Olaf Wysocki

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ResearchGate: https://shorturl.at/Yh8zc   **Google Scholar:** https://shorturl.at/Ykeby

ORCID: https://shorturl.at/Ho1hL   **GitHub:** https://github.com/OloOcki

Date of birth: 30/01/1995   **Nationality:** Polish

ABOUT ME

I am deeply invested in geospatial science, with contributions spanning photogrammetry, remote sensing, machine learning, and computer vision. My education reflects a strong commitment to my profession and active involvement in the field. I see myself as a bridge, uniting interdisciplinary skills within teams to achieve greater outcomes.

EDUCATION AND TRAINING

[10/2020 – 10/2024]

Doctor of Engineering in Photogrammetry & Remote Sensing

Prof. Uwe Stilla and Prof. Thomas H. Kolbe, Technical University of Munich   https://www.tum.de/en/

City: Munich | **Country:** Germany | | **Level in EQF:** EQF level 8 | **Thesis:** Enrichment of 3D Building Models by Facade Elements Based on Point Clouds and Confidence Value

[10/2018 – 09/2020]

Master of Science in Geodesy & Geoinformation

Prof. Thomas H. Kolbe, Technical University of Munich   https://www.tum.de/en/

City: Munich | **Country:** Germany | | **Level in EQF:** EQF level 7 | **Thesis:** Semantic-based geometry refinement of 3D city models for testing automated driving, Grade: 1.0 (very good)

[10/2015 – 02/2018]

Bachelor of Engineering in Geodesy & Cartography

Prof. Jan Blachowski, Wroclaw University of Science and Technology   https://pwr.edu.pl/en/

City: Wroclaw | **Country:** Poland | | **Level in EQF:** EQF level 6 | **Thesis:** Visibility analysis for selected lookout towers in the Sudety Mountains, Grade: 5.0 (very good)

[09/2016 – 01/2017]

Semester exchange (Erasmus+)

Technical University of Crete   https://www.tuc.gr/en/home

City: Chania | **Country:** Greece | | **Level in EQF:** EQF level 6

WORK EXPERIENCE

[09/2023 – Current]

Senior Research Associate

Photogrammetry and Remote Sensing, Technical University of Munich

City: Munich | **Country:** Germany

- Leading an interdisciplinary team of researchers at the intersection of geoinformatics, photogrammetry, computer vision, and machine learning research

[09/2020 – 09/2023]

Research Associate

Photogrammetry and Remote Sensing, Technical University of Munich

City: Munich | **Country:** Germany

- Designing and developing high-detail 3D building reconstruction strategy using mobile mapping point clouds while considering uncertainty

[09/2017 – 07/2018]

GIS Specialist

SHH

City: Wroclaw | **Country:** Poland

- Developing and implementing a semantic 3D city model reconstruction workflow

INTERNSHIPS

[03/2020 – 09/2020] **Master's Thesis Candidate, at Audi AG**

- Title: Semantic-based Geometry Refinement of 3D City Models for Testing Automated Driving, Grade: 1.0, Prof. Thomas H. Kolbe

[08/2019 – 10/2019] **Intern in R&D, at Audi AG**

- Designing an approach to generate semantic 3D city models for autonomous driving simulation

[12/2018 – 03/2020] **Student Research Assistant, at TUM**

- Implementing 3D modeling approaches to create virtual environments in a game engine for autonomous driving simulations
- Creating a workflow generating semantic cross-country 3D landscape models

RESEARCH STAYS

[05/2024 – 06/2024] **National University of Singapore, Singapore**

- Visiting researcher, [group of Prof. Biljecki](#)

[08/2023 – 09/2023] **University of Nottingham, UK**

- Visiting researcher, [group of Prof. Marsh](#)

[09/2022 – 09/2022] **Technion - Israel Institute of Technology, Israel**

- Visiting researcher, [group of Prof. Filin](#)

