



Postdoctoral position in analysis of atmospheric pollution data at IASS

Applications are sought for a Postdoctoral Research Fellow at the Institute for Advanced Sustainability Studies (IASS) in Potsdam, Germany in the field of atmospheric measurements and data analysis, particularly for the region of South Asia, focusing on Nepal.

There is a growing recognition that air pollutants, for example aerosols and ozone, affect public health, crop productivity, the hydrological cycle and precipitation patterns, and climate change. This has created a demand for science-based knowledge that can be used for designing appropriate mitigation measures (technological, financial, legal, political, planning strategies etc.). These air pollutants are short-lived in the atmosphere and therefore the impacts are more pronounced in the source regions. The countries or communities in and downwind of the major source regions will benefit most from reduction of aerosols and other short-lived climate-forcing pollutants (SLCPs). There is an urgent need for a better understanding of the sources, emissions, atmospheric transport, transformation and removal, and impacts of air pollutants in particular regions of interest. One such region is South Asia, which is one of the most heavily polluted as well as heavily populated regions of the world. An end-to-end study called "Sustainable Atmosphere for the Kathmandu Valley (SusKat)" is being implemented in Nepal with the aim of advancing our knowledge on the dynamics of air pollution in the Kathmandu Valley, Nepal and the broader surrounding regions (see more information below).

Postdoctoral Fellow: A post-doctoral fellow position is available for one year with the possibility of an extension. The focus of work will be to conduct, analyze and interpret ground-based observations, particularly black carbon, elemental carbon and organic carbon in combination with satellite data and atmospheric model output in order to investigate, among other issues, characteristics of aerosol and gaseous species, their source attribution, and aerosol radiative forcing in the region. One of the areas of particular interest is the brick production sector - associated technologies, emissions, socio-economic aspects, and mitigation options and their anticipated impacts. The post-doctoral fellow may also participate in ongoing measurements and future field campaigns in Nepal.

The applicant should have very good understanding of atmospheric chemistry and physics, skills and knowledge in operation of scientific instruments for aerosol, gaseous species, and meteorological measurements; demonstrated capability in data analysis and interpretation of results (data collected with ground-based instruments, satellite data, model output), and demonstrated skill in writing scientific manuscripts for publication. Knowledge of the brick sector in South Asia would be an extra asset. The candidate should be familiar with data analysis and visualization software (e.g., R, Igor Pro, Matlab). He/she must be fluent in written and spoken English.

The application must include a brief research proposal (not more than 4 pages) highlighting his/her research ideas and plan, including how available data from the South Asia region (ground-based measurements, satellite data, model output etc.) will be utilized to address the key scientific questions.

The IASS has an excellent international fellowship program (tax-free stipend) to allow a great degree of flexibility and freedom to researchers to carry out work within this environment. Should you need more information on the IASS and the SIWA cluster please visit our website: www.iass-potsdam.de

Are you interested in joining a dedicated, exciting team in a strongly trans-disciplinary environment? Then please e-mail the following documents to the following address before **15 November 2015**. The successful applicant is expected to commence the duty on **1 January 2016** or as soon as possible thereafter.

- An application (cover letter)
- A statement of scientific background, interests and plans (i.e., research proposal), and
- A curriculum vitae with a list of publications and names of 2 references

To:

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The IASS particularly encourages applications from female researchers; handicapped applicants will be given preference in case of equal qualifications.

SusKat: Initiated and led by the IASS, Suskat (Sustainable Atmosphere for the Kathmandu Valley) is an end-to-end study which is being implemented in collaboration with the international Centre for Integrated Mountain Development (ICIMOD), based in Nepal and 20 other collaborators with the aim of advancing our knowledge on the dynamics of air pollution in the greater Himalayan region, with focus on the Kathmandu Valley, Nepal. Kathmandu, the capital city of Nepal, is one of the most polluted cities in the world. The study includes a combination of intensive field campaigns, analysis of current emissions and future emission scenarios, focused and solution-oriented atmospheric modeling, analysis of availability, appropriateness, and anticipated effectiveness of various possible mitigation solutions, as well as interactions with key stakeholders. This is also likely to generate knowledge on possible transfer of implementation successes to similar efforts in other regions. An international air pollution measurement campaign, SusKat-ABC, was carried out in the Kathmandu valley and the surrounding regions during Dec 2012- June 2013, which has generated a wealth of data in aerosols, gaseous species and meteorology of the region, one of the most poorly sampled regions of the world.