

**Open Call: Fully funded PhD position in the field of spatial mobility and segregation
University of Tartu**

The post opens at 1 September 2024

The closing date for applications is 11 February 2024 (23:59 EET)

The University of Tartu is inviting applications for a fully funded PhD position in the field of spatial mobility and segregation. The four-year position opens at the Department of Geography and is part of the project “Living segregated lives: Exploring changes in spatial inequalities in digitally transforming societies”, led by Professor Tiit Tammaru. The PhD position is closely linked also to the Digital Geography Lab at the University of Helsinki.

The Estonian Research Council -funded “Living segregated lives” is a fundamental five-year research project (2024-2028) similar to ERC projects where scientific excellence stands before anything else. Its ambition is a scientific breakthrough by means of novel ways of thinking and analysis of digital transition induced spatial processes. Thus, the project allows room for learning through exploration and failures. The overarching goal of the project is to enhance our understanding of the changes in the spatial mobility patterns in digitally transforming societies. The project seeks answers to questions such as whether digital transition induced changes like professionalization of the workforce and spread of remote working (a) help to reduce existing structures of spatial inequality and segregation, (b) amplify existing structures of spatial inequality and segregation or (c) introduce new layers of spatial inequality and segregation.

The main role of the PhD candidate is to contribute to the successful implementation of the project with strong skills in spatial (mobility) analytics and visualization. We expect the candidate to bring new ideas of how to analytically capture the changes in people’s spatial mobility and activity spaces, and consequently of new forms of spatial segregation in digitally transforming societies.

Supervisor team

[Tiit Tammaru](#) a Professor of Urban and Population Geography and Head of the Chair of Human Geography at the Department of Geography, University of Tartu. He leads the development of longitudinal linked censuses and registers data for urban and regional research in Estonia. He is theorizing the paradigmatic shift in spatial inequality studies from residential neighbourhood approach to activity space-based approach, and how the shift of many activities to digital space affect activities in physical space. Professor Tammaru is developing the concept of vicious circle of segregation that focusses on how social and ethnic inequality and segregation are passed from parents to children or across generations, and produced and reproduced across multiple activity places (homes, workplaces, schools, leisure time activity sites). He has published extensively in the leading journals of geography, demography and sociology such as “Nature Human Behaviour”, “Demography” and so on. His recent works include edited books and journal special issues such as „Urban Socio-Economic Segregation and Income Inequality: A Global Perspective“ (Springer), „Spatial underpinnings of social inequalities: A vicious circles of segregation approach“ (Social Inclusion) and „Segregation and mobility: Understanding the nexus between inequality, segregation and sustainable urban mobility“ (Journal of Transport Geography).

[Kadi Kalm](#) is a researcher in the Department of Geography at University of Tartu with a background in human geography and regional planning. She has previously worked as a visiting researcher at Delft University of Technology (in DEPRIVEDHOODS project) and she did her post-doc at Charles University (Prague) in URRIlab research team. Currently, she is also working as a postdoctoral researcher at Ghent

University (part-time position). Her main research focuses on spatial inequalities, domains of inter-ethnic contacts, and residential mobility and migration. Much of her work examines the mobility of immigrant population and changes in residential segregation in urban regions. Together with the team, she has been developing Estonian longitudinal population data (censuses and registers) and she is interested in the use of different quantitative methods to study spatial patterns and processes.

[Kerli Müürisepp](#) is a researcher at the Digital Geography Lab, Department of Geosciences and Geography, University of Helsinki. Kerli's background is in human geography and regional planning, and her interdisciplinary research focuses on urban segregation, spatial inequalities, integration, and transnationalism from the perspective of people's mobility and activity spaces. In her PhD thesis, Kerli used spatial Big Data sources, and in particular mobile phone data, to provide a more nuanced understanding about people's daily mobility and activity spaces, and about the socio-spatial inequalities these create. Currently, she works as a Research Coordinator in the 5-year ERC-funded research project "GREENTRAVEL – Greener Urban Travel Environments for Everyone: From measured wellbeing impacts to Big Data analytics". In GREENTRAVEL, she focusses on understanding the equity of access and exposure to greenery during people's everyday urban travels.

