Oliver **Geißendörfer**

M.Sc.

About me

I am specializing in disruptive technologies and innovation, I excel at transforming concepts into scalable solutions that address real-world challenges. With a proven track record in leading groundbreaking research, fostering industry partnerships, and mentoring top talent, I bring a disruptive approach to driving impactful advancements in sensor fusion.

personal

nationality: German
1996

Areas of specialization

Geodesy • Geospatial data • GIS • LiDAR • GNSS • IMU • Statistics • Data Fusion • Machine Learning

Interests

Running • Cycling • Swimming • Diving • Mountaineering • Paragliding

Curriculum

2021–
Scientific Employee
PH.D CANDIDATE · Technical University of Munich
As a scientific employee, I develop advanced 4D high-frequency monitoring algorithms using LiDAR technology. My work focuses on transforming data into innovative approaches in remote sensing, and enabling precise, real-time insights for diverse applications through a forward-thinking and results-driven approach.

2021
Trainee
INTERNSHIP · Deutsche Bahn Systemtechnik Munich
During my internship, I analyzed data of train tracks and explored automation solutions to enhance efficiency and reliability. My work focused on evaluating processes and developing innovative approaches to streamline track monitoring.

2019–2022
Second board
BOOKKEEPING · Förderverien der Studierenden der Luftfahrt, Raumfahrt und Geodäsie e.V.
As the second board member we founded this non-profit organization with the switch to the new department Aerospace and Geodesy at the Technical University of Munich for aerospace and geodesy students. I helped to foster collaborations between student disciplines, and organize events. My role emphasized strategic planning, keeping track of the budget, and taxes for a non-profit organisation.

2019–2020
Student assistant
RESEARCH ASSISTANT · DGFI–TUM
As a student assistant, I contributed to the analysis of scale differences between SLR (satellite laser ranging) and VLBI (Very long baseline interferometry) in the computation of the ITRF (International Terrestrial Reference Frame). My work focused on data evaluation and precision modeling, enhancing the data fusion within the global geodetic reference frame.

Degrees

2021
Geodesy and Geoinformation
M.Sc. · Technical University of Munich
I pursued my Master's degree in Geodesy and Geoinformation, deepening my expertise in advanced surveying, remote sensing, GIS, physical and satellite geodesy, and data analysis. This program equipped me with specialized knowledge and innovative methodologies to address complex geospatial problems and drive advancements in the field.

2018
Geodesy and Geoinformation
B.Sc. · Technical University of Munich
I completed my Bachelor's degree in Geodesy and Geoinformation, gaining a strong foundation in surveying, remote sensing, GIS, cartography, land management, and both physical and satellite geodesy. This interdisciplinary education provided me with the technical and analytical skills essential for tackling complex spatial and geodetic challenges.

oliverlg.github.io
Oliver Geißendörfer

Publications

2025	*Vibration monitoring based on LiDAR by observation fusion and spatio-temporal processing of point clouds*, JISDM (Joint International Symposium of Deformation Monitoring)
2025	*MEMS LiDAR sensors for low-cost 3D frequency mode detection*, IEEE TIM (Transactions on Instrumentation and Measurement)
2024	*Combining LiDAR and Time-Domain Frequency Analysis for Enhanced Spatial Understanding of Vibration Responses*, IEEE OJIM (Open Journal of Instrumentation and Measurement)
2023	*Efficient In-Memory Point Cloud Query Processing*, 3DGeoInfo

Talks

2025	*Vibration monitoring based on LiDAR by observation fusion and spatio-temporal processing of point clouds*, at: *Joint International Symposium of Deformation Monitoring* in Karlsruhe, Apr. 2025.
2023	*Tutorium: Geodätisches Monitoring basierend auf Punktwolken*, at: *Internationaler Ingenieurvermessungskurs 2023* in Essen, Apr. 2023.
2022	*Identifikation von raumzeitlichen Schwingungen mittels Profilscannern*, at: *InterGeo* in Essen, Oct. 2022.

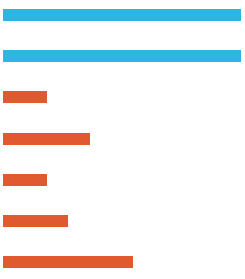
Certificates & Grants

2024–2029	*Drone pilot*, Luftfahrt Bundesamt
2024	*ChatGPT*, Coursiv
2024	*DALL-E*, Coursiv
2024	*MidJourney*, Coursiv
2024	*Jaspar AI*, Coursiv
2024	*Praxiskurs Technische Analyse*, Udemy
2024	*Praxiskurs Aktien und ETFs*, Udemy
2023	*Grundkurs Hochschullehre Bayern*, Technical University of Munich
2020	*Energy Production, Distribution and Safety*, University of Buffalo/Coursera
2020	*Engineering and Project Management*, Rice University/Coursera
2020	*IT Security: Defense against the digital dark arts*, Google/Coursera
2020	*IT Fundamentals for Cybersecurity*, IBM/Coursera
2020	*Self-Driving Cars*, University of Toronto/Coursera
2020	*Reinforcement Learning*, University of Alberta/Coursera
2020	*Natural Language Processing*, DeepLearning.AI/Coursera
2020	*AI for Medicine*, DeepLearning.AI/Coursera
2020	*Deep Learning*, DeepLearning.AI/Coursera

Languages

German	C2	mother tongue
English	C1	● ● ● ● ○
French	B2	● ● ● ○ ○
Spanish	A1	● ○ ○ ○ ○
Russian	A1	● ○ ○ ○ ○

Programming



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