin Pei, Zhiheng Li, Fei-Yue Wang, and Xiangbin Wu	A comparative study of state-of-the-art driving strategies for autonomous vehicles	10.1016/j.aap.2020.105937
Du, Na, Feng Zhou, Elizabeth M. Pulver, Dawn M. Tilbury, Lionel P. Robert, Anuj K. Pradhan, and X. Jessie Yang	Predicting driver takeover performance in conditionally automated driving	10.1016/j.aap.2020.105748
Khan, Shah Khalid, Nirajan Shiwakoti, Peter Stasinopoulos, and Yilun Chen	Cyber-attacks in the next-generation cars, mitigation techniques, anticipated readiness and future directions	10.1016/j.aap.2020.105837
Lian, Yanqi, Guoqing Zhang, Jaeyoung Lee, and Helai Huang	Review on big data applications in safety research of intelligent transportation systems and connected/automated vehicles	10.1016/j.aap.2020.105711
Cafiso, Salvatore, and Giuseppina Pappalardo	Safety effectiveness and performance of lane support systems for driving assistance and automation – Experimental test and logistic regression for rare events	10.1016/j.aap.2020.105791
Bao, Shan, Ling Wu, Bo Yu, and James R. Sayer	An examination of teen drivers' car-following behavior under naturalistic driving conditions:	10.1016/j.aap.2020.105762

	With and without an advanced driving assistance system	
Hu, Jiajie, Ming-Chun Huang, and Xiong Yu	Efficient mapping of crash risk at intersections with connected vehicle data and deep learning models	10.1016/j.aap.2020.105665
Wu, Jiabin, Huiying Wen, and Weiwei Qi	A new method of temporal and spatial risk estimation for lane change considering conventional recognition defects	10.1016/j.aap.2020.105796
Li, Xiaomeng, Atiyeh Vaezipour, Andry Rakotonirainy, Sebastien Demmel, and Oscar Oviedo-Trespalacios	Exploring drivers' mental workload and visual demand while using an in-vehicle HMI for eco-safe driving	10.1016/j.aap.2020.105756
Essa, Mohamed, and Tarek Sayed	Self-learning adaptive traffic signal control for real-time safety optimization	10.1016/j.aap.2020.105713
Wang, Jianqiang, Heye Huang, Yang Li, Hanchu Zhou, Jinxin Liu, and Qing Xu	Driving risk assessment based on naturalistic driving study and driver attitude questionnaire analysis	10.1016/j.aap.2020.105680
Noble, Alexandria M., Melissa Miles, Miguel A. Perez, Feng Guo, and Sheila G. Klauer	Evaluating driver eye glance behavior and secondary task engagement while using driving automation systems	10.1016/j.aap.2020.105959
He, Dengbo, Dina Kanaan, and Birsen Donmez	In-vehicle displays to support driver anticipation of traffic conflicts in automated vehicles	10.1016/j.aap.2020.105842
Li, Linheng, Jing Gan, Ziwei Yi, Xu Qu, and Bin Ran	Risk perception and the warning strategy based on safety potential field theory	10.1016/j.aap.2020.105805
Wen, Jianghui, Chaozhong Wu, Ruiyu Zhang, Xinping Xiao, Nengchao Nv, and Yu Shi	Rear-end collision warning of connected automated vehicles based on a novel stochastic local multivehicle optimal velocity model	10.1016/j.aap.2020.105800
Wang, Song, Yi Wang, Qi Zheng, and Zhixia Li	Guidance-oriented advanced curve speed warning system in a connected vehicle environment	10.1016/j.aap.2020.105801
Hu, Wenhao, Xiangyang Xu, Zhaohui Zhou, Yahui Liu, Yan Wang, Lingyun Xiao, and Xucheng Qian	Mining and comparative analysis of typical pre-crash scenarios from IGLAD	10.1016/j.aap.2020.105699
Zhao, Wenjing, Mohammed Quddus, Helai Huang, Qianshan Jiang, Kui Yang, and Zhongxiang Feng	The extended theory of planned behavior considering heterogeneity under a connected vehicle environment: A case of uncontrolled non-signalized intersections	10.1016/j.aap.2020.105934
Tan, Zhengping, Yaoyue Che, Lingyun Xiao, Wenhao Hu, Pingfei Li, and Jin Xu	Research of fatal car-to-pedestrian precrash scenarios for the testing of the active safety system in China	10.1016/j.aap.2020.105857
García, Alfredo, Francisco Javier Camacho-Torregrosa, and Pedro Vinicio Padovani Baez	Examining the effect of road horizontal alignment on the speed of semi-automated vehicles	10.1016/j.aap.2020.105732
Abdel-Aty, Mohamed, Yina Wu, Moatz Saad, and Md Sharikur Rahman	Safety and operational impact of connected vehicles' lane configuration on freeway facilities with managed lanes	10.1016/j.aap.2020.105616
Li, Pei, Mohamed Abdel-Aty, Qing Cai, and Cheng Yuan	The application of novel connected vehicles emulated data on real-time crash potential prediction for arterials	10.1016/j.aap.2020.105658

Zhang, Shile, Mohamed Abdel-Aty, Qing Cai, Pei Li, and Jorge Ugan	Prediction of pedestrian-vehicle conflicts at signalized intersections based on long short-term memory neural network	10.1016/j.aap.2020.105799
Yang, Guangchuan, Mohamed Ahmed, and Eric Adomah	An Integrated Microsimulation Approach for Safety Performance Assessment of the Wyoming Connected Vehicle Pilot Deployment Program	10.1016/j.aap.2020.105714
Huang, Heye, Xunjia Zheng, Yibin Yang, Jinxin Liu, Wenjun Liu, and Jianqiang Wang	An integrated architecture for intelligence evaluation of automated vehicles	10.1016/j.aap.2020.105681
Zhao, Xiaohua, Haolin Chen, Haijian Li, Xuewei Li, Xin Chang, Xiaofan Feng, and Yufei Chen	Development and application of connected vehicle technology test platform based on driving simulator: Case study	10.1016/j.aap.2021.106330
Li, Weixia, Guoyuan Wu, Danya Yao, Yi Zhang, Matthew J. Barth, and Kanok Boriboonsomsin	Stated acceptance and behavioral responses of drivers towards innovative connected vehicle applications	10.1016/j.aap.2021.106095
Cao, Jianqin, Li Lin, Jingyu Zhang, Liang Zhang, Ya Wang, and Jifang Wang	The development and validation of the perceived safety of intelligent connected vehicles scale	10.1016/j.aap.2021.106092
Calvi, Alessandro, Fabrizio D'Amico, Chiara Ferrante, and Luca Bianchini Ciampoli	Evaluation of augmented reality cues to improve the safety of left-turn maneuvers in a connected environment: A driving simulator study	10.1016/j.aap.2020.105793
Son, Seung-oh, Jeongho Jeong, Seongmin Park, and Juneyoung Park	Effects of advanced warning information systems on secondary crash risk under connected vehicle environment	10.1016/j.aap.2020.105786
Goncalves, Rafael C., Tyron L. Louw, Manuela Quaresma, Ruth Madigan, and Natasha Merat	The effect of motor control requirements on drivers' eye-gaze pattern during automated driving	10.1016/j.aap.2020.105788



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Editor-in-Chief: Helai Huang

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