


Complete List of the Peer-Reviewed Publications

Olaf Wysocki  

Photogrammetry and Remote Sensing, School of Engineering and Design, Technical University of Munich

 olaf.wysocki@tum.de

August 23, 2024

Original paper¹:

- Froech, T., **Wysocki, O.**, Xia, Y., Xie, J., Schwab, B., Cremers D., Kolbe, TH. FacaDiffy: Inpainting unseen facade parts using diffusion models *In preparation to the ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences (ISPRS Geospatial Week)*; manuscript available here: <https://shorturl.at/oWXNv>.
 - Own contribution: Conceptualization, writing - original draft, writing - review & editing, student supervision.
- Duc, N., Lai, YL., Madlindl, P., Zhu, X., Schwab, B., **Wysocki, O.**, Hoegner, L., Kolbe, TH. Mind the domain gap: Analyzing the domain gap between real-world and synthetic point clouds for automated driving development *Submitted to Journal of Photogrammetry, Remote Sensing and Geoinformation Science (PFG)*; manuscript available here: <https://shorturl.at/56Hlw>.
 - Own contribution: Conceptualization, writing - original draft, writing - review & editing, student supervision.
- Zhang, Q., **Wysocki, O.**, Urban, S., Jutzi, B. CDGS: Confidence-aware depth regularization for 3D Gaussian Splatting, *International Archives of the Photogrammetry, Remote Sensing & Spatial Information Sciences, XLVIII-2/W7-2024*, 189–196, <https://doi.org/10.5194/isprs-archives-XLVIII-2-W7-2024-189-2024>, 2024.
 - Own contribution: Conceptualization, writing - original draft, writing - review & editing, student supervision.
- Bieringer, A., **Wysocki, O.**, Tuttas, S., Hoegner, L., Holst, Ch. Analyzing the impact of semantic LoD3 building models on image-based vehicle localization, *ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences, X-4/W5-2024*, 55–62, <https://doi.org/10.5194/isprs-annals-X-4-W5-2024-55-2024>, 2024.
 - Own contribution: Conceptualization, writing - original draft, writing - review & editing, student supervision.
- Zhu, J., **Wysocki, O.**, Holst, Ch., Kolbe, TH. Enriching thermal point clouds of buildings using semantic 3D building models, *ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences, X-4/W5-2024*, 341–348, <https://doi.org/10.5194/isprs-annals-X-4-W5-2024-341-2024>, 2024.
 - Own contribution: Methodology, implementation, writing - original draft, writing - review & editing.
- **Wysocki, O.**, Hoegner, L. and Stilla, U. MLS2LoD3: Refining low LoDs building models with MLS point clouds to reconstruct semantic LoD3 building models, *Recent Advances in 3D Geoinformation Science*, 367–380. Cham: Springer Nature Switzerland, https://doi.org/10.1007/978-3-031-43699-4_23, 2023.
 - Own contribution: Methodology, implementation, validation, formal analysis, investigation, conceptualization, writing - original draft.

