

The Research Group

## Cartography and Geographical Information Science

has the honor to invite you to the public defense of the PhD thesis of

# Amy Phillips

to obtain the degree of Doctor of Sciences

Joint PhD with Université Libre de Bruxelles

Title of the PhD thesis:

**Toward Citizen-Centered Urban Green:  
Advancing understandings of supply and demand interactions and  
inequalities**

### Curriculum vitae

Amy Phillips holds a bachelor's degree in Geography from Clark University, Massachusetts, USA and a Master's degree in Geography from the Vrije Universiteit Brussel and the KU Leuven, Belgium, with a specialization in Spatial Analysis and GIS. She began her joint PhD between the VUB and ULB in 2019.

Amy is interested in how GIS can be used as a tool to uncover and remediate urban environmental injustice. She is currently working on the COGITO project, which looks at justice in the urban transition toward decarbonization and resilience through urban greening.

### Abstract of the PhD research

Leveraging the benefits provided by nature can help mitigate the environmental and social challenges associated with urbanization and contribute to positive health and sustainability outcomes. These benefits, referred to as ecosystem services, have garnered much attention in recent years. However, there remain knowledge gaps in the understanding of cultural ecosystem services (CES), or the intangible benefits people gain from ecosystems, including opportunities for recreation, restoration, and aesthetic appreciation, particularly in urban contexts. This dissertation aims to enhance the understanding of CES supply and demand interactions and inequalities in an urban context and to introduce new approaches and methodologies for studying CES supply and demand. The Brussels Capital Region is taken as a case study; earlier work on Brussels has shown that green is unequally distributed in the region to the disadvantage of vulnerable social groups.

The first part of this dissertation presents findings from a Public Participation GIS survey. This is a novel tool that fosters public involvement in the creation of spatial data. Based on the survey results, city-wide patterns of green space use, perception, and access were assessed. Specifically, the research examines the uses and perceived qualities of large urban green spaces, which offer distance benefits within urban environments.

Then, attention is turned toward urban residential streets, which are under-exploited and under-researched spaces of potential greening. Through an online survey and several focus group interviews, public perceptions of greening residential streets are explored, including the perceived benefits and challenges associated with street greening.

The research findings illustrate how highlighting the experiences and preferences of people for urban green, particularly in a spatially explicit way, allows for a nuanced understanding of green inequalities and supply and demand interactions. Findings can help to improve the existing stock of large urban green spaces in the region and emphasize the need for intervention in green spaces in the city center to address inequities. Simultaneously, as greening residential streets should become a priority, urban planners should consider the barriers identified by the public to improve acceptance of green residential street initiatives.

Promotors:

**Prof. dr. Frank Canters (VUB)**

**Prof. dr. Ahmed Z. Khan (ULB)**

The defense will take place on

**Tuesday, June 13, 2023 at 16h in  
auditorium E.0.05**

### Members of the jury

Prof. dr. Francesc Baró (VUB, chair)

Prof. dr. Geoffrey Grulois (ULB, secretary)

Prof. dr. Sylvie Gadeyne (VUB)

Prof. dr. Rieke Hansen (Geisenheim University)

Prof. dr. Ian Mell (University of Manchester)