

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

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

IT and Green Transitions, 7.5 ECTS

Urban Data Science and Sustainable Mobility

Copenhagen, Denmark

Oct 2024

Conferences and talks

Conference on Complex Systems 2025

The Trade-Off between Directness and Coverage in Planar Network Growth, Talk

Siena, Italy

Sep 2025

Just Streets

Street Space Reallocation: Superblockify, Talk

Online

May 2025

D3A 2.0

Prioritizing links in bicycle network plans, Poster

Nyborg, Denmark

Oct 2024

Conference on Complex Systems 2024

Prioritizing links in bicycle network plans with greedy network optimization, Talk

Exeter, UK

Sep 2024

UrbanSys2024

Translating active mobility goals into network metrics, Poster

Exeter, UK

Sep 2024

MIT Senseable City Lab

Pecha Kucha: Bicycle Plans and Superblockify, Talk

Online

Aug 2024

Nordic Geographers Meeting 2024

Prioritizing links in bicycle network plans, Talk

Copenhagen, Denmark

Jun 2024

PRIMS

Morphogénèse urbaine, Talk

Arc-et-Senans, France

Nov 2023

Rencontres Francophones Transport Mobilité 2023

Inventaire et analyse de motifs viaires..., Talk

Dijon, France

Jun 2023

LIPHY

Effets collectifs en environnement complexe chez les poissons, Lightning Talk

Grenoble, France

Jun 2022

Conference on Complex Systems 2021

Attending

Lyon, France

Oct 2021

Summer schools and advanced courses

Santa Fe Institute

Complex Systems Summer School

Santa Fe, New Mexico, USA

Jun 2025 – Jul 2025

Royal Danish Academy

Sustainable Futures IV (PhD Course)

Copenhagen, Denmark

Oct 2024 – Jan 2025

Aalborg University

The Anatomy of Mobility Injustice (PhD Course)

Aalborg, Denmark

Sep 2024

Fondazione Alessandro Volta

Advances in Complex Systems Summer School

Como, Italy

Jul 2024

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	Exeter, UK
<i>Best poster</i>	<i>Sep 2024</i>