Requirements

PhD studies in Estonia imply writing of three papers accepted for publication in the leading journals of the field. Papers can be co-authored with team members. We look for a PhD candidate who is technically highly skilled in spatial analytics and has deep dedication towards social science understanding of spatial inequalities and segregation. Within these restrictions, the background of the candidate can range from various fields of social sciences and computer sciences, including Master's degree in quantitative human geography, geoinformatics, computational social science, spatial data science, computer science, data science, urban studies or similar fields. In specific, the candidate:

- Masters contemporary methods of longitudinal and spatial analysis (GIS methods, spatial regression, time-series analysis, etc.)
- Is highly skilled in visualizing spatial data
- Has knowledge and interest about the project topics (spatial mobility, activity spaces, spatial inequalities, segregation, digital transformation)
- Has high motivation for academic research
- Has the ability to conduct independent scholarly work
- Feels comfortable in working in diverse teams of 3-5 people, is collaborative and supports team members
- Takes actively part of the seminars
- Contributes to research-related teaching in Master's programme "Geoinformatics for Urbanized Societies"
- Is willing to travel and interact with PhD students and researchers from other universities

Having knowledge and proved experience in AI-based methods (machine learning methods on spatial data, object detection), spatial simulations, creating synthetic variables and developing tools for data visualization are seen as an asset. Also, good skills in academic writing and oral communication of the research findings (seminars, conferences, teaching) are important additional skills to offer.

Our offer

The position is based at the Chair of Human Geography at the Department of Geography, which belongs to the Institute of Ecology and Earth Sciences of the University of Tartu, the leading university in Estonia located in Tartu. Tartu is a very cosy student town with a high quality of life, safety and excellent education system. Estonia is a member of the EU where English is widely spoken, the country is known for the generous healthcare and being digitally highly advanced. The successful candidate will receive the benefits provided by the University of Tartu employees, including occupational health care services.

We offer a full time PhD position and the status of a junior researcher in a friendly, young, dynamic and international research team with highly competent supervision team that consists of Professor Tiit Tammaru, Dr Kadi Kalm from the University of Tartu, and Dr Kerli Müürisepp from the University of Helsinki. We offer a stimulating research environment at the [Department of Geography](#) in Tartu and a possibility to visit the [Digital Geography Lab](#) in Helsinki. For example, the Department of Geography hosts a Centre of Excellence in Energy Efficiency (co-PI Tiit Tammaru) and two ERC grants. Digital Geography Lab hosts one ERC grant. We dedicate supporting every aspect of personal academic development that would allow to successfully complete the PhD thesis and be highly competitive on academic labour market upon graduation.

The salary of the PhD candidate will be based on the salary system of Estonian universities. There is a minimum base salary component of 2000 EUR (equivalent of the average salary in Estonia) and, in addition, personal performance-based salary. The first year is a trial year, after which a go/no-go decision will be made. The offer includes opportunities for travelling, including taking part of the conferences.

Application process

The application process has two stages. Firstly, the research team pre-selects the candidate. This is the key stage where the candidate is actually selected for the position. Secondly, a formal process through the University of Tartu Study System starts after that, and the successful candidate is finally confirmed by the University of Tartu in early June. The contract starts at 1 September 2024.

This is a pre-selection phase that consists of the submission of applications and interview with top candidates. Please send the following documents pooled into a single pdf file no longer than three pages to apply:

- A “Contribution Letter” that presents your motivation but that also elaborates on how you would see yourself as our team member. Please write one paragraph that presents a sketch of one paper you could write within the PhD research. Present the research question and how you would approach it.
- A “Curriculum Vitae” that includes a narrative part on your achievements and skills, maximum one page. The achievements do not have to be related to the topic of the project. The skills should be elaborated in relation to the project. Please complement the narrative part with a list of materials that would provide evidence on your skills and achievements, a list of courses relevant for the position, publications if you have any, tools you have developed, etc.

Please send the application to: Professor Tiit Tammaru, tiit.tammaru@ut.ee