

Opportunity 1: Urban Heat Island (UHI) Study

There is a vacancy for a fully funded PhD position to contribute to cutting-edge research in Urban Heat Island (UHI) studies. The successful candidate will engage in a multidisciplinary exploration of UHI phenomena, with a specific focus on leveraging advanced data analytics, landscape modelling, and/or agent-based modelling. This project aims to deepen our understanding of UHI dynamics and develop innovative strategies to mitigate its impact on urban environments. Some of the research foci dealing with UHI are as follows:

1. **Exploring High Spatio-Temporal Datasets:** The PhD candidate will play a pivotal role in analyzing and interpreting data from diverse sources, including the utilization of high spatio-temporal datasets. This exploration will provide valuable insights into UHI patterns and dynamics.
2. **Landscape Modelling:** The project involves the application of landscape modelling techniques to study the interactions between urban form, land use, and UHI. The candidate will have the opportunity to contribute to the development and refinement of spatial models to simulate UHI scenarios. It can also be supported by agent based modelling.
3. **Building Energy Modelling:** The research will integrate building energy modeling to assess the role of built structures in contributing to UHI effects. This aspect of the project will involve collaboration with experts in architecture and environmental engineering.
4. **Outdoor Comfort:** The candidate will investigate outdoor comfort in urban spaces, considering factors such as temperature, humidity, and other environmental parameters. This research will contribute to strategies for enhancing the livability of urban areas.

Required qualifications:

- A Master's degree in Environmental Sciences/Studies, Geography, Urban planning, or related fields.
- A strong background in environmental science, geography, urban planning, or a related field.
- Proficiency in data analytics and modelling techniques.
- Strong programming skills (e.g., Python, R) and experience with relevant software.
- Ability to work collaboratively in a multidisciplinary research environment.

Other requirements:

- Ability to deliver work in a fast-paced environment and adhere to deadlines
- A high level of professionalism with an understanding of research ethics
- Ability to work in teams and serve as a liaison between multiple collaborators
- Assist in grant writing, coordinating workshops/ seminar series and willing to handle any academic administration related to these initiatives
- Preparing annual reports is required to demonstrate their contribution and outputs achieved

Opportunity 2: Urban Heat Island (UHI) and Land Tenure Research for Sustainable Urban Planning

There is a vacancy for a fully funded PhD position that integrates Urban Heat Island (UHI) research with a focus on the critical aspect of land tenure. This interdisciplinary project aims to explore the nexus between UHI phenomena and land tenure, examining how tenure information can inform and improve mitigation measures for sustainable urban planning. Some of the research foci dealing with UHI are as follows:

1. **UHI Dynamics and Land Tenure:** Investigate the relationship between UHI dynamics and land tenure patterns. Analyze how land tenure influences land surface distribution and intensity, considering both formal and informal land ownership structures.
2. **Land Titling for Mitigation Measures:** Explore the role of land titling in UHI mitigation. Examine how secure land tenure can facilitate the implementation of effective urban planning strategies to reduce UHI effects, including green infrastructure development and heat mitigation interventions.
3. **Community Engagement and Tenure Awareness:** Investigate the impact of community awareness about land tenure on UHI mitigation efforts. Develop strategies to engage local communities in understanding the relationship between land tenure and UHI, fostering community-driven solutions.
4. **Spatial Analysis and Modelling:** Utilize advanced spatial analysis and modeling techniques to integrate land tenure information into UHI simulations. Develop spatial models that consider land ownership patterns and assess their influence on UHI formation and mitigation.
5. **Policy Implications:** Assess the policy implications of incorporating land tenure information into urban planning for UHI mitigation. Contribute to the development of policy recommendations that integrate land tenure considerations into broader urban sustainability initiatives.

Required qualifications:

- Master's degree in Environmental Sciences/Studies, Geography, Urban planning, or related fields
- A background in geography, urban planning, environmental science, or a related field.
- Proficiency in spatial analysis and GIS tools.
- Strong quantitative and qualitative research skills.
- Familiarity with land tenure systems and urban governance.
- Ability to collaborate across disciplines and engage with diverse stakeholders.

Other requirements:

- Ability to deliver work in a fast-paced environment and adhere to deadlines
- A high level of professionalism with an understanding of research ethics
- Ability to work in teams and serve as a liaison between multiple collaborators
- Assist in grant writing, coordinating workshops/ seminar series and willing to handle any academic administration related to these initiatives
- Preparing annual reports is required to demonstrate their contribution and outputs achieved



Candidates interested in applying for a doctoral position for either of the above areas are encouraged to contact Dr. Prasad Pathak (prasad.pathak@flame.edu.in).

FLAME University has an online application process. Please register on our application portal to create your user account. You will get an auto generated email with your login information. Use this login information to [apply to FLAME](#).