Postdoc in Perceptions, Planning and Management of Green Infrastructure

Postdoc position at Department for Architecture, University of Pretoria, South Africa. The programme in Landscape Architecture under the Integrative Green Infrastructure Planning Project funded by DANIDA advertises a 24-month full-time postdoc position.

This position is available for a postdoc interested in working with sustainable city collaboration and assist public sector partners in matters of Green Infrastructure planning, management and governance. It will also focus on on-the-ground social-ecological feedbacks, finding connections between different ecosystem service benefits and relations between different ecosystem services. The role of native species in provisioning of services and disservices will be of interest, including how native biodiversity is perceived by city dwellers and how native biodiversity interaction influences people's well-being and their perceptions of nature. In this position, the incumbent will explore the perception and governance of GI in marginalised areas of the urban context of the City of Tshwane and surrounds. The ideal applicant would have a PhD related to one of the following fields: urban ecology, human geography, political ecology, social sciences or landscape architecture.

The postdoc will be based at the Department of Architecture at the University of Pretoria, South Africa (SA), where the project is led by Dr Ida Breed. This position forms part of the DANIDA award entitled: Integrative Green Infrastructure Planning *(GRIP).*

The greater GRIP project will be led by Prof Jens-Christian Svenning from Aarhus University, Denmark. The GRIP project is structured in four interrelated Work Packages (WPs) in which joined activities, including fieldwork and capacity building, will take place. You will be part of a diverse research environment and embedded in a network of national and international collaborators (researchers, students and private and public sector consultants). Joint fieldwork will take place four times during the project period (three times in CoT and one time in CoA) along with joint project workshops facilitating coordination, collaboration and exchange of expertise, as well as dissemination of results at the final stage of the project period.

Research area and project description:
The project 'Integrative Green Infrastructure Planning (GRIP)' aims to complement an existing collaboration on sustainable cities between City of Aarhus, Denmark and City of Tshwane (Pretoria) in South Africa by adding a strong research component. In close connection with urban planners from both cities, GRIP aims to facilitate a strategic transformation of the social and urban landscape in City of Tshwane (CoT) through guidelines inspired by City of Aarhus (CoA) for improved planning and management of green infrastructure (such as public parks, green ways, community gardens and conservation areas). In contrast to 'grey' (man-made) infrastructure approaches, 'green' infrastructure promotes multifunctionality, which means that the same area of land can perform several functions at the same time and thereby offer multiple benefits through infrastructural and ecosystem services. For instance, green infrastructure supports environmental and human health, including biodiversity habitat, flood and heat island control, and sense of place, which affects physical and psychological well-being. The research project will provide new in-depth knowledge on opportunities for multiple ecological and social benefits of green infrastructure, as well as integrate governance and justice perspectives, and develop concrete landscape design proposals to improve green infrastructure access, functioning and socio-economic opportunities. Together with urban planners from Aarhus and Tshwane, private partners and students, the main research partners in Denmark (Aarhus University) and in South Africa (University of Pretoria) will co-create this knowledge

and strengthen research capacities through exchange of technological, ecological, socio-political, and planning expertise. The long-term objective is that the GRIP research will facilitate an improved quality of life in urban communities in CoT by moving towards a more climate resilient, health promoting, biodiverse, and liveable city.

Focus A: Sustainable city collaboration towards deliberate management and maintenance of GI
This postdoc position (you) will lead this work package (WP1) with co-lead: *Maya Pasgaard*, Aarhus University, Denmark. This WP aims facilitate an exchange of experiences and development of context-sensitive ways to improve coordination, communication, and stakeholder involvement around GI management in CoT. This WP is devoted to bridging the activities of the SSC partners (an existing city-to-city Strategic Sector Cooperation between CoA and CoT) with the GRIP research. Exchange of knowledge, experiences, and capacities will be facilitated through oral, written, and digital channels, i.e. physical/virtual meetings, interim reports, and final guidelines. Research in WP1 will focus on the GI-related governance structures with attention to supporting the formation and implementation of GI by connecting to existing spatial frameworks, policies, and management across chains of actors. Desk studies of policies and legal documents, and semi-structured interviews with city planners and ward representatives will be conducted and analysed together with WP3 data to compare policy objectives with management outcomes seeking opportunities to improve GI sustainable management. The final output of WP1 is communication of GI management guidelines (jointly across all WPs) based on all GRIP research, with recommendations for decision making in terms of actions to take and people to involve and opportunities for upscaling. Aarhus University and University of Pretoria will work in close collaboration with CoA and CoT, including eight joint workshops and one week of joint fieldwork for interviews. Local private partners will devote time.

