Deadline: Until filled

APPLY 19/2021

Research Scholar in Earth system modeling

ADVANCING SYSTEMS ANALYSIS (ASA) PROGRAM AND ENERGY, CLIMATE, AND ENVIRONMENT (ECE) PROGRAM

BACKGROUND

The IIASA **Advancing Systems Analysis (ASA) program** aims to discover, develop, and deploy new, more effective, and efficient ways of infusing systems science into policy and decision making for sustainable development. Its **Exploratory Modeling of Human-natural Systems (EM)** research group focuses on the development of integrative models of different complexity to better understand complex feedbacks in human-natural systems.

The IIASA **Energy, Climate, and Environment (ECE) program's** overarching vision is to provide evidence-based, scientific roadmaps for feasible systems transformations that simultaneously meet the Sustainable Development Goals and ambitious climate change mitigation targets. Its **Integrated Assessment and Climate Change (IACC)** research group leads the development of tools for a new generation of "coupled" global transformation pathways that are able to represent bottom-up local constraints and opportunities at the national and sub-national scale.

As part of the institute's strategic goals of strengthening its expertise in Earth system modeling, and of pushing further the frontier of a fully integrated systems approach, the ASA/EM and ECE/IACC research groups are jointly looking for a research scholar in reduced-complexity modeling of the Earth system.

The successful applicant will mainly focus on exploiting and developing the OSCAR reduced-complexity Earth system model. They will also take part in the overall effort to integrate OSCAR into the integrated assessment cluster of IIASA. Short-term priorities are to (i) update the model on CMIP6 simulations, (ii) improve the physical uncertainty sampling and constraining, and (iii) incorporate OSCAR into the OpenSCM framework as a first step towards stronger integration.

MAIN TASKS AND RESPONSIBILITIES

- Setup, run, exploit and share simulations made with the OSCAR reduced-complexity Earth system model, be it for internal use, as part of community-wide exercises like RCMIP or the Global Carbon Budget, to contribute to existing projects, or to answer external requests.
- Maintain, update, improve, and optimize the code base of OSCAR, including the pre-processing code necessary to the model's calibration.
- Identify scientific priorities, and carry out model development, in consultation with internal and external

collaborators.

- Integrate the OSCAR model further into the integrated assessment cluster of IIASA.
- Write and contribute to scientific articles derived from the above work, and present those at scientific workshops and conferences.
- In line with the team spirit that prevails at IIASA, the incumbent may occasionally work on other tasks assigned by their superiors, that might not be directly related to this appointment but where the post holder has relevant experience and skills, and/or a shortage of immediate personnel capabilities requires such.

OUR REQUIREMENTS

- PhD (or equivalent) in a related subject and/or in dynamic and statistical modeling methods.
- Advanced understanding of current research in climate change, Earth system modeling, and integrated assessment modeling.
- Experience with at least one scientific coding language (Python, Matlab, C++, Julia, R); fluency in Python would be ideal.
- Additional experience with other computer-based tools would be advantageous: version control (e.g. Git), netCDF data format (esp. CMIP data), Linux platforms (esp. Bash scripting).
- Ability to work with collaborators distributed across many scientific disciplines, institutions, and continents.
- Excellent organizational skills, results-oriented mindset, proactive and adaptable.
- Excellent communication skills (both written and verbal) in English, good presentation skills and proven ability to write scientific articles.
- IIASA offers an interdisciplinary and international workplace, and the possibility to interact with researchers of different nationalities, with strong ties to a world-wide network of research institutions engaged in environmental systems research. The successful candidate must be able to work in, and have respect for, an intercultural environment.

APPOINTMENT TERMS

The selected candidate should be available to take up the position as soon as possible in 2021. We offer an initial fixed-term, full-time (40 hours per week) employment contract for one year, with the possibility of extension thereafter. Applicants wishing to work part-time hours will also be considered.

Duties will be carried out at the IIASA premises in Laxenburg, near Vienna in Austria.

The corresponding profile for this opportunity is **R2** according to the **IIASA profiles for research careers**. IIASA does however, reserve the right to hire a researcher with a lower profile, and at a corresponding lower salary than the minimum stated below, if the qualifications and professional experience of the selected candidate do not meet the criteria described in the researcher profiles adequately.

WE OFFER:

A **minimum** gross annual salary of EUR 43,000.00 (full-time), which is exempt from income tax in Austria.

The advertised salary is:

- Negotiable, based on the qualifications, skills and experience of the selected individual.
- Subject to deductions for health insurance and/or social security.
- Not directly comparable with other employers in Austria, due to the unique legal status and privileges granted to IIASA.
- Subject to the principle of income aggregation (Progressionsvorbehalt in German).

IN ADDITION:

- Educational subsidies for children of school age enrolled in private schools in Austria.
- A generous annual leave allowance.
- Moving and settlement allowances and paid home leave for employees in scientific and professional categories hired from international locations.

- Assistance for newcomers to Austria with visa, work and residency permit applications.
- Support finding accommodation in Austria.

Further details **here.**

About IIASA

IIASA is committed to a working environment that promotes equality, diversity, tolerance and inclusion within its workforce. This is reflected in our Core Values. We encourage qualified candidates, irrespective of gender, from all religious, ethnic, and social backgrounds to apply. In the case that candidates are equally qualified, preference will be given to applicants from countries where IIASA has a National Member Organization (NMO).

Further Information

For further information about this opportunity please contact:

Dr. Thomas Gasser, Research Scholar.

For general information about working at IIASA, please contact:

Ms. Alia Harrison, Recruitment Coordinator

Applications

To apply for this opportunity, you will need to provide the following documents in English:

- **A cover letter outlining your motivation for and fit to the position**
- **A detailed Curriculum Vitae**
- **The names, addresses (including e-mail), and telephone numbers of two work-related reference givers.**

Deadline for receipt of applications: Until filled

APPLY