

Curriculum Vitae — Nico Lang

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Research experience

03/2025–	Assistant Professor — Computer Vision and Machine Learning for Earth Observation, <i>Department of Computer Science (DIKU), University of Copenhagen; Global Wetland Center; Pioneer Centre for AI</i>
09/2022–03/2025	Postdoctoral Researcher , <i>DIKU, University of Copenhagen; Pioneer Centre for AI</i>
02/2018–05/2022	PhD Research Assistant , <i>Photogrammetry and Remote Sensing, ETH Zürich</i>
03/2013–10/2017	Student Researcher , <i>Photogrammetry and Remote Sensing, ETH Zürich</i>
02/2015–04/2015	Intern , <i>LOGITECH UPICTO GmbH</i>
10/2014–01/2015	Intern , <i>upicto GmbH (ETH spin-off)</i>

Academic degrees

05/2022	Doctor of Sciences, <i>ETH Zürich</i>
09/2017	MSc in Geomatics, <i>ETH Zürich</i>
08/2014	BSc in Geomatik und Planung, <i>ETH Zürich</i>

Scientific focus areas

Computer vision; Deep learning; Machine learning; Remote sensing; Earth observation; Environmental monitoring; Global vegetation structure mapping; Representation learning; Self-supervised learning, Open-world recognition; Uncertainty quantification; Fine-grained recognition

Selected professional activities

2026–	ELLIS member
2025–	Area Chair for CVPR 2026 and ECCV 2026
2025–	Organizer <i>AICC: Workshop on AI for Climate and Conservation, EurIPS</i>
2025–	Organizer <i>Advances in Representation Learning for Earth Observation (REO), EurIPS</i>
2025–	Program Committee (Keynotes) <i>Nordic AI Meet 2025</i>
2025–	Co-director <i>P1 program on AI for Climate & Conservation</i>
2025–	Coordinator <i>Climate & Conservation at the Pioneer Centre for AI</i>
2025–	Core team member <i>Climate AI Nordics network</i>
2024	Workshop organizer <i>Visipedia workshop 2024</i> , Copenhagen
2024	Organizer <i>PhD summer course SSL4EO-2024: Self-Supervised Learning for Earth Observation, University of Copenhagen</i>
2023–	Workshop organizer (main point of contact) of <i>FGVC10, FGVC11, FGVC12, CVPR</i>
2023	Drummer in the <i>CVPR 2023 house band</i> , Vancouver

Academic services

2019–	Reviewer <i>CVPR [Outstanding reviewer 2023], ECCV, ICCV, TPAMI, RSE, ISPRS, Nature Comms. Env., Global Change Biology, NLDL, CVPR FGVC workshop, NeurIPS CompSust-2023 workshop, ICCV Joint workshop on marine vision, AI in Science Summit 2025, EurIPS AICC workshop, EurIPS REO workshop</i>
2026	External examiner PhD thesis by Yuchang Jiang, <i>University of Zurich</i>
2025	Reviewer PhD proposal by Claire Robin, <i>Wageningen University & Research</i>
2025	Reviewer for the ELLIS PhD Program

Bibliography overview

Author of 18 peer-reviewed journal and conference articles. See [Google Scholar](#) or the separate publication list.

Ten selected publications

- [1] Yuyan Chen, **Lang, Nico**, B. Christian Schmidt, Aditya Jain, Yves Basset, Sara Beery, Maxim Larrivée, and David Rolnick. “Open-Insect: Benchmarking Open-Set Recognition of Novel Species in Biodiversity Monitoring”. In: *NeurIPS Datasets and Benchmarks Track*. [Spotlight]. 2025.
- [2] Vésteinn Snæbjarnarson, Kevin Du, Niklas Stoehr, Serge Belongie, Ryan Cotterell, **Lang, Nico**, and Stella Frank. “Taxonomy-Aware Evaluation of Vision-Language Models”. In: *CVPR*. 2025.
- [3] Vishal Nedungadi, Ankit Kairiyaa, Stefan Oehmcke, Serge Belongie, Christian Igel, and **Lang, Nico**. “MMEarth: Exploring multi-modal pretext tasks for geospatial representation learning”. In: *ECCV*. 2024.
- [4] **Nico Lang**, Vésteinn Snæbjarnarson, Elijah Cole, Oisin Mac Aodha, Christian Igel, and Serge Belongie. “From coarse to fine-grained open-set recognition”. In: *CVPR*. 2024.
- [5] Bingchen Zhao, **Lang, Nico**, Serge Belongie, and Oisin Mac Aodha. “Labeled Data Selection for Category Discovery”. In: *ECCV*. 2024.
- [6] Nikolai Kalischek, **Lang, Nico**, Cécile Renier, Rodrigo Caye Daudt, Thomas Addoah, William Thompson, Wilma J Blaser-Hart, Rachael Garrett, Konrad Schindler, and Jan D Wegner. “Cocoa plantations are associated with deforestation in Côte d’Ivoire and Ghana”. In: *Nature Food* (2023).
- [7] Siyu Liu, Martin Brandt, Thomas Nord-Larsen, Jerome Chave, Florian Reiner, **Lang, Nico**, Xiaoye Tong, Philippe Ciais, Christian Igel, Adrian Pascual, et al. “The overlooked contribution of trees outside forests to tree cover and woody biomass across Europe”. In: *Science Advances* (2023).
- [8] **Nico Lang**, Walter Jetz, Konrad Schindler, and Jan Dirk Wegner. “A high-resolution canopy height model of the Earth”. In: *Nature Ecology & Evolution* (2023).
- [9] **Nico Lang**, Nikolai Kalischek, John Armston, Konrad Schindler, Ralph Dubayah, and Jan Dirk Wegner. “Global canopy height regression and uncertainty estimation from GEDI LIDAR waveforms with deep ensembles”. In: *Remote sensing of environment* (2022).
- [10] **Nico Lang**, Andrea Irniger, Agnieszka Rozniak, Roni Hunziker, Jan Dirk Wegner, and Konrad Schindler. “GRAINet: mapping grain size distributions in river beds from UAV images with convolutional neural networks”. In: *Hydrology and Earth System Sciences Discussions* (2020).

