

# Nikola Milojevic-Dupont

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CONTACT INFORMATION	EUREF-Campus, Torgauer Str. 12–15, building 19, office 1.01, 10829 Berlin, Germany	<a href="mailto:milojevic@mcc-berlin.net">milojevic@mcc-berlin.net</a> <a href="https://github.com/milojevicdupontnikola">milojevicdupontnikola.github.io</a> <a href="#">@Nikola_MD</a> <a href="#">Google scholar</a>
RESEARCH FOCUS	<b>Topics:</b> Climate change mitigation; Urban sustainability, planning & morphology; Buildings & mobility sectors; Open data  <b>Methods:</b> Machine learning; Geographical information system; Energy modelling	
EDUCATION	<b>Technische Universität Berlin</b> , Berlin, Germany PhD candidate, 2018–2022 (expected) Thesis advisor: Prof. Dr. Felix Creutzig  <b>AgroParisTech, Ecole des Ponts ParisTech, School for Advanced Studies in the Social Sciences (EHESS), Paris Nanterre University</b> , Paris, France M.S. in Environmental Economics, 2016–2017 Major in Integrated Assessment Modelling, at <b>CIRE</b>  <b>University of Paris 1 Pantheon-Sorbonne</b> , Paris, France M.S. in International Economics, 2015–2016 Best of class  <b>University of Paris 1 Pantheon-Sorbonne</b> , Paris, France B.S. in Economics, 2011–2015	
PROFESSIONAL EXPERIENCE	<b>Mercator Research Institute on Global Commons and Climate Change (MCC)</b> , Berlin, Germany PhD student researcher, 2018–Present  <b>Potsdam Institute on Climate Impact Research (PIK)</b> , Potsdam, Germany Guest researcher, 2017(Aug.)–2017(Oct.)  <b>Potsdam Institute on Climate Impact Research (PIK)</b> , Potsdam, Germany Research assistant to Dr. Nico Bauer, 2017(Mar.)–2017(Aug.)	
PEER-REVIEWED JOURNAL PUBLICATIONS	<b>4. <i>Buildings and Cities</i></b> , Milojevic-Dupont N. & Kaack, L. H. and <b><i>Collective Decisions</i></b> , Maharaj, T. & Milojevic-Dupont N. in <b>Tackling climate change with machine learning</b> . Rolnick, D., Donti, P. L., Kaack, L. H., Kochanski, K., Lacoste, A., Sankaran, K., Ross AS, Milojevic-Dupont, N., Jaques, N., Waldman-Brown, A. Luccioni, A., Maharaj, T., Sherwin, E. D., Mukkavilli, S. K., Kording, K. P., Gomes, C., Ng, A. Y., Hassabis, D., Platt, J. C., Creutzig, F., Chayes, F. & Bengio, Y. (2022) <i>ACM Computing Surveys</i> 55, 2, Article 42  <b>3. Learning from urban form to predict building heights.*</b> Milojevic-Dupont, N., Hans, N., Kaack, L. H., Zumwald, M., Andrieux, F., de Barros Soares, D., Lohrey,	

S., Pichler, P.P. & Creutzig, F. (2020) *PLoS ONE* 15(12): e0242010

\* featured in *PLOS ONE Collection – Cities as Complex Systems*

**2. Machine learning for geographically differentiated climate change mitigation in urban areas.** Milojevic-Dupont, N., & Creutzig, F. (2020). *Sustainable Cities and Society*, 102526

**1. Fair street space allocation: ethical principles and empirical insights.** Creutzig, F., Javaid, A., Soomauroo, Z., Lohrey, S., Milojevic-Dupont, N., Ramakrishnan, A., ... & Weddige, U. (2020). *Transport Reviews*, 1-23

PEER-REVIEWED  
CONFERENCE  
PROCEEDINGS

**3. Understanding the impact of the built environment on travelled vehicle kilometres in Berlin,** Felix Wagner, Milojevic-Dupont, N., Franken L., Zekar, A., Thies, B., Koch, N., and Creutzig, F. (2021) *The 28th International Seminar of Urban Form (ISUF)*

