Postdoc Position

Optimizing Nature-based Solutions for Sustainable Cities

Led by Prof. Assaf Shwartz

- Candidates should hold a Ph.D. in a relevant field
- Demonstrate strong quantitative analysis and modeling skills
- Have proficiency in optimization methods and spatial data analysis
- Effective collaboration, project management, and a commitment to scientific advancement are essential

Urbanization presents pressing environmental challenges, and Nature-based Solutions (NbS) offer a promising approach to enhance human well-being and ecological balance. However, current methods often overlook the complex and sometimes conflicting outcomes of NbS.

Building on extensive ecological and social data, this 2-year position seeks to explore the intricate trade-offs and synergies between social and ecological outcomes of NbS. The postdoc will need to adapt systematic conservation planning principles, employ modeling approaches, and develop a user-friendly decision support tool to optimize NbS scenarios for multiple benefits.

Join us in shaping sustainable urban planning!

Submit your application by May 31, 2025

For details contact
ronitco@technion.ac.il

European Research Council
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המעבדה לחקר האדם והמגוון הביולוגי
Human & Biodiversity Research Lab

The Human and biodiversity research lab (HUB)
Faculty of Architecture and Town Planning

TECHNION
Israel Institute of Technology

Postdoc Position on Optimizing Nature-based Solutions for Sustainable Cities: Join the Human and Biodiversity (HUB) lab at the Technion Institute of Technology and contribute to an innovative ERC-funded project, "Niche4NbS," led by Prof. Assaf Shwartz. We're looking for a Postdoctoral Researcher with a strong background in spatial modeling, ideally with experience in systematic conservation planning or optimization modeling to explore the complex interplay between social and ecological outcomes of Nature-based Solutions (NbS). Urbanization presents pressing environmental challenges, and NbS offer a promising approach to enhance human well-being and ecological balance. However, current methods often overlook the complex and sometimes conflicting outcomes of NbS. Building on extensive ecological and social data collected in this project, this 2-year position seeks to explore the intricate trade-offs and synergies between social and ecological outcomes of NbS. The postdoc will need to adapt systematic conservation planning principles, employ modeling approaches, and develop a user-friendly decision support tool to optimize NbS scenarios for multiple benefits. Candidates should hold a Ph.D. in a relevant field, demonstrate strong quantitative analysis and modeling skills, and have proficiency in optimization methods and spatial data analysis. Effective collaboration, project management, and a commitment to scientific advancement are essential. Don't miss the opportunity to drive innovation in Nature-based Solutions and contribute to resilient cities supporting biodiversity and human well-being! Submit your application by May 31, 2025, and join us in shaping sustainable urban planning.

More details can be found here https://shwartzlab.net.technion.ac.il/opportunities/

You are welcome to send an email to ronitco@technion.ac.il for any questions.

Postdoc position in an innovative ERC-funded project "Niche4NbS" led by Prof. Assaf Shwartz.
You are welcome to Join the Human and Biodiversity (HUB) lab at the Technion Institute of Technology We're seeking a Postdoctoral Researcher with a strong background in spatial modeling (ideally with experience in systematic conservation planning or optimization modeling) to explore the social and ecological outcomes of Nature-based Solutions (NbS) for sustainable cities.
This 2-year position involves adapting conservation planning, using modeling, and developing a decision support tool. Must have a Ph.D., strong quantitative and spatial analysis skills, and proficiency in optimization methods.
Apply by **May 31, 2025**!
More details: https://shwartzlab.net.technion.ac.il/opportunities/
Questions? Email: ronitco@technion.ac.il

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Postdoctoral Researcher – Optimizing implementation of Nature-based Solutions (NbS) for designing sustainable cities

Position Overview:
The Human and Biodiversity (HUB) lab at the Technion is hiring a postdoc with a strong background in spatial modeling, ideally with experience in systematic conservation planning or optimization modeling to work on an ERC-funded project (Niche4NbS). Niche4NbS aims to optimize social and ecological benefits of Nature-based Solutions in urban areas. Urbanization poses one of the most pressing environmental challenges of our time, affecting both human well-being and the delicate balance of natural ecosystems. Nature-based Solutions (NbS), broadly defined as cost-effective solutions that are inspired and supported by nature to simultaneously provide several environmental and social benefits, have shown promise in addressing these challenges. However, the current approach to implementing and assessing NbS often relies on a one-size-fits-all approach, neglecting the intricate interplay between different NbS and their diverse outcomes. To bridge this gap, Niche4NbS offers to develop and demonstrate a universally applicable, theory-grounded approach for understanding trade-offs and to develop decision support tools that optimize the implementation of NbS that maximize both ecological and social benefits.

Research Focus:
At the heart of the Niche4NbS project lies a fundamental question: How can we harness the potential of Nature-based Solutions to create urban environments that are not only ecologically sustainable but also promote the health, well-being, and overall quality of life for urban residents?

Key Responsibilities:
As a Postdoctoral Researcher, you will play a pivotal role in Task 4 of our project, which focuses on exploring the intricate trade-offs and synergies between the social and ecological outcomes of NbS and developing tools for optimizing NbS implementation. Building on extensive social and ecological data collected in previous tasks of this project, you will first investigate the complex interplay between social and ecological outcomes of NbS, seeking to identify synergies and trade-offs through a rigorous analysis. Second, you will adapt and employ systematic conservation planning principles, or other modeling approaches, to develop and demonstrate a framework that can help implement NbS in a way that maximizes various benefits for a given budget and context. Third, you will develop a user-friendly, decision support tool that aids planners and decision-makers in optimizing NbS scenarios for multiple benefits.

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This pioneering research position offers a unique opportunity to drive innovation in the field of Nature-based Solutions and contribute to the development of sustainable, resilient cities. As a member of the HUB lab and the Niche4NbS project, you will work alongside a dynamic team of researchers dedicated to addressing pressing environmental challenges.

Qualifications:
Candidates should hold a Ph.D. in a relevant field, such as environmental science, ecology, or urban planning, and demonstrate a strong background in quantitative analysis and modeling. Proficiency in various optimization methods and spatial data analysis is highly advantageous. Effective collaboration within interdisciplinary teams, strong project management skills, including independent research project oversight, a record of high-quality publications, and a deep commitment to the scientific community are essential. Additionally, a passion for sustainability, biodiversity conservation, and urban development, with a desire to make a meaningful impact on the future of urban planning, is key.

Application Deadline and additional options:
Please submit your application by the **31st of May 2025**, including a cover letter, curriculum vitae, and contact information for two references (just emails). It is important to note however that we aim to fill the position as soon as a suitable applicant is found.
Regardless of this position, we are happy to support applications for independent postdoc funding (e.g., Zukerman, Rothschild, ISF, Euro-tech, or Azrieli) for conducting socio-ecological research related to the wide and interdisciplinary interests of the human and biodiversity lab. Please reach out if you're interested in applying to one of these programs or many others.

Key information:
The position is for 2 years (with an option for extension) and the starting date is flexible between September 2025 -August 2027. Salary and benefits are competitive and consistent with the Technion policy and applicant experience.

Contact:
For inquiries or to submit your application, please contact Dr. Ronit Cohen (**ronitco@technion.ac.il**).
Join us in pioneering innovative approaches to Nature-based Solutions, utilizing existing ecological and social data to shape urban planning for a sustainable future, and contributing to the development of resilient cities that promote both biodiversity and human well-being.