Talks

Fusing Remote Sensing Data Across Sensors and Time

2025 Seminar talk *Wageningen University & Research*, Wageningen

Learning From Global Earth Observation Data

2025 Keynote *OpenGeoHub summer school “Data Science for Earth observation”*, Wageningen

2025 Keynote *QIM Workshop on “Challenges in analysis of large image data”*, SCIA2025, Reykjavík

2024 Invited talk *Winter school “BigAI for BigGIS”*, Indian Institute of Remote Sensing, Webinar

2024 Invited talk *Workshop LifeCLEF2024*, Grenoble

2024 Seminar talk *Allen Institute for AI (AI2)*, Seattle

2024 Seminar talk *Danish Hydraulic Institute (DHI)*, Hørsholm

MMEarth: Multi-Modal Pretext Tasks For Geospatial Representation Learning

2025 Invited talk “From Pixels to Products: CV in Danish Research & Industry”, D3A, Nyborg

2025 Invited talk *Nordic Workshop on AI for Climate Change*, Gothenburg

2025 Talk *ESA-NASA International Workshop on AI Foundation Model for EO*, Frascati

Global vegetation monitoring with probabilistic deep learning

2023 Invited talk *Rise Learning Machines Seminars*, Lund

2023 Invited talk *AI for Good*, Webinar

2023 Keynote *PhD course on “Deep learning in forest remote sensing”*, Ås

2022 Invited talk *ML4RS: Machine learning for remote sensing reading group*, Webinar

Forest canopy height mapping at global scale by fusing Sentinel-2 and GEDI

2022 Talk *ESA Living planet symposium*, Bonn

Global vegetation height mapping with deep ensembles

2022 Seminar talk *Alan Turing Institute*, Webinar

High carbon stock mapping at large scale

2022 Lightning talk *Google Geo for Good*, Webinar

	Towards global high-resolution biomass maps: machine vision at large scale
2021	Seminar talk <i>ESA Φ-Lab</i> , Webinar
2021	Invited talk <i>High carbon stock approach (HCSA) Largescale Working Group</i> , Webinar
	Machine Learning for Environmental Sciences
2019	Invited talk <i>WSIS Forum Workshop "Analysis of aerial data for Aid & Development"</i> , Geneva

Panel discussions

2025	<i>Nordic–Alan Turing Institute AI Research Workshop</i> , Oslo
2025	<i>OpenGeoHub Summer School “GeoAI – Dos and Don’ts”</i> , Wageningen
2025	<i>D3A Conference Session “From Pixels to Products”</i> , Nyborg
2024	<i>ICLR 2024 workshop ML for Remote Sensing, “Beyond Benchmarks: ML for the Planet”</i> , Vienna

Awards

2023	Culmann Prize (Outstanding doctoral thesis, ETH Zürich)
2023	CVPR Outstanding Reviewer
2019	U.V. Helava Award (Best Paper, ISPRS Journal)

Selected news media

For a complete list please refer to my [personal website](#).

2022	German national TV ARD quiz show: Wer Weiss Denn Sowas
2022	Swiss national TV SRF news “10 vor 10”: Living Planet Symposium mit Schweizer Beteiligung
2022	NASA: Scientists Show How Forests Measure Up
2022	NVIDIA: Neural Network Generates Global Tree Height Map, Reveals Carbon Stock Potential
2022	ETH Zürich: Neural network can read tree heights from satellite images
2021	SRF1 Swiss national radio live interview: Die Vermessung der Wälder
2021	Mongabay: Chocolate giant funds high resolution carbon map to protect forests
2020	ETH Zürich Industry Relations: A global tool against deforestation

Funding awarded (Total: $\approx \$115K$)