**2. Estimating energy demand of buildings ...by learning their heights,** Milojevic-Dupont, N., Pichler, P.P., Kaack, L. H., Lohrey, S., & Creutzig, F. (2019) *OpenStreetMap State Of The Map*

**1. Low-carbon urban planning with machine learning,** Milojevic-Dupont, N., & Creutzig, F. (2019) *Climate Change AI workshop at the International Conference on Machine Learning (ICML)*

MANUSCRIPTS  
UNDER REVIEW

**A novel machine learning framework to identify location-specific relevance of built environment for urban motorised travel.** Wagner, F., Milojevic-Dupont, N., Franken, L., Zekar, A., Thies, B., Koch, N., Creutzig, F. (2021)

**Digitalization and the Anthropocene.** Creutzig, F., Acemoglu, D., Bai, X., Edwards, P.N., Hintz, M.J, Kaack, L.H., Kilakis, S., Kunkel, S., Luers, L., Milojevic-Dupont, N., Rejeski, D., Renn, J., Rolnick, D., Rosol, C., Russ, D., Turnbull, T., Verdolini, E., Wagner, F., Wilson, C., Zekar, A., Zumwald, M. (2021)

**Open government geospatial data on buildings for planning sustainable and resilient cities.** Biljecki, F., Chew, L. Z. X., Milojevic-Dupont, N., Creutzig, F. (2021) Preprint: [arXiv:2107.04023](https://arxiv.org/abs/2107.04023).

CONFERENCE  
PRESENTATIONS

*Mapping 200 million European buildings in 2.5D to support policy-making*, Data for Policy conference, 2021

*Estimating energy requirements for thermal comfort in the European Union at individual building level*, International Energy Workshop, 2021

*Estimating energy demand of buildings ...by learning their heights*, OpenStreetMap State Of The Map, 2019

*Estimating latent energy demand of buildings with open data*, 13th Conference of the International Society for Industrial Ecology (ISIE) - Socio-Economic Metabolism Section, 2019

*Low-carbon urban planning with machine learning*, Spotlight presentation, Climate Change AI workshop at the International Conference on Machine Learning (ICML),

2019

OTHER  
PRESENTATIONS

*WiDS Datathon Data Science and Climate Change Webinar*, Panel discussion, Women in Data Science, 2022 [[video](#)]

*A user-driven data space: is INSPIRE ready?*, Presentation and panel discussion, INSPIRE Conference, session "Modernising INSPIRE within the European Green Deal data space", 2021

*Machine Learning for low-carbon urban planning*, AI for Sustainable Finance Seminar, The Alan Turing Institute / Oxford University, 2021

*Tackling climate change with machine learning*, Panel discussion at the United Nations Environment Programme's Digital Transformation Conference for Environmental Sustainability, 2021

*Data-driven policy making for sustainable cities*, Panel discussion at Artificial Intelligence for Sustainable Cities Network Malaysia, 2021

*Tackling climate change with machine learning*, Keynote presentation at Machine Learning Week Europe, Predictive Analytics World, 2021

*Tackling climate change with machine learning (in urban areas)*, Guest lecture at the Lee Kuan Yew Center for Innovative Cities Singapore, 2021

*Tackling climate change with machine learning*, German AI Association (KI Bundesverband), 2020

AI for sustainable urban planning (in French), Week on Cities and AI, University of Paris 1 Pantheon-Sorbonne, Chair Entrepreneurship, Territory, Innovation, 2020 [[video](#)]

*Summary of the Tackling Climate Change with Machine Learning paper* (with the CCAI team), TEDx Countdown Climate Change AI, 2020

*Sustainable urban planning with machine learning*, Cimpatico Studios, 2020

*Can machine learning help the transition to low-carbon mobility?*, AGYA Workshop Governance of Smart Mobility Data, Reiner Lemoine Institute, 2019

