



Dear reader,

Welcome to the fifth edition of the KI Familie Newsletter! This week we have two big events coming up in our project family: The Final Event of KI Absicherung and the Mid-Term Presentation of KI Data Tooling. You can find more information about both events in this newsletter. Furthermore, our project highlights feature among others the start of the data recording in KI Delta Learning and the publication of a new state-of-the-art article in KI Wissen.

We hope, you will enjoy the newsletter and we are always happy to hear your feedback and suggestions.

The KI Familie Editorial Team



Final Event of KI Absicherung takes place

On 23 June, KI Absicherung will be the first project of the KI Familie to reach the finish line and present its results in Berlin. Over the past three years, KI Absicherung has been researching the verifiability of the functional safety of AI-based systems in automated vehicles. You can learn more about the event and the Agenda on the link below - more detailed results will be published on the project website after the event.

[Read more](#)

Project Highlights



KI Data Tooling's Mid-Term Presentation on 24 June

In a joint effort, the Mid-Term Presentation of KI Data Tooling will be held the day after KI Absicherung's Final Event. You can also follow the event in a live-stream. More information on the event and the link to the live-stream can be found here:

[Read more](#)



Data recording started in KI Delta Learning

In order to build up its own data set that meets the requirements of the project, the KI Delta Learning project has started collecting data. For this purpose, a specially equipped test vehicle will collect data in Germany and abroad in the coming weeks and months.

[Read more](#)



State-of-the-Art Article published in KI Wissen

The article covers approaches, methods, and references from the three core areas of knowledge integration, extraction, and conformity and thus shows a far-reaching state of knowledge that provides important indications and directions for further work in the project.

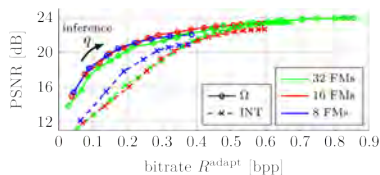
[Read more](#)



2nd Workshop on Autonomy@Scale held

For the second year in a row, KI Delta Learning organized a workshop on Autonomy@Scale during the Intelligent Vehicles Symposium (IV2022). The symposium is an important industry event. It took place in Aachen between 5-9 June 2022.

[Read more](#)



New Quantization Approach for Learned Image Compression

As a result of the ever-increasing amounts of data required for the use of autonomous driving systems, the field of data compression is also playing an increasingly important role. The consortium partners of the KI Data Tooling project have now dedicated a new publication to this topic.

[Read more](#)

Events



@City Final Event

22/23 June 2022

Aldenhoven

[Find out more about the project](#)

Joint Event: KI Absicherung Final Event & KI Data Tooling Mid-Term Presentation

23/24 June 2022

Berlin, Germany

Find out more: [KI Absicherung](#) / [KI Data Tooling](#)

CVPR 2022

19-24 June 2022

New Orleans, USA

[Find out more](#)

IEEE World Congress on Computational Intelligence

18-23 July 2022

Padua, Italy

[Find out more](#)

International Joint Conference on Artificial Intelligence

23-29 July 2022

Vienna, Austria

[Find out more](#)

AI Safety 2022

24/25 July 2022

Vienna, Austria

[Find out more](#)

International Conference on Pattern Recognition

21-25 August 2022

Montréal, Canada

[Find out more](#)

Driving Simulation Conference

14-16 September

Strasbourg, France

[Find out more](#)

ITS World Congress 2022

18-22 September 2022 Los Angeles,
USA

[Find out more](#)

Academic Corner - KI Familie Publications



Deep Neural Networks and Data for Automated Driving

Tim Fingscheidt, Hanno Gottschalk, Sebastian Houben

[Link to Publication](#)

Quantification of Actual Road User Behavior on the Basis of Given Traffic Rules

Daniel Bogdoll, Tim Joseph, Moritz Nekolla

[Link to Publication](#)

Knowledge Augmented Machine Learning with Applications in Autonomous Driving: A Survey

Julian Wörmann, Daniel Bogdoll, Etienne Bührlé, Han Chen, Evaristus Fuh Chuo, Kostadin Cvejovski, Tobias Gleißner, Philip Gottschall, Stefan Griesche, Christian Hellert, Christian Hesels, et al.

