

APPLY 11-2025

Applied Statistician in demographic modeling

The **Multidimensional Demographic Modeling (MDM) Research Group**, part of the **IIASA Population and Just Societies (POPJUS) Program** is looking to recruit a postdoctoral research scholar (or exceptionally well-qualified predoctoral researcher) to work on the project “Demographically Coherent Education and Literacy Statistics” (EduCohorts). The successful candidate will have a strong quantitative background.

BACKGROUND

POPJUS strives to produce empirical-based research focusing on human and social dimensions of global change processes. The EduCohorts project is a collaboration between IIASA and the UNESCO Institute for Statistics (UIS) and the Global Education Monitoring (GEM) Report (with additional support from the Yidan Prize Foundation) that aims to establish a comprehensive and authoritative knowledge base for the demographically consistent calculation, estimation, and projection of individual and population-level education and literacy indicators. This initiative addresses data challenges by combining different data sources within a single statistical model to produce coherent time series of education indicators.

THE ROLE

The successful candidate will carry out highly visible research that advances the state-of-the-art in monitoring global education indicators, including their trends and inequalities, and will have an opportunity to shape the official UN monitoring for Sustainable Development Goal 4 on education (SDG 4). As part of a small team, in collaboration with and under the strategic direction of the project leads, and in coordination with UN partners, they will contribute research and proposed solutions to conceptual and methodological discussions around the overall modeling approach, manage large-scale input datasets, and perform analyses of results. Key contributions will include taking the lead in finding the best way to implement the agreed models in the Stan system for Bayesian inference and managing the project’s statistical programming codebase. They will enjoy significant independence and full credit for their contribution and have the opportunity to build a record of peer-reviewed academic publications. Other outputs will be code repositories, conference presentations, and technical reports.

MAIN TASKS AND RESPONSIBILITIES

- Identify promising relevant methodologies in the statistical literature.
- Adapt and develop rigorous statistical methodologies and models for the project’s estimation challenges.
- Collect and manage relevant large-scale micro and macro-level education and demographic data from a

variety of sources (household surveys, censuses, administrative data, etc.).

- Handle data quality challenges (gaps, contradictions, etc.).
- Implement and debug hierarchical Bayesian estimation models in Stan.
- Maintain and document the codebase.
- Optimize models for convergence, memory, and run-time performance.
- Conduct statistical analyses on input data and estimates.
- Present research at conferences and publish in peer-reviewed journals.
- Engage with partners and stakeholders to share findings.

QUALIFICATIONS, SKILLS AND REQUIREMENTS

- Graduate degree in (applied) statistics, quantitative social sciences, data science, economics, demography, or a related field; PhD preferred, but strong candidates without a doctorate will be considered.
- Strong foundation in statistics/econometrics, empirical modeling, and statistical programming.
- Expertise in Bayesian modeling using Stan (required); experience with R is an advantage.
- Proficiency in working with large-scale micro and macro datasets; familiarity with SDG 4 indicators and education data sources is a plus.
- Interest in global education; relevant research experience is preferred.
- Excellent command of written and spoken English.
- 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, and [IIASA core values](#).

ADDITIONAL ASSETS

- Experience with programming best practices (e.g., version control, unit testing).
- Familiarity with High-Performance Computing (HPC) environments.
- Background in demography.
- Creativity, problem-solving ability, and methodological innovation.
- Strong critical thinking, independence, and

WE OFFER

- The possibility to contribute to highly visible applied statistical sciences for international educational development (the UN's official SDG 4 monitoring).
- Career development perspectives.
- An international atmosphere and pleasant working environment in a historic market town surrounded by green areas.
- An attractive salary which is **exempt from income tax in Austria** of at least:

EUR 41,020.00 for R1 researchers

EUR 53,451.00 for R2 research scholars

- Salaries quoted are:
 - Gross per annum (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).

OTHER BENEFITS

- Educational subsidies for children of school age enrolled in private schools in Austria.
- A generous annual leave entitlement.
- Relocation allowances and paid home leave.
- The possibility to work up to 100 days per year in home office (within Austria).
- Assistance for newcomers to Austria with visa, work and residency permit applications.
- Support finding accommodation in Austria.

interdisciplinary collaboration skills.

Further details [here](#).

- Willingness to engage with stakeholders and communicate policy-relevant findings; experience working with UN partners is an advantage.

APPOINTMENT TERMS

The selected candidate should be available to take up the position by June 2025, or as soon as possible thereafter. We offer an initial fixed-term, one-year, employment contract, with the possibility of extension for up to two years thereafter.

Eligible applicants wishing to work part-time hours may also be considered.

The place of work is at the IIASA premises in Laxenburg, near Vienna in Austria.

The successful candidate will be appointed in accordance with the [IIASA profiles for research careers](#).

About IIASA

IIASA is committed to a working environment that promotes equality, diversity, tolerance and inclusion within its workforce. This is reflected in our [IIASA core values](#) and the [IIASA Gender Equality Plan \(GEP\)](#). We encourage 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 from countries where IIASA has a [Member Organization](#).

Further Information

For further information about this opportunity please contact

[Dr. Bilal Barakat](#)

For general information about working at IIASA, contact: recruitment@iiasa.ac.at

Applications

To apply, please submit the following documents in English (pdf format) by clicking on the apply button below:

- A cover letter outlining your motivation and fit to the position.
- Your CV.
- The names and contact details of two reference givers (at least one should be able to specifically attest to your statistical programming skills).

Deadline for receipt of applications: 7 May 2025

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