¹accepted and published, unless indicated otherwise

- Froech, T., **Wysocki, O.**, Hoegner, L. and Stilla, U. Reconstructing facade details using MLS point clouds and Bag-of-Words approach, *Recent Advances in 3D Geoinformation Science*, 337-355. Cham: Springer Nature Switzerland, https://doi.org/10.1007/978-3-031-43699-4_21 , 2023.
 - Own contribution: Conceptualization, writing - original draft, writing - review & editing, student supervision.
- Tan, Y., **Wysocki, O.**, Hoegner, L. and Stilla, U. Classifying point clouds at the facade-level using geometric features and deep learning networks, *Recent Advances in 3D Geoinformation Science*, 391-404. Cham: Springer Nature Switzerland, https://doi.org/10.1007/978-3-031-43699-4_25 , 2023.
 - Own contribution: Conceptualization, writing - original draft, writing - review & editing, student supervision.
- Schwarz, S., Pilz, T., **Wysocki, O.**, Hoegner, L. and Stilla, U. Transferring facade labels between point clouds with semantic octrees while considering change detection, *Recent Advances in 3D Geoinformation Science*, 287-298. Cham: Springer Nature Switzerland, https://doi.org/10.1007/978-3-031-43699-4_17 , 2023.
 - Own contribution: Conceptualization, writing - original draft, writing - review & editing, student supervision.
- **Wysocki, O.**, Xia, Y., Wysocki M., Grilli, E., Hoegner, L., Cremers D., and Stilla, U. Scan2LoD3: Reconstructing semantic 3D building models at LoD3 using ray casting and Bayesian networks, *IEEE/CVF Conference on Computer Vision and Pattern Recognition*, 6547-6557, <https://shorturl.at/qzSX0>, 2023.
 - Own contribution: Methodology, implementation, validation, formal analysis, investigation, conceptualization, writing - original draft.
- **Wysocki, O.**, Grilli, E., Hoegner, L. and Stilla, U. Combining visibility analysis and deep learning for refinement of semantic 3D building models by conflict classification, *ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, X-4/W2-2022, 289–296, <https://doi.org/10.5194/isprs-annals-X-4-W2-2022-289-2022>, 2022.
 - Own contribution: Methodology, implementation, validation, formal analysis, investigation, conceptualization, writing - original draft.
- **Wysocki, O.**, Hoegner, L. and Stilla, U. Refinement of semantic 3D building models by reconstructing underpasses from MLS point clouds, *International Journal of Applied Earth Observation and Geoinformation*, 111, 2022, 102841, <https://doi.org/10.1016/j.jag.2022.102841>, 2022.
 - Own contribution: Methodology, implementation, validation, formal analysis, investigation, conceptualization, writing - original draft.
- **Wysocki, O.**, Xu, Y. and Stilla, U. Unlocking point cloud potential: Fusing MLS point clouds with semantic 3D building models while considering uncertainty, *ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, VIII-4/W2-2021, 45–52, <https://doi.org/10.5194/isprs-annals-VIII-4-W2-2021-45-2021>, 2021.
 - Own contribution: Methodology, implementation, validation, formal analysis, investigation, conceptualization, writing - original draft.
- **Wysocki, O.**, Schwab, B., Hoegner, L., Kolbe, TH. and Stilla, U. Plastic surgery for 3D city models: A pipeline for automatic geometry refinement and semantic enrichment, *ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, V-4-2021, 17–24, <https://doi.org/10.5194/isprs-annals-V-4-2021-17-2021>, 2021.
 - Own contribution: Methodology, implementation, validation, formal analysis, investigation, conceptualization, writing - original draft.

Review/dataset paper²:

- **Wysocki, O.**, Tan Y., Froech T., Xia, Y., Wysocki M., Hoegner, L., Cremers D., and Holst Ch. ZAHA: Introducing the Level of Facade Generalization and the large-scale point cloud facade semantic segmentation benchmark dataset, *Accepted for IEEE/CVF Winter Conference on Applications of Computer Vision (WACV)*, <https://arxiv.org/abs/2411.04865>, 2025.
 - Own contribution: Review, benchmark data preparation, formal analysis, investigation, conceptualization, writing - original draft.
- **Wysocki, O.**, Schwab, B., Beil, Ch., Holst, Ch., Kolbe, TH. Reviewing open data semantic 3D city models to develop novel 3D reconstruction methods *International Archives of the Photogrammetry, Remote Sensing & Spatial Information Sciences, XLVIII-4-2024*, 493–500, <https://doi.org/10.5194/isprs-archives-XLVIII-4-2024-493-2024>, 2024.
 - Own contribution: Review, formal analysis, investigation, conceptualization, writing - original draft.
- **Wysocki, O.**, Hoegner, L. and Stilla, U. TUM-FAÇADE: Reviewing and enriching point cloud benchmarks for façade segmentation, *International Archives of the Photogrammetry, Remote Sensing & Spatial Information Sciences, XLVI-2/W1-2022*, 529–536, <https://doi.org/10.5194/isprs-archives-XLVI-2-W1-2022-529-2022>, 2022.
 - Own contribution: Review, benchmark data preparation, formal analysis, investigation, conceptualization, writing - original draft.

²accepted and published, unless indicated otherwise