Focus B: Environmental justice and socio-economic potentials
Maya Pasgaard, Aarhus University, Denmark, will lead this Work package (WP3) on justice with *this postdoc position (you)* as a co-lead elaborating on socio-ecological feedbacks.
This WP will examine the socioeconomic opportunities and existing barriers for improving people's benefits from GI. It will also focus on social-ecological feedbacks and connections between ecosystem service benefits – finding relations between cultural services (e.g. sense of place), provisioning (e.g. food and medicine), and supporting services (biodiversity). The role of native species in provisioning of services and disservices will be of interest, including how native biodiversity is perceived by city dwellers and how native biodiversity interaction influences people's well-being and their perceptions of nature. Surveys will be conducted for an evaluation of physical access to ESS among different user groups and relate this to the functional levels of GI (e.g. restorative, cultural, biodiverse). The survey will follow ethical guidelines and cover a sample size of approx. 100 respondents in each study sites (total of approx. 200) and address questions such as their frequency and purpose of GI visits, time spend on transport through or to GI areas, types of activities/business, and their perceived ESS benefits and disservices. Ethnographic approaches, including approx. 25 semi-structured interviews and 5 key informant interviews with local authorities and NGOs at each site, will be applied to explore local perceptions of GI, native biodiversity, and to identify socio-ecological feedbacks, cumulative and competitive values and sensible trade-offs. Environmental justice aspects of community inclusion, ownership, and empowerment, including elements of personal safety, will be addressed along with questions concerning socio-political relations, opportunities and barriers affecting GI access and management. The data from the surveys and interviews will inform an analysis of the mechanisms and structures shaping access to – and thereby ability to benefit from – GI. Through joined fieldwork with inclusion of Master's and Honour's students, WP3 will work closely with WP2 and WP4 to provide a novel dual view on GI potential for social and ecological multifunctionality by combining socio-political, design, and spatial aspects. Aarhus University and University of Pretoria will collaborate in two weeks of joint fieldwork for data collection.

Conditions of Award

- The fellowship is only available to candidates with nationalities from a developing or a transition country.

- The fellowship is only available to individuals who have achieved the doctoral degree within the past five years, if more time has lapsed a clear motivation must be provided.
- The fellowship is only available to individuals who are under 40 years of age, unless a clear motivation can be provided.
- The successful candidate needs to be approved by the University of Pretoria, Department of Research and Innovation.
- The successful candidate will be required to register as a Postdoctoral Research Fellow at the University of Pretoria.
- The successful candidate will be required to comply with the university's approved policies, procedures and practices for the postdoctoral sector.

Value and tenure
The value of the Postdoctoral Research Fellowship is between R250,000 and R350, 000 per annum based on the seniority of the candidate. The seniority is determined by the time spent actively doing research and the publication record of the candidate.

The tenure of the fellowship is two years (starting 2021). Renewal for 2022 will be contingent on satisfactory academic progress.
The fellowship does not include any benefits.
The fellowship is compliant with the SARS policies/rules and is therefore exempt from taxation.

Place of employment
The place of employment is the University of Pretoria, Department of Architecture, Programme in Landscape Architecture, Building Sciences, Hatfield Campus, Hatfield 0028, Pretoria, South Africa. You will be part of GRIP – Integrated Green Infrastructure Research Project.

Contact information
Any further questions about the position can be directed to Dr Ida Breed at ida.breed@up.ac.za

Application Process
To apply, send 1) a letter of application that explicitly identify your relevant education, skills and experience to the position, 2) a CV including a complete list of publications and/or conference presentations, a statement of future research plans and information about research activities, verified information on previous teaching experience (if any). 3) copies of academic transcripts, 4) a copy of the relevant thesis (if no publications have emerged from this work yet), and 5) two letters of reference (with names and contact details) of academics who have taught, supervised or worked alongside the applicant.

Applications (by email) should be sent to:
Dr Ida Breed, Department of Architecture, University of Pretoria, South Africa,
ida.breed@up.ac.za
BY NO LATER THAN 28 February 2021

Qualifications
We are looking for a candidate with a PhD in political ecology, human geography, landscape architecture or a related field where there has been a strong participatory and qualitative social sciences research background. Experience with Green Infrastructure planning for improved ecosystem services would be an advantage.
We look for the following specific qualifications:

- Proven experience in the analyses or interpretation of Green Infrastructure management across chains of actors.
- Experience in the development and/ or interpretation of spatial frameworks, policies, and their management.
- Excellent knowledge in community liaison and workshop facilitation.

- Proven capabilities in qualitative fieldwork conduction (surveys and in-depth interviews), data analyses (Atlas TI, NVivo or similar) and excellent results communication.
- Ability to synthesize and conceptualize on a theoretical and empirical basis. Proven skills with systematic reviews are an advantage.
- Proven ability to publish in key journals within the field
- Good collaboration skills across different groups of employees.
- Proven ability of good communication and writing skills in English.

Selection process
Selection of eligible candidates will be made by the project leaders. Applications that are incomplete, late or inappropriate will be disqualified. The University of Pretoria reserves the right to: disqualify ineligible, incomplete, inappropriate and/or late applications, and to change the conditions of award or to make no awards at all. Once the recruitment process is completed a final letter of rejection is sent to the deselected applicants.

All interested candidates are encouraged to apply, regardless of their personal background. Research activities will be evaluated in relation to actual research time. Thus, we encourage applicants to specify periods of leave without research activities, in order to be able to subtract these periods from the span of the scientific career during the evaluation of scientific productivity.

Further information
Interviews (expected): medio March
Start date: 1st of April, or thereafter (latest August 2021)