TEACHING EXPERIENCE

Point Cloud Processing, SS 2024

- Master's course, Technical University of Munich

TUM Data Innovation Lab, SS 2023

- Interdisciplinary Master's course, Technical University of Munich

Photogrammetry Project WS 2022/23; WS 2023/24

- Master's course, Technical University of Munich

Point Cloud Processing SS 2022

- Erasmus+ Staff Mobility for Lecturers, Technion - Israel Institute of Technology

Photogrammetry Selected Topics SS 2022

- Master's course, Technical University of Munich

Photogrammetry Selected Chapters WS 2020/21; WS 2022/23; WS 2023/24

- Master's course, Technical University of Munich

MENTORSHIP

Theses

- Shuangyi Liu, [M.Sc. thesis](#), 2022
- Thomas Froech, [M.Sc. thesis](#) ([followed by a scientific publication](#)), 2023
- Khairil Ariffin Bin Yahya, M.Sc. thesis, 2023
- Antonia Bieringer, [B.Sc. thesis](#) ([followed by a scientific publication](#)), 2023
- Yue Tan, [M.Sc. thesis](#)(scientific publication in preparation), 2024

- Chenhao Huang, B.Sc. thesis, (ongoing)
- Yuan Luo, M.Sc. thesis, (ongoing)
- Afreen Abdul Khaleel, M.Sc. thesis, (ongoing)

Master's semester projects

- Thomas Froech ([followed by a scientific publication](#))
- Yue Tan ([followed by a scientific publication](#))
- Tanja Pilz, Sophia Schwarz ([followed by a scientific publication](#))
- Xinyue Yang, Xiaoyu Huang
- Patrick Madlindl, Xinyuan Zhu, Yan-Ling Lai, Nguyen Duc, Florian Hauck ([followed by a scientific publication](#))
- Amirarsalan Ehsani
- Boyi Chen, Marco Antonio Ortiz Rincón
- Berkay Mutlu, Yusuf Şimşir

Student Research Assistants

- Weihang Li, Wenzhao Tang ([honorable mention at CVPRW S23DR challenge](#))
- Thomas Froech ([CityGML2OBJ v2 open source tool](#))
- Yue Tan (early-injection, implementation and testing on [TUM-FACADE](#))
- Franz Hanke ([tum2twin](#), textured models)
- Prabin Gyawali ([tum2twin](#), data labeling)
- Xiaoyu Huang ([tum2twin](#), data modeling)
- Jiarui Zhang ([TUM-FACADE](#), data labeling)

SCIENTIFIC REVIEWER

IEEE Transactions on Geoscience and Remote Sensing

- [TOP 3 in remote sensing](#), IF: 7.5, h5: 141

[01/03/2023 – Current] **ISPRS Journal of Photogrammetry and Remote Sensing**

- [TOP 4 in remote sensing](#), IF: 10.6, h5: 104

[01/02/2023 – Current] **IEEE Geoscience and Remote Sensing Letters**

- [TOP 5 in remote sensing](#), IF: 4, h5: 83

[01/11/2022 – Current] **International Journal of Applied Earth Observation and Geoinformation**

- [TOP 7 in remote sensing](#), IF: 7.6, h5: 80

HONOURS AND AWARDS

[18/10/2022] **Runner-up: Best poster presentation, the 3D GeoInfo 2022 conference, Sydney, Australia Awarding institution:** 3D GeoInfo 2022 conference committee

[01/08/2018] **Study Scholarships for Graduates of All Disciplines, 2018/19 Awarding institution:** Deutscher Akademischer Austauschdienst (DAAD)

[01/09/2017] **Rector's Scholarship for high grade average and achievements in the scientific area Awarding institution:** Wroclaw University of Science and Technology

[01/09/2017] **Best oral paper presentation, the 15th Students' Science Conference, Jelenia Gora, Poland Awarding institution:** Wroclaw University of Science and Technology

