

## CHENWEI LIANG | RESUME

- » Links: [in](#) LinkedIn [🎓](#) Google Scholar [🌐](#) Personal Website
- » Fields: Machine Learning, Computer Vision, Multimodal Learning
- » Tech: Python, PyTorch, Linux, Git,  $\text{\LaTeX}$ , C++, Docker, Matlab
- » Language: English, Germany, Chinese



## »»» Project Experience

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|-----------|--|--------------------------------------|
| 2024-2025 | <b>Dynamic Gaussian Splatting for Autonomous Driving</b>   | Independent Research                 |
|           | » Proposed a 4D Gaussian Splatting approach for dynamic scene rendering, enhancing accuracy with semantic and temporal features.<br>» Enabled object-level editing and outperformed self-supervised methods in 4D reconstruction and novel view synthesis. |                                      |
| 2023-2024 | <b>3D Scene Understanding in V2X System</b>  | Fraunhofer IVI                       |
|           | » Proposed first vehicle collaboration algorithm for camera-only 3D semantic occupancy prediction, outperforming state-of-the-art methods.<br>» Enabled real-time, efficient information transmission between vehicles.                                    |                                      |
| 2023-2024 | <b>Software Tools for Processing Traffic Datasets</b>  | Fraunhofer IVI                       |
|           | » Developed an anonymization software tool for traffic datasets, which can automatically blur faces and license plates and a blockchain-based dataset management system  |                                      |
| 2022-2023 | <b>Audio-Visual Speech Representation Learning</b>   | Technical University of Braunschweig |
|           | » Proposed a novel method to compress a state-of-the-art audio-visual speech representation model, reducing parameters by 83%. Retained 97% of the model's performance in speech recognition and maintained effectiveness across various downstream tasks  |                                      |

## »»» Education

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|-----------|---|---|
| 2019-2023 | <b>M.Sc. Electrical Engineering</b>   | Technical University of Braunschweig              |
|           | » Focus: Information Technology<br>» Master Thesis: Audio-Visual Representation Learning by Distillation Methods                  |   |
| 2015-2019 | <b>B.Eng. Electrical Engineering</b>  | University of Shanghai for Science and Technology |
|           | » Double degree with Hamburg University of Applied Sciences<br>» Bachelor thesis: Camera-based intelligent robotic sorting system |   |

## »»» Publication List

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|------|---|-------------|
| 2025 | <b>CoDa-4DGS: Dynamic Gaussian Splatting with Context and Deformation Awareness for Autonomous Driving [pdf]</b>    | ICCV        |
|      | Rui Song*, <u>Chenwei Liang*</u> , Yan Xia, Walter Zimmer, Hu Cao, Holger Caesar, Andreas Festag, Alois Knoll       |             |
| 2024 | <b>Collaborative Semantic Occupancy Prediction with Hybrid Feature Fusion in Connected Automated Vehicles [pdf]</b> | CVPR        |
|      | Rui Song, <u>Chenwei Liang</u> , Hu Cao, Zhiran Yan, Walter Zimmer, Markus Gross, Andreas Festag, Alois Knoll       |             |
| 2023 | <b>An Efficient and Noise-Robust Audiovisual Encoder for Audiovisual Speech Recognition [pdf]</b>                   | INTERSPEECH |
|      | Zhengyang Li, <u>Chenwei Liang</u> , Timo Lohrenz, Marvin Sach, Björn Möller, Tim Fingscheidt                       |             |