*Deploying artificial intelligence to climate change mitigation semantics: a systematic review*, Berlin International Graduate School in Model and Simulation based Research (BIMoS) PhD seminar, 2019

*Upscaling urban climate solutions with ML approaches* (with Felix Creutzig), TU Berlin Machine Learning group PhD seminar, 2018

PROGRAM  
ORGANIZATION

Women in Data Science Conference, Stanford University  
[WiDS Datathon](#) (committee member), 2022 [[video](#)]

International Conference on Learning Representations (ICLR)  
[Energy day of the Climate Change AI workshop](#) (co-organizer), 2019

Applied Machine Learning Days, EPFL  
**Climate Change AI track** (lead organizer), 2019 [\[video\]](#)

PROFESSIONAL  
SERVICE

**Climate Change AI**

Climate Change AI is a global organization aiming facilitate meaningful work in machine learning for tackling climate change.

Founding member (2019)  
Member of the Board of Directors (2021–present)  
Chair of the Content Committee (2021–present)  
Community Lead for Buildings and Transportation (2020–2022)

**Assessment reports:** Contributing Author of the IPCC 6th Assessment Report, Working Group III, Chapter 16: Innovation, technology development and transfer

**Journals (Reviewer):** Applied Energy, Environmental Science Technology, Journal of Industrial Ecology, PeerJ Computer Science, IEEE Latin America Transactions

**Conferences (Meta-Reviewer):** Climate Change AI workshop at the Conference on Neural Information Processing Systems (NeurIPS), Climate Change AI workshop at the International Conference on Machine Learning (ICML)

**Conferences (Reviewer):** Climate Change AI workshop at the Conference on Neural Information Processing Systems (NeurIPS), Climate Change AI workshop at the International Conference on Machine Learning (ICML), Climate Change AI workshop at the International Conference on Learning Representations (ICLR)

**Grants (Reviewer, Meta-Reviewer):** AI4CITIES (public procurement), Climate Change AI Innovation Grants program

SUPERVISION  
EXPERIENCE

**Theses**

Florian Nachtigall, M.S thesis, 2022  
Title: *tbd*  
Day-to-day supervisor, main supervisor: Felix Creutzig

Andreas Meyer, M.S thesis, 2020–2021  
Title: *Building Height Prediction using Convolutional Neural Networks*  
Day-to-day supervisor, main supervisor: Felix Creutzig

**Other**

Glenn Pitiot, Internship, 2022(May)–2022(July)

Paul Monat, Internship, 2021(June)–2021(Sep.)

Marvin Bensch, Research Assistant, 2021(Jan.)–2021(June)

Nicolai Hans, Internship, 2020(Feb.)–2020(Aug.)  
Currently PhD candidate at Humboldt Universität zu Berlin in Statistics  
Published together **3**.

SELECTED PUBLICITY	TU Berlin (in German), press release, <i>KI hebt Nachhaltigkeitspotenzial im Städtebau</i> , 2020
	MIT Tech Review, article, <i>Here are 10 ways AI could help fight climate change</i> , 2019
	National Geographic, article, <i>How artificial intelligence can tackle climate change</i> , 2019
	The Verge, article, <i>Here's how AI can help fight climate change according to the field's top thinkers</i> , 2019
	MCC Berlin, press release, <i>Tackling climate change with artificial intelligence</i> , 2019
COMPUTER SKILLS	Programming languages: <b>Python</b> (proficient), <b>R</b> (knowledgeable)
	High-performance computing: <b>SLURM</b> (proficient)
	Machine learning software: <b>Keras</b> , <b>Scikit-learn</b> , <b>XGBoost</b> (proficient)
	Geographical information software: geospatial <b>Python</b> stack, <b>QGIS</b> (proficient), <b>ArcGIS</b> (knowledgeable)
	Databases: <b>SQL</b> , <b>Postgres</b> , <b>PostGIS</b> (knowledgeable)
OTHER INFORMATION	Spoken languages: English (proficient), French (mother tongue), German (basic)
	Citizenship: France
	Last updated: April 8, 2022