FUNDING ACQUISITION

[08/2024] **Nerf2BIM: TUM Georg Nemetschek Institute Artificial Intelligence for the Built World (accepted)**

- Four years' funding for three PhDs
- Interdisciplinary project of three TUM Chairs concentrating on AI in the built environment

[01/2024] **ReLoD3: TUM Global Incentive Fund (accepted)**

- International exchange funding for the joint 'ReLoD3' project with Prof Biljecki, NUS, Singapore

[12/2023] **AI4UPC: Leonhard Obermeyer Center Scholarship (submitted)**

- Three years' funding for supervised PhD

[05/2023] **TUM Internationalization Fund (accepted)**

- Personal funding for research stay at the University of Nottingham & travel to CVPR '23

[05/2022] **Erasmus++ For Staff (accepted)**

- Personal funding for outside-EU teaching exchange

NETWORKS AND MEMBER-SHIPS

[09/2020 – Current] **Leonhard Obermeyer Center (LOC)**   Munich, Germany

- Networking and contributing expertise to the think-tank of scientists and practitioners
- Representing the researchers' team of Professorship of Photogrammetry and Remote Sensing, TUM

Link: https://www.ed.tum.de/en/loc/home/

[01/2019 – Current] **Runder Tisch GIS**   Munich, Germany

- Networking and sharing expertise with scientists, practioners, and governmental institutes concerning the geospatial field

Link: https://www.rundertischgis.de/

[09/2022 – Current] **TUM Data Innovation Lab**   Munich, Germany

- Designing multidisciplinary projects
- Supervising young master's researchers in multidisciplinary endavours

Link: https://www.mdsi.tum.de/en/di-lab/tum-di-lab/

[03/2021 – Current] **Get Kids Into Survey**   Munich, Germany

- Educating young peolpe about geospatial technologies

Link: https://www.getkidsintosurvey.com/

VOLUNTEERING

[05/2024 – Current] **Visual Investigations Between Advocacy, Journalism, and Law**   Munich, Germany

- Contributing with photogrammetry and computer vision knowledge to create an art exhibition on pressing intertwined issues of technology and society
- Disseminating the technical expertise to art students and art creators

Link: https://shorturl.at/SpxT9

[10/2021 – 09/2022] **Doctoral Representative**   Munich, Germany

- Representing over 2000 doctoral candidates of the TUM School of Engineering and Design

[01/2021 – Current] **Awesome CityGML**   Munich, Germany

- Initializing a community project aiming at collecting all open data semantic 3D city models

Link: https://github.com/OloOcki/awesome-citygml

[09/2019 – Current] **Trend Analysis**   Munich, Germany

- Researching current geospatial interviews at the biggest venue in the field: INTERGEO
- Supporting young researchers in conducting interviews
- Collating trends in a form of an annual report

Link: https://shorturl.at/RQwrO

[09/2019 – 04/2020] **TUM Hyperloop**   Munich

- Contributing the geospatial expertise into the innovative large-scale hyperloop route planning of the TUM

Link: https://tumhyperloop.com/

DIGITAL SKILLS

My Digital Skills

Pytorch,Tensorflow | ETL: FME | Git | Numpy, pandas, matplotlib, Tensorflow | Deep Learning | OpenCV | Machine Learning | Computer Vision | Python | Data Science | Open3D / PCL | LIDAR, Photogrammetry, and UAV sensors and platforms | CARLA Simulator | QGIS | Bently Microstation | SketchUP (3D modelling)

COMMUNICATION AND IN-TERPERSONAL SKILLS

Public speaking

- Presenting team's and own work at professional and academic conferences

Communication

- Communicating effectively findings in written and verbal forms to academic and industry partners

Leadership

- Leading teams of young academics and peers to pursue a common goal

LANGUAGE SKILLS

Mother tongue(s): Polish

Other language(s):