2025	<i>Danish Data Science Academy</i> - Small event grant for the AICC EurIPS workshop, \$7600.
2025	<i>Pioneer Centre for AI</i> - P1 program on AI for Climate & Conservation, \$7700
2025	<i>Google DeepMind</i> - Sponsorship for the FGVC12 workshop at CVPR (with Serge Belongie and Christine Kaeser-Chen), \$5000
2025	<i>Pioneer Centre for AI</i> - Research assistant 4 months (part-time), \$10,500 (in-kind) Project: Neural Implicit Fields for Multi-Image Super-Resolution
2024	<i>Pioneer Centre for AI</i> - Part-time research assistant 2 months, \$1,250 (in-kind) Project: MMEarth-Bench: Global Environmental Tasks for Multimodal Geospatial Models
2024	<i>University of Copenhagen</i> - SSL4EO-2024 PhD summer course (with Stefan Oehmcke, Ankit Karirya, Christian Igel), \$6800
2023	<i>Pioneer Centre for AI</i> - Research assistant 6 Months, \$39,500 (in-kind) Project: MMEarth: Exploring Multi-Modal Pretext Tasks For Geospatial Representation Learning
2023	<i>University of Copenhagen and University of Edinburgh (UoE)</i> - Strategic Partnership seed-fund (with Serge Belongie, Oisin Mac Aodha, Stella Frank), \$17,700 Financed the Visipedia workshop 2024 and my 3-weeks research visit at UoE in April 2024.
2021	<i>Amazon</i> - Cloud computing credits (with Peter Gehler, Jan Dirk Wegner) \$20,000 Project: A high-resolution canopy height model of the Earth
2018	<i>ETH Global</i> - Travel grant to represent ETH at the Clinton Global Initiative University meeting in Chicago, (with Andrés C Rodríguez), \$2,000
2016	<i>Degen Stiftung ETH Zürich</i> - Travel award for summer research visit at Caltech (USA), \$1,150

Supervisor functions

Co-supervised 11 master’s and bachelor’s theses. Co-advised 8 PhD students.

Teaching experience

09/2025	Lecturer , <i>OpenGeoHub Summer School “Data Science for EO”</i> , Wageningen
07/2024	Lecturer , <i>SSL4EO-2024 PhD Summer Course</i> , University of Copenhagen
02/2018–05/2022	Teaching Assistant , Photogrammetry and Remote Sensing, ETH Zürich
03/2013–09/2017	Teaching Assistant , ETH Zürich
08/2010–08/2017	Volleyball Instructor , J+S School Sport, Switzerland

Tutorials on “Deep Learning for Geospatial Data Analysis”

09/2019	Tutorial, <i>ECML/PKDD Summer School (EPSS19)</i> , Würzburg
06/2019	Lecture & Tutorial, <i>ISPRS Geospatial Week</i> , Enschede
01/2019	Tutorial, <i>Workshop on ML for Environmental and Geosciences (MLEG2019)</i> , Zürich
01/2018	Tutorial, <i>ISPRS TC II Symposium, Riva</i>

Selected mentorships

2024-	PhD student (University of Agder & The Norwegian Mapping Authority) Co-supervising Sander Riisøen Jyhne during his one-year research visit at the University of Copenhagen. Together we are working on implicit neural representations for multi-image super-resolution. Conference submission under review.
2024-	Graduate student (Harvard & University of Copenhagen) Co-supervising Lucia Gordon (with Andrew Davies, Harvard) since her summer visit at the Pioneer Centre for AI in 2024. As a follow-up of the MMEarth project, we are working on the MMEarth-Bench project. Conference submission is under review.
2024-	Graduate student (McGill University & Mila Quebec AI Institute) Co-advising Yuyan Chen (with David Rolnick, McGill & Sara Beery, MIT) working on benchmarking open-set recognition and category discovery for insect monitoring. Publication at NeurIPS 2025, Spotlight.
2023-	PhD student (University of Copenhagen) Co-advising Hui Zhang together with Christian Igel. Hui is working on an extension of my PhD research towards mapping the full vertical vegetation structure. I have listed her for a named two-year postdoc position in the RECLAIM proposal (under review at NordForsk, starting in early 2026).
2024-	Research Assistant (Pioneer Centre for AI) Supervised Vishal Nedungadi as a research assistant after his master, working on the MMEarth project for 6 months at the Pioneer Centre for AI, which was published at ECCV 2024. I mentored Vishal during the application for PhD positions. Co-advising Vishal in his PhD research at Wageningen University & Research.
2023-2025	SURF undergrad (Caltech) Supervised Avirath Sundaresan during a summer research visit as a SURF fellow. Mentored Avirath during weekly meetings together with Sara Beery (MIT) working on animal re-identification.
2023-2024	Bachelor students (University of Copenhagen) Co-supervised Philip Enevoldsen and Christian Gundersen during their Bachelor thesis. Mentored them beyond their thesis to present at the ICCV 2023 workshop OOD-CV and the NLLD 2025 conference leading to a publication in PMLR proceedings, supported by a DDSA travel grant.

Languages

German (native), English (fluent)

References

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Ralph Dubayah

University of Maryland

Professor of Geographical Sciences
NASA GEDI Principal Investigator
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Sara Beery

Massachusetts Institute of Technology

Homer A. Burnell Career Development Professor
Co-lead, Global Center on AI and Biodiversity Change
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Oisin Mac Aodha

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Reader (Associate Professor) in Machine Learning
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