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## Research interests

Vehicle dynamics  
Automated driving  
Human-Machine-Interaction  
Active, passive and integrated vehicle safety  
Suspension Systems

## Research outputs

### **Validation of Automated Driving Function Based on the Apollo Platform: A Milestone for Simulation With Vehicle-in-the-Loop Testbed**

Li, H., Makkapati, V. P., Tomasch, E., Hoschopf, H., GU, Z. & Eichberger, A., 16 Jun 2023, In: *Vehicles*. 5, 2, p. 718-731 14 p.

### **Evaluation of Perception Sensor Model Performance in Simulation based on Experimental Findings**

Bamminger, N., Li, H., Wan, L., Magosi, Z. F. & Eichberger, A., 31 May 2023, (Submitted).

### **Quantitative Analysis of the Impact of Baidu Apollo Parameterization on Trajectory Planning in a Critical Scenario**

Li, H., De Cristofaro, F., Orucevic, F., GU, Z. & Eichberger, A., 31 May 2023, (Submitted).

### **Advanced Sensing and Safety Control for Connected and Automated Vehicles: Criticality Assessment Method for Automated Driving Systems by Introducing Fictive Vehicles and Variable Criticality Thresholds**

Eichberger, A., 15 May 2023, *Advanced Sensing and Safety Control for Connected and Automated Vehicles*. Huang, C., Wang, Y., Hang, P. & Zuo, Z. (eds.). MDPI AG, p. 85-100

### **Deep Learning for Driver Drowsiness Classification**

Arefnezhad, S. & Eichberger, A., May 2023, (Accepted/In press) *Deep Learning and Its Applications for Vehicle Networks*. Hu, F. & Rasheed, I. (eds.). CRC Press

### **The Effect of Rainfall and Illumination on Automotive Sensors Detection Performance**

Li, H., Bamminger, N., Magosi, Z. F., Feichtinger, C., Zhao, Y., Mihalj, T., Orucevic, F. & Eichberger, A., 27 Apr 2023, In: *Sustainability*. 15, 9, 19 p., 7260.

### **A novel approach for simulation of automotive radar sensors designed for systematic support of vehicle development**

Magosi, Z. F. & Eichberger, A., 17 Mar 2023, In: *Sensors*. 23, 6, 24 p., 3227.

### **Comparative Analysis of critical lane change for Autonomous Driving Vehicles and Human Drivers**

Li, H., De Cristofaro, F., Orucevic, F., GU, Z. & Eichberger, A., 2023, (Unpublished).

### **Drivers' EEG responses to different distraction tasks**

Li, G., Wu, X., Eichberger, A., Green, P., Olaverri-Monreal, C., Yan, W., Qin, Y. & Li, Y., 2023, In: *Automotive Innovation*. 6, 1, p. 20-31 12 p.

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### **Automotive Radar Modeling for Virtual Simulation Based on Mixture Density Network**

Li, H., Kanuric, T. & Eichberger, A., Dec 2022, (E-pub ahead of print) In: IEEE Sensors Journal. p. 1 1 p.

### **Driver Drowsiness Estimation Using EEG Signals with a Dynamical Encoder-Decoder Modeling Framework**

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### **Criticality Assessment Method for Automated Driving Systems by Introducing Fictive Vehicles and Variable Criticality Thresholds**

Nalic, D., Mihalj, T., Orucevic, F., Schabauer, M., Lex, C., Sinz, W. & Eichberger, A., 14 Nov 2022, In: Sensors . 22, 22, p. 1-15 15 p., 8780.

### **Correction: Automated lane change featuring re-planning in dynamic environments and sensitivity analysis of main operational parameters (IEEE Access (2022) 10 (8604-8616) DOI: 10.1109/ACCESS.2022.3143807)**

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### **A Survey on Modelling of Automotive Radar Sensors for Virtual Test and Validation of Automated Driving**

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### **Advances in Automated Driving Systems**

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### **Improved Perception of Motorcycles by Simulator-based Driving Education**

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### **Evaluation methodology for physical radar perception sensor models based on on-road measurements for testing and validation of automated driving**

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### **Effects of automated vehicle models at the mixed traffic situation on a motorway scenario**

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