English

LISTENING C2 **READING** C2 **WRITING** C2

SPOKEN PRODUCTION C2 **SPOKEN INTERACTION** C2

German

LISTENING B2 **READING** B2 **WRITING** B2

SPOKEN PRODUCTION B2 **SPOKEN INTERACTION** B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

CONFERENCES AND SEM-INARS

[10/06/2022] **Speaker, XXIVth ISPRS Congress**   Nice, France

- Plastic surgery for 3D city models: A pipeline for automatic geometry refinement and semantic enrichment

Link: https://www.isprs2022-nice.com/

[11/10/2021]   **Speaker, 16th 3D GeoInfo Conference 2021**   New York, United States of America

> • Unlocking point cloud potential: Fusing MLS point clouds with semantic 3D building models while considering uncertainty

Link: https://3dgeoinfo2021.github.io/

[03/03/2022]   **Speaker, 9th International Workshop 3D-ARCH**   Mantova, Italy

> • TUM-FACADE: Reviewing and enriching point cloud benchmarks for facade segmentation

Link: https://www.sitech-3dsurvey.polimi.it/?p=3303

[13/05/2022]   **Speaker, PhD Colloquium of the DGK Section on Geoinformatics 2022**   Braunschweig, Germany

> • Enriching 3D building models by facade elements based on point clouds and confidence intervals

Link: https://easychair.org/cfp/dgkgeoinfo2022

[21/10/2022]   **Speaker, 7th Smart Data Smart Cities and 17th 3D GeoInfo Joint International Conference**
Sydney, Australia

> • Combining visibility analysis and deep learning for refinement of semantic 3D building models by conflict classification

Link: https://www.sdsc3dgeoinfo.unsw.edu.au/

[30/11/2022]   **Speaker, ASAM International Conference 2022**   Dresden, Germany

> • Plastic surgery of 3D building models for testing automated driving

Link: https://www.asam.net/conferences-events/detail/asam-international-conference-2022/

[22/03/2023]   **Speaker, The 43rd scientific and technical annual conference of the German Society for Photogrammetry, Remote Sensing and Geoinformation (DGPF)**
Munich, Germany

> • Enriching 3D building models using point cloud geometry and image semantic

Link: https://dgpf.de/con/jt2023.html

[15/06/2023]   **Speaker, Conference of PhD Students and Young Scientists**   Wroclaw, Poland

> • Reconstructing LoD3 building models using ray casting and semantic segmentation

Link: https://cpsys.pwr.edu.pl/home/

[19/06/2023]   **Speaker, Photogrammetric Computer Vision Workshop, in conjunction with IEEE/CVF Conference on Computer Vision and Pattern Recognition 2023**
Vancouver, Canada

> • Scan2LoD3: Reconstructing semantic 3D building models at LoD3 using ray casting and Bayesian networks

Link: https://photogrammetric-cv-workshop.github.io/program.html

[06/09/2023]   **Keynote Speaker, Ordnance Survey 3D PhD Programme**   Southampton, United Kingdom

> • Building reconstruction using point clouds

[14/09/2023]   **Speaker, 18th International 3DGeoInfo Conference**   Munich, Germany

> • MLS2LoD3: Refining low LoDs building models with MLS point clouds to reconstruct semantic LoD3 building models

Link: https://www.3dgeoinfo.org/3dgeoinfo/

[03/11/2023]   **Speaker, Leonhard Obermeyer Center Center Day 2023**   Munich, Germany

• Semantic 3D building reconstruction at level of detail 3 using mobile mapping data

Link: https://www.ed.tum.de/loc/events/center-day/

[07/10/2021 – 08/10/2021]   **Co-organizer, TUM-DLR-Summer School 2021**   Munich, Germany

• Co-organizing interdisciplinary summer school involving German Aerospace Center, and the TUM Chairs of Photogrammetry and Remote Sensing, Data Science in Earth Observation, Remote Sensing Technology.