

Clément Sebastiao

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Experience

IT University of Copenhagen

Copenhagen, Denmark

PhD Student

Apr 2024–Present

Optimizing urban sustainable mobility networks, part of the Just Streets EU Horizon Program (Grant agreement ID: 101104240). Supervised by Michael Szell and Luca Maria Aiello.

MIT Senseable City Lab

Cambridge, Massachusetts, USA

Visiting Student

Sep 2025–Feb 2026

Supervised by Paolo Santi.

IT University of Copenhagen

Copenhagen, Denmark

Research Assistant

Jan 2025–April 2025

Course Manager and Lecturer of the Master course "Geospatial Data Science".

IT University of Copenhagen

Copenhagen, Denmark

Research Assistant

Jan 2024–Mar 2024

Université de Bourgogne-Franche-Comté

Besançon, France

Intern

Feb 2023–Jul 2023

Mode of Transport and Historical Road Network Growth Relationship, supervised by Claire Lagesse.

ISI

Turin, Italy

Intern

Oct 2022–Jan 2023

Nature and Bicycle Network Relationship, supervised by Rossano Schifanella.

IT University of Copenhagen

Copenhagen, Denmark

Intern

Feb 2022–Jul 2022

Prioritizing Links in Bicycle Network Plans With Subtractive Network Optimization, supervised by Michael Szell.

LIPHY

Grenoble, France

Intern

May 2021–Jul 2021

Collective Motion of Schooling Fish in a Complex Environment, supervised by Aurélie Dupont and Philippe Peyla.

Ecole Normale Supérieure de Lyon

Lyon, France

Intern

Jun 2020–Jul 2020

Deep Learning for Time Series Predictions for FECG Monitoring, supervised by Pierre Borgnat and Patrice Abry.

Université d'Aix-Marseille

Marseille, France

Intern

Jun 2019–Jul 2019

Study of Optically Excited Magnetic States of ZnO by EPR, supervised by Adrien Savoyant.

Education

Ecole Normale Supérieure de Lyon <i>ENS Lyon Diploma,</i>	Lyon, France 2019–2023
Ecole Normale Supérieure de Lyon <i>Master degree in Complex Systems, Physics,</i>	Lyon, France 2020–2022
Claude Bernard Université Lyon 1 <i>Bachelor degree in Physics,</i>	Lyon, France 2017–2020

Languages

French: Native speaker

English: Proficient, A1/A2 *Cambridge Advanced 199/210*

Skills

Research and Productivity Software: QGIS, LaTeX, Visual Studio Code, Zotero, Git.

Python: Network Science (networkx, igraph), Data Science (pandas, numpy, scipy), Geospatial analysis (geopandas, OSMnx, shapely, momepy), data visualization (matplotlib, seaborn, folium).

Other programming languages (decreasing order of proficiency): PostgreSQL, R, Matlab.

Research Interests

Primary: Urban Data Science, Sustainable and Just mobility, Complex Systems

Secondary: Applied Network Science, Data visualization

Preprint

The Trade-Off between Directness and Coverage in Transport Network Growth: Clément Sebastiao, Anastassia Vybornova, Ane Rahbek Vierø, Luca Maria Aiello, Michael Szell.
<https://arxiv.org/abs/2507.13005>

Peer-reviewed Articles

[1] Adrien Savoyant, Clément Sebastiao, and Olivier Margeat. Long-standing optically excited magnetic states in znO nanoparticles. *physica status solidi (RRL)–Rapid Research Letters*, 14(7):2000176, 2020.

Teaching

Courses.....

IT University of Copenhagen <i>Geospatial Data Science, 7.5 ECTS</i> Course Manager and Lecturer (100%)	Copenhagen, Denmark <i>Feb 2025 – Jul 2025</i>
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Single classes		
IT University of Copenhagen	Copenhagen, Denmark	
<i>IT and Green Transitions, 7.5 ECTS</i>		<i>Oct 2024</i>
Urban Data Science and Sustainable Mobility		

Conferences and talks

Conference on Complex Systems 2025	Siena, Italy	
<i>The Trade-Off between Directness and Coverage in Planar Network Growth, Talk</i>		<i>Sep 2025</i>
Just Streets	Online	
<i>Street Space Reallocation: Superblockify, Talk</i>		<i>May 2025</i>
D3A 2.0	Nyborg, Denmark	
<i>Prioritizing links in bicycle network plans, Poster</i>		<i>Oct 2024</i>
Conference on Complex Systems 2024	Exeter, UK	
<i>Prioritizing links in bicycle network plans with greedy network optimization, Talk</i>		<i>Sep 2024</i>
UrbanSys2024	Exeter, UK	
<i>Translating active mobility goals into network metrics, Poster</i>		<i>Sep 2024</i>
MIT Senseable City Lab	Online	
<i>Pecha Kucha: Bicycle Plans and Superblockify, Talk</i>		<i>Aug 2024</i>
PRIMS	Arc-et-Senans, France	
<i>Morphogénèse urbaine, Talk</i>		<i>Nov 2023</i>
Rencontres Francophones Transport Mobilité 2023	Dijon, France	
<i>Inventaire et analyse de motifs viaires..., Talk</i>		<i>Jun 2023</i>
LIPHY	Grenoble, France	
<i>Effets collectifs en environnement complexe chez les poissons, Lightning Talk</i>		<i>Jun 2022</i>
Conference on Complex Systems 2021	Lyon, France	
<i>Attending</i>		<i>Oct 2021</i>

Summer schools

Santa Fe Institute	Santa Fe, New Mexico, USA	
<i>Complex Systems Summer School</i>		<i>Jun 2025</i>
Fondazione Alessandro Volta	Como, Italy	
<i>Advances in Complex Systems</i>		<i>Jul 2024</i>

Academic services

Reviews		
Scientific Data: 2024		
Organization and committee		
Eurodoc Conference 2025	Copenhagen, Denmark	
<i>Volunteer</i>		<i>Aug 2025</i>
ITU PhD Club	Copenhagen, Denmark	
<i>Treasurer</i>		<i>Nov 2024–Nov 2025</i>

Academic Awards

UrbanSys2024
Best poster

Exeter, UK
Sep 2024