

# Curriculum Vitae — Nico Lang

**Email:** nila@di.ku.dk  
**Homepage:** [langnico.github.io](https://langnico.github.io)  
**Work address:** Øster Voldgade 3, 1350 København

## Research experience

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

## Academic degrees

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

## Scientific focus areas

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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

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2026– **ELLIS member**  
2025– **Area Chair** for CVPR 2026 and ECCV 2026  
2025– **Organizer** *AICC: Workshop on AI for Climate and Conservation*, EurIPS  
2025– **Organizer** *Advances in Representation Learning for Earth Observation (REO)*, EurIPS  
2025– **Program Committee** (Keynotes) *Nordic AI Meet 2025*  
2025– **Co-director** *P1 program on AI for Climate & Conservation*  
2025– **Coordinator** *Climate & Conservation at the Pioneer Centre for AI*  
2025– **Core team member** *Climate AI Nordics network*  
2024 Workshop organizer *Visipedia workshop 2024*, Copenhagen  
2024 **Organizer** *PhD summer course SSL4EO-2024: Self-Supervised Learning for Earth Observation*, University of Copenhagen  
2023– **Workshop organizer** (main point of contact) of *FGVC10, FGVC11, FGVC12, FGVC13, CVPR*  
2023 Drummer in the *CVPR 2023 house band*, Vancouver

## Academic services

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2019– **Reviewer** *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*  
2026 **External examiner** PhD thesis by Yuchang Jiang, University of Zurich  
2025 **Reviewer** PhD proposal by Claire Robin, Wageningen University & Research  
2025 **Reviewer** for the ELLIS PhD Program

## Bibliography overview

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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 Larrivé, 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 Stoeck, Serge Belongie, Ryan Cotterell, **Lang, Nico**, and Stella Frank. “Taxonomy-Aware Evaluation of Vision-Language Models”. In: *CVPR*. 2025.
- [3] Vishal Nedungadi, Ankit Kariryaa, 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, Oisín 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 Oisín 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

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	<b>Fusing Remote Sensing Data Across Sensors and Time</b>
2025	Seminar talk <i>Wageningen University &amp; Research</i> , Wageningen
	<b>Learning From Global Earth Observation Data</b>
2025	Keynote <i>OpenGeoHub summer school “Data Science for Earth observation”</i> , Wageningen
2025	Keynote <i>QIM Workshop on “Challenges in analysis of large image data”</i> , SCIA2025, Reykjavík
2024	Invited talk <i>Winter school “BigAI for BigGIS”</i> , Indian Institute of Remote Sensing, Webinar
2024	Invited talk <i>Workshop LifeCLEF2024</i> , Grenoble
2024	Seminar talk <i>Allen Institute for AI (AI2)</i> , Seattle
2024	Seminar talk <i>Danish Hydraulic Institute (DHI)</i> , Hørsholm
	<b>MMEarth: Multi-Modal Pretext Tasks For Geospatial Representation Learning</b>
2025	Invited talk “From Pixels to Products: CV in Danish Research & Industry”, D3A, Nyborg
2025	Invited talk <i>Nordic Workshop on AI for Climate Change</i> , Gothenburg
2025	Talk <i>ESA-NASA International Workshop on AI Foundation Model for EO</i> , Frascati
	<b>Global vegetation monitoring with probabilistic deep learning</b>
2023	Invited talk <i>RISE Learning Machines Seminars</i> , Lund
2023	Invited talk <i>AI for Good</i> , Webinar
2023	Keynote <i>PhD course on “Deep learning in forest remote sensing”</i> , Ås
2022	Invited talk <i>ML4RS: Machine learning for remote sensing reading group</i> , Webinar
	<b>Forest canopy height mapping at global scale by fusing Sentinel-2 and GEDI</b>
2022	Talk <i>ESA Living planet symposium</i> , Bonn
	<b>Global vegetation height mapping with deep ensembles</b>
2022	Seminar talk <i>Alan Turing Institute</i> , Webinar
	<b>High carbon stock mapping at large scale</b>
2022	Lightning talk <i>Google Geo for Good</i> , Webinar

	<b>Towards global high-resolution biomass maps: machine vision at large scale</b>
2021	Seminar talk <i>ESA Φ-Lab</i> , Webinar
2021	Invited talk <i>High carbon stock approach (HCSA) Largescale Working Group</i> , Webinar
	<b>Machine Learning for Environmental Sciences</b>
2019	Invited talk <i>WSIS Forum Workshop "Analysis of aerial data for Aid &amp; 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: <i>Wer Weiss Denn Sowas</i>
2022	Swiss national TV SRF news "10 vor 10": <i>Living Planet Symposium mit Schweizer Beteiligung</i>
2022	NASA: <i>Scientists Show How Forests Measure Up</i>
2022	NVIDIA: <i>Neural Network Generates Global Tree Height Map, Reveals Carbon Stock Potential</i>
2022	ETH Zürich: <i>Neural network can read tree heights from satellite images</i>
2021	SRF1 Swiss national radio live interview: <i>Die Vermessung der Wälder</i>
2021	Mongabay: <i>Chocolate giant funds high resolution carbon map to protect forests</i>
2020	ETH Zürich Industry Relations: <i>A global tool against deforestation</i>

## Funding awarded (Total: ≈\$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 Kariyaa, 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, Oisín 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

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

## Selected mentorships

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2024-	<b>PhD student (University of Agder &amp; The Norwegian Mapping Authority)</b> 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-	<b>Graduate student (Harvard &amp; University of Copenhagen)</b> 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-	<b>Graduate student (McGill University &amp; Mila Quebec AI Institute)</b> 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-	<b>PhD student (University of Copenhagen)</b> Co-advising Hui Zhang at 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-	<b>Research Assistant (Pioneer Centre for AI)</b> 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	<b>SURF undergrad (Caltech)</b> 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	<b>Bachelor students (University of Copenhagen)</b> 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 NLDL 2025 conference leading to a publication in PMLR proceedings, supported by a DDSA travel grant.

## Languages

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German (native), English (fluent)

## References

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### **Serge Belongie**

*University of Copenhagen*

Professor of Computer Science  
Director, Pioneer Centre for AI  
s.belongie@di.ku.dk

### **Christian Igel**

*University of Copenhagen*

Professor of Computer Science  
Director, SCIENCE AI Centre  
igel@di.ku.dk

### **Konrad Schindler**

*ETH Zürich*

Professor of Photogrammetry and Remote Sensing  
schindler@ethz.ch

### **Jan Dirk Wegner**

*University of Zürich*

Professor of Data Science for Sciences  
jandirk.wegner@uzh.ch

### **Ralph Dubayah**

*University of Maryland*

Professor of Geographical Sciences  
NASA GEDI Principal Investigator  
dubayah@umd.edu

### **Sara Beery**

*Massachusetts Institute of Technology*

Homer A. Burnell Career Development Professor  
Co-lead, Global Center on AI and Biodiversity Change  
beery@mit.edu

### **Oisín Mac Aodha**

*University of Edinburgh*

Reader (Associate Professor) in Machine Learning  
oisin.macaodha@ed.ac.uk

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