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Postdoctoral Research Scholar - Advanced Systems Analysis (ASA) Program



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Vacancy 32/2019 – The Advanced Systems Analysis (ASA) Program is offering a postdoctoral position working within its interdisciplinary team. The successful candidate will identify roles, opportunities, and pathways for cities to foster circular economy, and to become more resilient and livable under climate change across different urbanization contexts in China and Europe.

Background:

The mission of the ASA Program is to develop, test, and make available new quantitative and qualitative methods from areas including mathematics, statistics, operations research, and management science for addressing problems arising in the policy analysis of complex socio-environmental systems.

The ASA Program's activities advance IIASA's ability to conduct research that improves human and societal well-being, as well as environmental quality by enabling more efficient problem solving that cannot be achieved by existing tools.

The Project:

The successful applicant will join an interdisciplinary team across IIASA's AIR, ASA and RISK programs. The project will involve identifying roles, opportunities, and pathways for cities to foster circular economy to significantly reduce energy, water and material resource use, and related environmental impacts. The goal is building resilience to ever-increasing uncertainties from globalization and climate changes, and to become more livable for growing populations in different urbanization contexts in China and Europe.

The work will be conducted as part of the Europe and China-funded project RECREATE: "Resource nexus for transformation to circular, resilient, and liveable cities in the context of climate change". The research will also focus on network analysis and simulation of urban metabolisms in four case study cities, elicitation of stakeholder and governance perspectives, and development of a resilience indicator and recommendations towards more livable urban systems.

Tasks:

Under the supervision of a senior scientist, the incumbent will develop urban systems models for the city of Vienna using inter alia, economic input-output data.

Specific tasks of the successful applicant include but are not limited to:

- Develop a literature-based overview of available models and data for Vienna
- Collect input-output data for Vienna
- Construct urban network and urban metabolism models
- Analyze network model, including robustness analysis with the principal investigator and Chinese project partners
- Participate in scenario development
- Support the development of indicator system for urban resilience assessment that reflect local resource challenges
- Develop sensitivity and uncertainty analyses for urban resilience assessment
- Extend methods to other cities in Europe and China
- Lead and contribute to the writing of publications.

Your Profile:

We seek a motivated postdoctoral research scholar who can work in an interdisciplinary and multicultural environment. The degree of supervision can be flexible depending on the successful candidate's experience, skill set and needs. The vacancy would ideally suit recent PhD graduates who are seeking experience in an international research setting.

Required Skills and Qualifications:

- A PhD or equivalent in economics, social or political sciences, statistics, geography, environmental science, or other relevant fields
- Experience with I/O tables and the iterative proportional fitting procedure (RAS method)
- Familiarity with network analysis
- Ability to code and run network models
- Strong English language communication and writing skills are required. Proficiency in other languages, especially German and/or Mandarin will be considered an asset
- Intercultural sensitivity and ability to work within an international team
- Experience with stakeholder participation processes and facilitation will be considered an asset.

Appointment Terms:

Duties will be carried out at the IIASA premises in Laxenburg (near Vienna), Austria. Some travel will be required.

The successful candidate will be offered an initial employment contract of one year and possibility for extension thereafter. The successful candidate should be available to take up the position as soon as possible.

IIASA offers a competitive compensation and benefits package (home leave, moving allowances, educational grants for children of school age, and five weeks' annual vacation). IIASA salaries are exempt from taxation in the host country of Austria but subject to the principle of income aggregation.

IIASA is committed to a working environment that promotes equality, diversity, tolerance and inclusion within its workforce, and encourages qualified candidates from all religious, ethnic and social backgrounds to apply. In the case that candidates are equally qualified, preference will be given to applicants who are nationals of IIASA member countries.

To Apply:

Please email the documents listed below to recruitment@iiasa.ac.at:

1. Cover letter
2. Curriculum vitae or résumé
3. Up to two (maximum) recent examples of research work
4. Names and addresses (including title, affiliation, e-mail, and telephone number) of two work-related reference givers

Review of applications will be ongoing and continue until the position has been filled.

Contact:

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