[Link to Publication](#)

Towards Safe and Sustainable Autonomous Vehicles using Environmentally-Friendly Criticality Metrics

Sorin Liviu Jurj, Tino Werner, Dominik Grundt, Eike Möhlmann

[Link to Publication](#)

Trajectories as Markov States for Long Term Traffic Scene Prediction

Jörg Reichardt

[Link to Publication](#)

3D-VField: Learning to Adversarially Deform Point Clouds for Robust 3D Object Detection

Alexander Lehner, Stefano Gasperini, Alvaro Marcos-Ramiro, Michael Schmidt, Mohammad-Ali Nikouei Mahani, Benjamin Busam, Nassir Navab, Federico Tombari

[Link to Publication](#)

ScrutinAI: A Visual Analytics Approach for the Semantic Analysis of Deep Neural Network Predictions

Elena Haedecke, Michael Mock, Maram Akila

[Link to Publication](#)

Performance Prediction for Semantic Segmentation by a Self-Supervised Image Reconstruction Decoder

Andreas Bär, Marvin Klingner, Jonas Löhdefink, Fabian Hüger, Peter Schlicht, Tim Fingscheidt

[Link to Publication](#)

What Should AI See?

Robin Chan, Radin Dardashti, Meike Osinski, Matthias Rottmann, Dominik Brüggemann, Cilia Rücker, Peter Schlicht, Fabian Hüger, Nikol Rummel, Hanno Gottschalk

[Link to Publication](#)

Is Neuron Coverage Needed to Make Person Detection More Robust?

Svetlana Pavlitskaya, Şiyar Yıkılmış, J. Marius Zöllner

[Link to Publication](#)

Towards Understanding Adversarial Robustness of Optical Flow Networks

Simon Schrodi, Tonmoy Saikia, Thomas Brox

[Link to Publication](#)

Understanding the Domain Gap in LiDAR Object Detection Networks

Jasmine Richter, Florian Faion, Di Feng, Paul Benedikt Becker, Piotr Sielecki, Claudius Glaeser

[Link to Publication](#)

MEAT: Maneuver Extraction from Agent Trajectories

Julian Schmidt, Julian Jordan, David Raba, Tobias Welz,
Klaus Dietmayer

[Link to Publication](#)

Wavelet-based Unsupervised Label-to-Image Translation

George Eskandar, Mohamed Abdelsamad, Karim Armanious, Shuai Zhang, Bin Yang

[Link to Publication](#)

A Modular Co-Simulation Framework with Open Source Software and Automotive Standards

Dominik Salles, Lukas Lang, Martin Kehrer, et al.

[Link to Publication](#)

A-Eye: Driving with the Eyes of AI for Corner Case Generation

Kamil Kowol, Stefan Bracke, Hanno Gottschalk

[Link to Publication](#)

Adaptive Bitrate Quantization Scheme Without Codebook for Learned Image Compression

Jonas Löhdefink, Jonas Sitzmann, Andreas Bär, Tim Fingscheidt

[Link to Publication](#)

Amodal Cityscapes: A New Dataset, its Generation, and an Amodal Semantic Segmentation Challenge Baseline

Jasmin Breitenstein, Tim Fingscheidt

[Link to Publication](#)

Anomaly Detection in Autonomous Driving: A Survey

Daniel Bogdoll
[Link to Publication](#)

Contact us for comments & feedback

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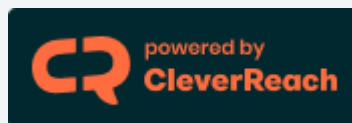
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